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December 31, 1991
88-44-361-20-1518
WIC No. 204-5508-4903

Mr. Thomas Callahan
San Francisco Bay Regional Water
Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: Transmittal of the Quarter 4, 1991 Report of Activities
Shell Oil Company Site
500 40th Street
Oakland, California

Dear Mr. Hayes:

Enclosed with this letter is a copy of the Quarter 4, 1991 (Q4/91) Report of Activities for the above referenced Shell Oil Company site which Converse Environmental West (Converse) will submit to the agencies of jurisdiction.

Please call us if you have any questions.

Very truly yours,

Converse Environmental West

David Siegel
Project Geologist

Gerard L. Slattery, RG 5038
Senior Geologist
Technical Services Manager

Enclosure

cc: Mr. Paul Hayes - Shell Oil Company
[redacted]Alameda County Health Care Services Agency
(w/ encl.)

REPORT OF ACTIVITIES
QUARTER 4, 1991

SHELL OIL COMPANY SITE
500 40th Street
Oakland, California

Prepared for:
SHELL OIL COMPANY
1390 Willow Pass Road, Suite 900
Concord, California 94524

Prepared by:
CONVERSE ENVIRONMENTAL WEST
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December 31, 1991

CEW Project No. 88-44-380-20
WIC No. 204-1381-0407

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SECTION 1

INTRODUCTION

1.1 BACKGROUND AND OBJECTIVES

This report presents the results of investigative activities conducted by Converse Environmental West (Converse) during Quarter 4, 1991 (Q4/91) for the former Shell Oil Company (Shell) station (site) located at 500 40th Street, Oakland, California (Drawing 1). This report is prepared to fulfill the quarterly reporting requirements for the site.

This former retail gasoline station is located on the northwest corner of 40th Street and Telegraph Avenue in Oakland, California. The site is approximately 150 feet long by 125 feet wide (Drawing 2). Commercial businesses exist on all corners of the intersection. Surrounding neighborhood development is commercial along both roads. Single family houses or residences are located on nearby side streets. The site was an active service station prior to 1987, but is now occupied by a small retail shopping center.

During the past nine years Shell and its environmental consultants International Technologies (IT), and Converse have investigated the extent of soil contamination associated with underground storage tanks and product lines at the site. Environmental investigation was initiated in July 1982, after hydrocarbon vapors were detected in the storm sewer beneath the Bart station property across 40th Street from the site.

In November, 1983, Shell removed the underground gasoline storage tanks, according to IT. No detailed records of the tank removal have been made available to Converse.

Converse installed groundwater monitoring wells MW-2, MW-3, MW-4, MW-5, MW-8 and EW-1 on the site and wells OMW-6, OMW-9 and OMW-10 offsite between May, 1989 and June, 1990.

A chronological summary of environmental activities conducted at the site is presented in Appendix A. A general description of site conditions is included in previous reports on file with the Lead Implementing Agency (LIA).

1.2 SCOPE OF ACTIVITIES

The investigative activities conducted during Q4/91 were authorized under an existing purchase order and blanket number from Shell for environmental services at the site. The work completed during Q4/91 consisted of the following activities:

- Drilling of soil borings OMW-11, OMW-12 and OMW-13. Installation of groundwater monitoring wells OMW-11, MW-12 and OMW-13;

- Sampling and physical monitoring of wells MW-1, MW-2, MW-3, MW-4, MW-5, OMW-6, MW-8, OMW-9, OMW-10, OMW-11, OMW-12 and OMW-13. The samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPH-g), diesel (TPH-d), and motor oil (TPH-mo); and

- Evaluating the findings from the field activities and preparing this report.

Due to time constraints for quarterly reporting, only the offsite plot plan was prepared showing the locations of the three new offsite wells. These wells will be included on groundwater contour maps and isoconcentration maps in future quarterly reports.

SECTION 2

WORK COMPLETED THIS QUARTER

Work initiated and completed during Q4/91 followed the task descriptions of the Converse Work Plan (April, 1989), and the Converse protocols on file with the regulatory agencies of jurisdiction.

2.1 SOIL SAMPLING AND ANALYSIS

Soil samples were collected from three borings, OMW-11, OMW-12 and OMW-13 (Drawing 3) that were drilled during Q4/91 (from November 20 to November 22, 1991) by All Terrain Exploration Drilling from Pleasant Grove, California. The borings were sampled and logged at 5-foot depth intervals to first encountered groundwater at approximately 10 feet below ground surface (bgs). The borings were continuously sampled for logging purposes below the water table to evaluate water bearing zone thickness. Boring logs are presented in Appendix B.

Soil cuttings from each boring were stored onsite in drums. The soil will be disposed of at a proper facility based upon soil laboratory analytical results.

Soil samples collected from OMW-11, OMW-12 and OMW-13 were submitted, under proper chain-of-custody, to NET Pacific, Inc., a California certified analytical laboratory in Santa Rosa, California. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g) and as diesel (TPH-d) and benzene, toluene, ehtylbenzene and xylenes (BTEX). Analytical data for the soil samples collected from the borings are summarized in Table 1. Signed analytical laboratory reports and chain of custody forms are included in Appendix C.

2.2 GROUNDWATER MONITORING WELL INSTALLATION

Three offsite groundwater monitoring wells (OMW-11, OMW-12 and OMW-13) were installed on November 20 through 22, 1991. The location of the wells are shown on Drawing 3. The wells were completed to a total depth of approximately 21 feet below ground surface (bgs). The summary of the well installations is presented in Table 4. Groundwater monitoring well completion diagrams are presented on the boring logs in Appendix B.

2.3 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected on October 30, 1991 from 6 onsite and 3 offsite wells. Three additional offsite wells (OMW-11, OMW-12, OMW-13) were sampled between November 22 and December 2, 1991. Samples were submitted to NET Pacific, Inc., a California-certified laboratory located in Santa Rosa, California. The samples were analyzed for TPH-g, TPH-d, and BTEX. Analytical data for the groundwater samples collected from the monitoring wells are summarized in Table 3. Analytical laboratory reports and chain-of-custody forms from this quarterly round of monitoring are provided in Appendix B.

2.4 PHYSICAL MONITORING

During Q4/91, all wells were physically monitored for depth-to-water and observed for floating product, its thickness and odor, if any. A summary of groundwater monitoring information is presented in Table 4.

SECTION 3

FINDINGS AND DISCUSSION

3.1 SOIL

3.1.1 Stratigraphy

Available lithologic information from previously drilled onsite soil borings indicate that subsurface soils consist of silty clay with local, laterally discontinuous layers of silty fine sand and silty gravel, to the depth of approximately 23 feet bgs. Two deeper wells installed at the site, EW-1 and MW-8 show approximately 20 feet of silty clay underlain by a layer of sandy gravel to approximately 40 feet bgs. The installation of three new offsite wells, OMW-11, OMW-12 and OMW-13 show silty clay to a depth of approximately 7 feet bgs. Clayey sand and fine gravel containing thin beds of coarse sand, silty fine sand and fine sandy silt is found below the silty clay.

3.1.2 Results of Chemical Analyses

Analytical results of soil samples collected during the installation of wells OMW-11, OMW-12 and OMW-13, indicate the presence of petroleum hydrocarbons in concentrations above analytical laboratory detection limits in only one sample.

The soil sample collected at 4.5 feet in boring OMW-12 contained 56 mg/kg TPH-mo. Analytical data for the soil samples collected from the borings are summarized in Table 1. Analytical laboratory reports are included in Appendix C.

3.2 GROUNDWATER

3.2.1 Physical Parameters

During Q4/91 onsite wells EW-1, MW-2, MW-3, MW-4, MW-5, MW-8, and offsite wells OMW-6, OMW-9, OMW-10, OMW-11, OMW-12 and OMW-13 were monitored for depth-to-water and presence of floating product. No floating product was detected in any of the wells. Petroleum odor was detected in one onsite (MW-2), and three offsite wells (OMW-6, OMW-9, and MW-10). A summary of Q4/91 groundwater monitoring data is presented in Table 4.

3.2.2 Elevation and Gradient

Groundwater elevations ranged from 69.10 feet above mean sea level (MSL) in well MW-2 to 65.54 feet MSL in well EW-1 on October 30, 1991. Groundwater flow appears to be trending to the west and southwest towards the San Francisco Bay, with an approximate gradient of 0.04 ft/ft (Drawing 4).

3.2.3 Results of Chemical Analyses

Groundwater analytical results made available during Q4/91 indicate no significant changes in the onsite groundwater quality (Table 1). Wells MW-4 and MW-5, located near the northeastern site boundary, contained no detectable hydrocarbon concentrations. Groundwater analytical results collected during Q4/91 continue to indicate the presence of an upgradient, northeastern plume boundary.

In the offsite area, cross and downgradient from the site, all monitoring wells sampled except OMW-12 showed hydrocarbons concentrations above detection levels. Water quality data from the offsite wells indicate that the contaminant plume is extended in the downgradient direction to the west. The data from offsite well OMW-6, located approximately 30 feet downgradient from the site, indicated that a dissolved petroleum hydrocarbon plume extends into 40th Street. The new offsite monitoring wells OMW-11 and OMW-13 contained detectable levels of petroleum hydrocarbons though lower than OMW-6. The groundwater chemical concentration contours for TPH-g, and benzene are presented in Drawings 5 and 6 respectively. Quarterly sampling was performed at the site prior to the installation of OMW-11, OMW-12 and OMW-13 therefore data from these wells are not included on Drawings 5 and 6.

3.3 DISCUSSION

Analytical results for soil samples collected from borings OMW-11, OMW-12, and OMW-13 indicate hydrocarbons only at five feet in OMW-12. Laboratory analysis of groundwater from well OMW-12 indicated no detectable concentrations of hydrocarbons. The results of the samples from OMW-11 and OMW-13 revealed the presence of hydrocarbons in wells downgradient from OMW-6.

CERTIFICATION

This report of activities for the Shell Oil Company facility at 500 40th Street, Oakland, California has been prepared by the staff of **Converse Environmental West** under the professional supervision of the Engineer and/or Geologist whose seal(s) and signature(s) appear hereon.

The findings, recommendations, specifications or professional opinions are presented, within the limits prescribed by the Client, after being prepared in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied.

Respectfully submitted,

DAVID SIEGEL
Project Geologist

GERARD L. SLATTERY, RG 5038
Senior Geologist
Technical Services Manager

PRIMARY CONTACTS

Shell Oil Company Facility
500 40th Street
Oakland, California

Quarter 4, 1991

Regional Water Quality Control Board Representative:	Mr. Thomas Callahan San Francisco Bay Regional Water Quality Control Board 2101 Webster Street, Room 500 Oakland, California 94612
LIA Representative:	Mr. Rafat Shahid Alameda County Department of Health Services 80 Swan Way Oakland, California 94621
Shell Engineer:	Mr. Paul Hayes Shell Oil Company 1390 Willow Pass Road, Suite 900 Concord, California 94520
Converse Project Manager:	Mr. David Siegel Converse Environmental West 55 Hawthorne, Suite 500 San Francisco, California 94105
Registered Geologist in Charge:	Mr. Gerard L. Slattery Converse Environmental West 55 Hawthorne Street, Suite 500 San Francisco, California 94105
Site Owner:	KFH Land Company 21250 Hawthorne Boulevard, Suite 830 Torrance, California 90503

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TABLE 1. SOIL ANALYTICAL RESULTS (mg/kg)

Shell Oil Company Site
500 40th Street
Oakland, California

Boring No.	Sample Depth (ft. bgs)	TPH-g	TPH-d	TPH-mo	Benzene	Toluene	Ethyl-benzene	Xylene	Total Lead
EW-1	6	<1.0	<1.0	21.0	<0.0025	<0.0025	<0.0025	0.0081	9.1
EW-1	10	110	4.4	<10.0	0.028	0.380	0.410	1.600	3.3
EW-1	15	<1.0	<1.0	<10.0	<0.0025	0.005	<0.0025	0.0029	3.0
EW-1	20	<1.0	<1.0	<10.0	<0.0025	<0.0025	<0.0025	<0.0025	4.8
MW-2	5, 10, 15	<10	<10	<10	<0.025	0.028	<0.075	<0.075	0.4
MW-2	10	<10	<10	<10	<0.025	<0.025	<0.075	<0.075	1.0
MW-3	5, 10, 15	28	<10	<10	0.054	0.032	<0.075	0.099	<0.2
MW-3	5, 10, 15	<10	<10	<10	<0.025	<0.025	<0.075	<0.075	<0.2
MW-4	10	<10	<10	<10	<0.025	<0.025	<0.075	<0.075	<0.2
MW-4	5, 10	<10	<10	<10	<0.025	<0.025	<0.075	<0.075	<0.2
MW-5	4	<10	<10	<10	<0.025	<0.025	<0.075	<0.075	12
MW-5	8	<10	<10	27	<0.025	<0.025	<0.075	<0.075	5.3
MW-5	12	<10	<10	18	<0.025	<0.025	<0.075	<0.075	3.3
MW-5	16	<10	<10	<10	<0.025	<0.025	<0.075	<0.075	5.7
OMW-6	5	<10	1	<10	<0.025	<0.025	<0.075	<0.075	4.3
OMW-6	10	18	17	<10	0.028	0.040	0.10	0.45	3.2
OMW-6	15	<10	<1	<10	<0.025	<0.025	<0.075	<0.075	3.6
MW-8	6	<1.0	<1.0	<10.0	<0.0025	<0.0025	<0.0025	<0.0025	5.4
MW-8	10	<1.0	<1.0	<10.0	<0.0025	<0.0025	<0.0025	<0.0025	5.4
MW-8	15	<1.0	<1.0	<10.0	<0.0025	0.0027	<0.0025	<0.0025	4.4
MW-8	20	<1.0	<1.0	<10.0	<0.0025	<0.0025	<0.0025	<0.0025	5.8
OMW-9	5	<10	<1.0	<10	<0.025	<0.025	<0.075	<0.075	3.1
OMW-9	10	210	40	<10	0.064	0.46	1.1	6.3	2.6
OMW-9	15	11	<1.0	<10	<0.025	<0.025	<0.075	<0.075	4.3
OMW-9	20	<10	<1.0	<10	<0.025	<0.025	<0.075	<0.075	3.1
OMW-10	5	<1.0	<1.0	<10	0.025	0.025	0.025	0.025	5.5
OMW-10	10	<1.0	<1.0	<10	20	4.4	8.4	24	4.3
OMW-10	15	<1.0	<1.0	<10	0.025	0.025	0.025	0.025	6.9
OMW-11	**5**	**<1**	**<1**	**<10**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**	**NA**
OMW-11	**10**	**<1**	**<1**	**<10**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**	**NA**
OMW-11	**14**	**<1**	**<1**	**<10**	**<0.0025**	**<0.0025**	**<0.0025**	**<0.0025**	**NA**

TABLE 1 (cont'd). SOIL ANALYTICAL RESULTS (mg/kg)

Shell Oil Company Site
500 40th Street
Oakland, California

Boring No.	Sample Depth (ft. bgs)	TPH-g	TPH-d	TPH-mo	Benzene	Toluene	Ethyl-benzene	Xylene	Total Lead
OMW-12	4.5	<1	<1	56	<0.0025	<0.0025	<0.0025	<0.0025	NA
OMW-12	10	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NA
OMW-12	15	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NA
OMW-13	5	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NA
OMW-13	9	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NA
OMW-13	15	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NA

TABLE 2. SUMMARY OF GROUNDWATER MONITORING WELL INSTALLATIONS

Shell Oil Company Site
500 40th Street
Oakland, California

Well No.	Date Installed	Diameter Well Bore (in.)	Initial Water Table (ft bgs)	Static Water Table (ft. MSL)	T.D. (ft. bgs)	Screen (ft. bgs)	Bentonite Seal (ft. bgs)	Grout Seal (ft. bgs)
EW-1	06/28/90	12	24'	65.15	39	38.5-24.5	23-20	20-0
MW-2	05/22/89	12	15.5	68.78	25	20.0-9.0	9.0-7.0	7.0-0
MW-3	05/23/89	12	15.3	68.58	21	19.0-9.5	9.5-8.0	8.0-0
MW-4	05/23/89	12	13.0	68.54	20	15.5-9.5	9.5-7.5	7.5-0
MW-5	09/19/89	12	18.5	68.56	20	20.0-10.5	9.0-8.0	8.0-0
OMW-6	10/16/89	12	16.0	67.72	20	20.0-10.5	9.0-8.0	8.0-0
MW-8	06/27/90	12	20	66.96	39	39-19	18-16	16-0
OMW-9	11/13/89	12	NA	NA	30	17.5-7.5	6.5-5.5	5.5-0
OMW-10	11/13/89	12	NA	NA	20	16.0-6.0	5.0-4.0	4.0-0
OMW-11	11/21/91	12	NA	NA	24	20-10	9-8	8-0
OMW-12	11/20/91	12	NA	NA	24	20-10	9-7.5	7.50-0
OMW-13	11/21/91	12	NA	NA	24	21-10.5	9-8	8-0

NOTE:

ft bgs	Feet below ground surface
ft. MSL	Feet mean sea level
NA	Date not available

TABLE 3. RESULTS OF GROUNDWATER CHEMICAL ANALYSES

Shell Oil Company
500 40th Street
Oakland, California

Concentration (mg/L)

Well No.	Date Sampled	TPH-g	TPH-d	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
EW-1	07/03/90	0.40	<0.05	0.0032	0.0032	0.0009	0.0007	NA
EW-1[1,2]	11/16/90	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
EW-1	02/21/91	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
EW-1	05/31/91	0.25	<0.05	0.012	<0.0005	0.0029	<0.0005	NA
EW-1	08/06/91	0.18	<0.05	0.0054	<0.0005	0.0009	0.0007	NA
EW-1	**10/30/91**	**0.07**	**<0.05**	**0.0026**	**<0.0005**	**<0.0005**	**<0.0005**	**NA**
MW-2	06/20/89	0.8	<0.01	0.046	0.0068	0.0027	0.056	NA
MW-2	07/18/89	1.4	0.4	0.033	0.0056	0.024	0.073	0.003
MW-2	08/08/89	0.230	0.50	0.045	<0.0005	<0.0015	0.011	NA
MW-2	09/11/89	0.50	0.31	0.019	0.0023	<0.0015	0.010	NA
MW-2	10/10/89	2.0	0.81	0.077	0.0084	0.024	0.150	NA
MW-2	01/05/90	2.0	0.56	0.038	0.0056	0.030	0.059	NA
MW-2	03/02/90	1.9	0.58	0.095	0.0005	0.083	0.200	NA
MW-2	05/31/90	4.1	0.57	0.170	<0.0005	0.100	0.33	NA
MW-2	05/31/90	5.2	0.51	0.200	<0.0005	0.120	0.39	NA
MW-2	08/28/90	1.4	0.31	0.044	<0.0005	0.0029	0.067	NA
MW-2	11/16/90	0.88	0.36	0.027	0.0019	0.034	0.005	NA
MW-2	02/22/91	2.70	013	0.082	<0.0005	0.057	0.140	NA
MW-2	05/30/91	1.4	0.15	0.023	<0.0005	0.038	0.059	NA
MW-2	08/07/91	1.2	0.23	0.059	0.0011	0.038	0.056	NA
MW-2	**10/30/91**	**0.52**	**0.3**	**0.056**	**<0.0005**	**0.056**	**0.1**	**NA**
MW-3	06/20/89	2.3	<0.1	0.18	0.15	0.054	0.800	NA
MW-3	07/18/89	1.5	9.1	0.085	0.034	0.010	0.120	0.002
MW-3	08/08/89	2.5	0.71	0.13	0.073	0.0035	0.330	NA
MW-3	09/11/89	1.9	0.23	0.18	0.074	0.0037	0.110	NA
MW-3	10/10/89	2.6	1.2	0.069	0.055	0.0063	0.300	NA
MW-3	01/05/90	2.7	0.76	0.051	0.041	0.028	0.070	NA
MW-3	03/02/90	2.3	0.57	0.23	0.8	0.055	0.230	NA
MW-3[1]	03/02/90	2.3	0.56	0.22	0.8	0.53	0.230	NA
MW-3	05/31/90	1.9	0.460	0.140	0.048	0.044	0.180	NA
MW-3	08/28/90	1.5	0.28	0.140	0.050	0.038	0.170	NA
MW-3[1]	08/28/90	1.5	0.26	0.140	0.04905	0.036	0.170	NA
MW-3	11/16/90	5.1	1.0	0.140	0.076	0.042	0.240	NA
MW-3	02/22/91	4.4	0.36	0.260	0.080	0.088	0.340	NA
MW-3	05/30/91	2.5	0.22	0.160	0.047	0.053	0.180	NA
MW-3	08/07/91	1.9	0.47	0.22	0.057	0.057	0.260	NA
MW-3	**10/30/91**	**1.9**	**0.48**	**0.16**	**0.028**	**0.063**	**0.18**	**NA**

TABLE 3 (cont'd). RESULTS OF GROUNDWATER CHEMICAL ANALYSES

Shell Oil Company
500 40th Street
Oakland, California

Concentration (mg/L)

Well No.	Date Sampled	TPH-g	TPH-d	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
MW-8	07/03/90	0.16	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
MW-8	11/16/90	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
MW-8	02/21/91	0.07	<0.05	<0.0005	0.0007	<0.0005	0.0013	NA
MW-8	05/31/91	0.06	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
MW-8	08/07/91	0.09	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA
MW-8	**10/30/91**	**<0.05**	**<0.05**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**NA**
OMW-9	01/05/90	4.3	1.6	0.097	0.12	0.091	0.290	NA
OMW-9	03/04/90	2.6	1.0	0.058	0.024	0.0081	0.075	NA
OMW-9	06/01/90	2.9	0.49	0.085	0.020	0.013	0.085	NA
OMW-9	08/28/90	1.5	0.26	0.140	0.049	0.036	0.170	NA
OMW-9	11/16/90	1.3	0.87	0.0092	0.014	0.0035	0.098	NA
OMW-9	02/22/91	1.7	0.26	0.084	0.026	<0.0005	0.210	NA
OMW-9	05/30/91	3.2	0.28	0.049	0.016	0.059	0.110	NA
OMW-9	08/06/91	3.9	0.19	0.058	0.0088	0.080	0.220	NA
OMW-9	**10/30/91**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
OMW-10	01/05/90	<0.05	0.20	0.034	0.0011	0.0043	0.013	NA
OMW-10	03/04/90	0.29	0.39	0.053	0.0015	0.0043	0.015	NA
OMW-10	06/01/90	0.73	0.30	0.100	0.0019	0.015	0.025	NA
OMW-10	08/28/90	0.36	0.36	0.064	0.0006	0.0022	0.0057	NA
OMW-10	11/16/90	<0.05	0.22	<0.0005	<0.0005	<0.0005	<0.0005	NA
OMW-10[3]	02/22/91	0.35	<0.05	0.040	0.0012	0.0100	0.0070	NA
OMW-10	05/31/91	0.69	<0.05	0.063	0.0022	0.024	0.016	NA
OMW-10	08/07/91	0.46	<0.05	0.073	0.001	0.018	0.0084	NA
OMW-10	**10/31/91**	**0.63**	**0.15**	**0.100**	**<0.0005**	**0.033**	**0.026**	**NA**
OMW-11	**11/22/91**	**0.45**	**0.24**	**0.0011**	**<0.0005**	**<0.0005**	**<0.0005**	**NA**
OMW-12	**12/02/91**	**<1**	**<0.05**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**	**NA**
OMW-13	**11/22/91**	**0.90**	**1.0**	**0.037**	**0.0095**	**0.074**	**0.130**	**NA**

NOTES:

*	duplicate sample, sample #910806 on analytical results and chain of custody forms
1	duplicate sample
2	EW-1 and OMW-10 showing the presence of TPH-mo
3	OMW-10 showing the presence of TPH-mo (0.50 mg/L).
mg/L	milligrams per liter
TPH-g	total petroleum hydrocarbons as gasoline (GCFID)
TPH-d	total petroleum hydrocarbons as diesel (GCFID)
NA	not analyzed
Bold	Indicates work completed this quarter
NS	not sampled this quarter

TABLE 4. GROUNDWATER MONITORING WELL INFORMATION

Shell Oil Company Site
500 40th Street
Oakland, California

Well No.	Date Monitored	Well Elevation (ft msl)	Depth to Water (ft bgs)	Water Table Elevation (ft msl)	Petroleum Odor in Water	Floating Product Thickness (inches)	Comments
EW-1	08/28/90	78.26	13.11	65.15	No	0.0	
EW-1	11/16/90		13.33	64.93	No	0.0	
EW-1	02/21/90		12.86	65.40	No	0.0	
EW-1	05/30/91		12.88	65.38	No	0.0	
EW-1	08/06/91		NM	NM	No	0.0	
EW-1	**10/30/91**		**12.72**	**65.54**	**No**	**0.0**	
EW-1	**12/02/91**		**12.91**	**65.35**	**No**	**0.0**	
MW-2	06/19/89	80.80	11.91	68.89	No	0.0	
MW-2	07/18/89		11.98	68.82	No	0.0	
MW-2	08/08/89		12.00	68.80	Yes	0.0	
MW-2	09/11/89		12.00	68.80	No	0.0	
MW-2	10/10/89		12.05	68.75	Yes	0.0	
MW-2	01/05/90		10.95	69.85	No	0.0	
MW-2	03/02/90		11.54	69.26	Yes	0.0	
MW-2	05/31/90		11.08	69.72	Yes	0.0	
MW-2	08/28/90		12.02	68.78	Yes	0.0	
MW-2	11/16/90		12.81	67.99	Yes	0.0	
MW-2	02/21/91		11.88	68.92	No	0.0	
MW-2	05/30/91		11.96	68.84	No	0.0	
MW-2	08/06/91		12.12	68.68	Slight	0.0	
MW-2	**10/30/91**		**11.70**	**69.10**	**Slight**	**0.0**	
MW-2	**12/02/91**		**12.04**	**68.76**	**Slight**	**0.0**	
MW-3	06/19/89	79.60	10.99	68.61	No	0.0	
MW-3	07/18/89		11.05	68.55	Yes	0.0	
MW-3	08/08/89		11.07	68.53	Yes	0.0	
MW-3	09/11/89		11.02	68.58	Yes	0.0	
MW-3	10/10/89		11.08	68.52	Yes	0.0	
MW-3	01/05/90		10.97	68.63	No	0.0	
MW-3	03/02/90		10.91	68.69	Yes	0.0	
MW-3	05/31/90		10.23	69.37	No	0.0	
MW-3	08/28/90		11.02	68.58	No	0.0	
MW-3	11/16/90		11.17	68.43	No	0.0	
MW-3	02/21/91		11.12	68.48	No	0.0	
MW-3	05/30/91		11.10	68.50	No	0.0	
MW-3	08/06/91		11.12	68.48	No	0.0	
MW-3	**10/30/91**		**10.93**	**68.67**	**No**	**0.0**	
MW-3	**12/02/91**		**11.11**	**68.49**	**No**	**0.0**	

TABLE 4 (cont'd). GROUNDWATER MONITORING WELL INFORMATION

Shell Oil Company Site
500 40th Street
Oakland, California

Well No.	Date Monitored	Well Elevation (ft msl)	Depth to Water (ft bgs)	Water Table Elevation (ft msl)	Petroleum Odor in Water	Floating Product Thickness (inches)	Comments
MW-4	06/19/89	81.00	12.18	68.82	No	0.0	
MW-4	07/18/89		12.21	68.79	No	0.0	
MW-4	08/08/89		12.23	68.77	No	0.0	
MW-4	09/11/89		12.26	68.74	No	0.0	
MW-4	10/10/89		12.28	68.72	No	0.0	
MW-4	01/05/90		12.25	68.50	No	0.0	
MW-4	03/02/90		11.63	69.37	No	0.0	
MW-4	05/31/90		11.52	69.48	No	0.0	
MW-4	08/28/90		12.26	68.74	No	0.0	
MW-4	11/16/90		12.40	68.60	No	0.0	
MW-4	02/21/91		12.17	68.83	No	0.0	
MW-4	05/30/91		12.18	68.82	No	0.0	
MW-4	08/06/91		12.36	68.64	No	0.0	
MW-4	**10/30/91**		**12.02**	**68.98**	**No**	**0.0**	
MW-4	**12/02/91**		**12.28**	**68.72**	**No**	**0.0**	
MW-5	10/10/89	81.50	11.08	70.42	No	0.0	
MW-5	01/05/90		12.96	68.54	No	0.0	
MW-5	03/02/90		12.66	68.84	No	0.0	
MW-5	05/31/90		12.39	69.11	No	0.0	
MW-5	08/28/90		12.94	68.56	No	0.0	
MW-5	11/16/90		13.05	68.45	No	0.0	
MW-5	02/21/91		12.86	68.64	No	0.0	
MW-5	05/30/91		12.88	68.62	No	0.0	
MW-5	08/06/91		13.02	68.48	No	0.0	
MW-5	**10/30/91**		**12.73**	**64.77**	**No**	**0.0**	
MW-5	**12/02/91**		**12.97**	**68.53**	**No**	**0.0**	
OMW-6	01/05/90	77.90	10.23	67.67	No	0.0	
OMW-6	03/02/90		9.40	68.50	No	0.0	
OMW-6	06/01/90		9.81	68.09	Yes	0.0	
OMW-6	08/28/90		10.18	67.72	Yes	0.0	
OMW-6	11/16/90		10.70	67.20	Yes	0.0	
OMW-6	02/21/91		10.10	67.80	Yes	0.0	
OMW-6	05/30/91		10.00	67.90	Yes	0.0	
OMW-6	08/06/91		10.71	67.19	Strong	0.0	
OMW-6	**10/30/91**		**10.50**	**67.40**	**Strong**	**0.0**	
OMW-6	**12/02/91**		**NM**	**NM**	**Strong**	**0.0**	

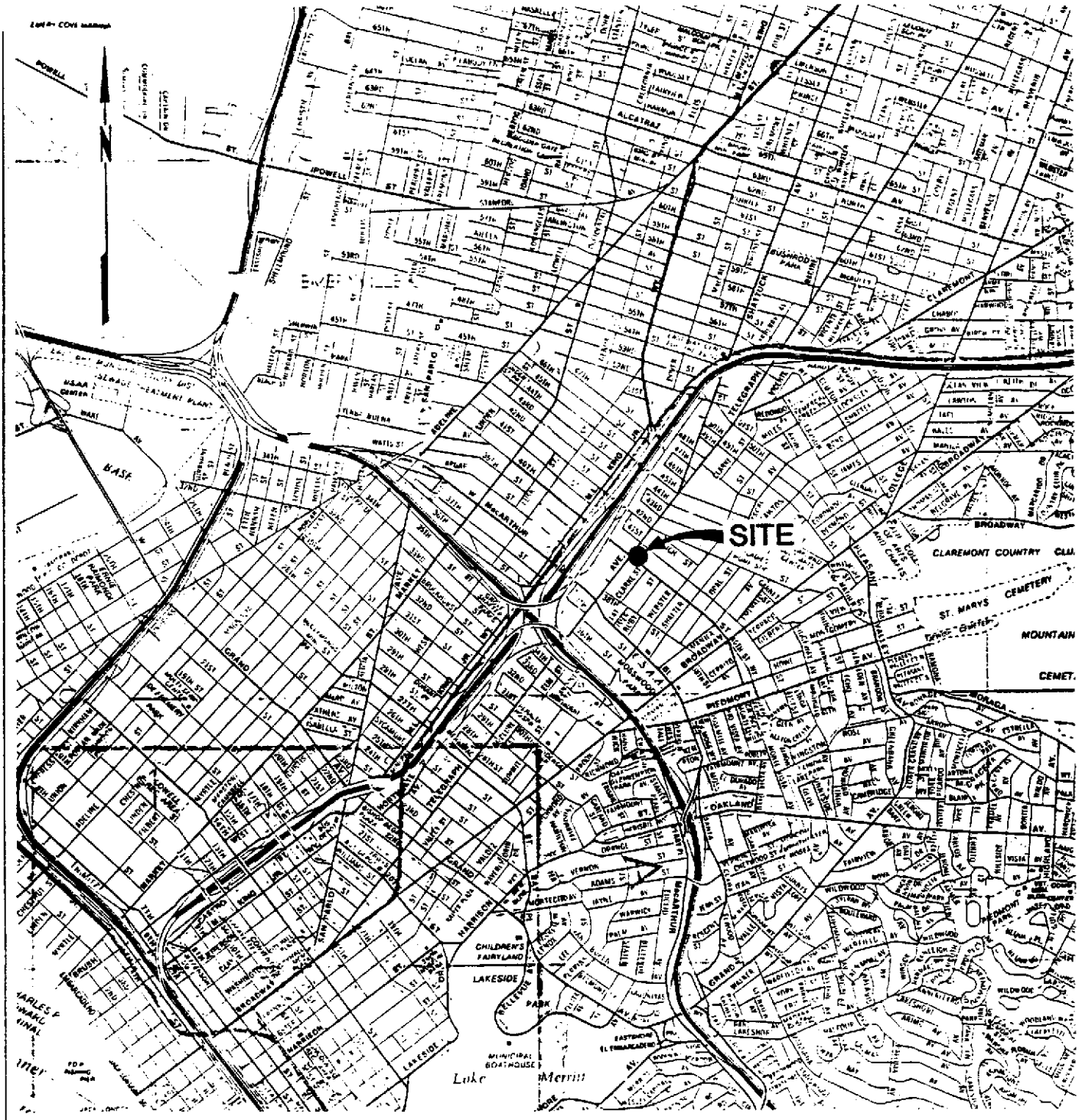
TABLE 4 (cont'd). GROUNDWATER MONITORING WELL INFORMATION

Shell Oil Company Site
500 40th Street
Oakland, California

Well No.	Date Monitored	Well Elevation (ft msl)	Depth to Water (ft bgs)	Water Table Elevation (ft msl)	Petroleum Odor in Water	Floating Product Thickness (inches)	Comments
MW-8	08/28/90	79.91	12.95	66.96	No	0.0	
MW-8	11/16/90		13.05	66.86	No	0.0	
MW-8	02/21/91		12.84	67.07	No	0.0	
MW-8	05/30/91		12.20	67.71	No	0.0	
MW-8	08/06/91		13.08	66.83	No	0.0	
MW-8	**10/30/91**		**12.78**	**67.13**	**No**	**0.0**	
MW-8	**12/02/91**		**12.87**	**67.04**	**No**	**0.0**	
OMW-9	01/05/90	77.71	9.90	67.81	No	0.0	
OMW-9	03/04/90		9.20	68.51	Yes	0.0	
OMW-9	06/01/90		9.50	68.21	Yes	0.0	
OMW-9	08/28/90		9.88	67.83	No	0.0	
OMW-9	11/16/90		9.92	67.79	Yes	0.0	
OMW-9	02/21/91		9.64	68.07	Yes	0.0	
OMW-9	05/30/91		9.86	67.85	No	0.0	
OMW-9	08/06/91		10.38	67.33	Strong	0.0	
OMW-9	**10/30/91**		**NM**	**NM**	**NA**	**NA**	
OMW-9	**12/02/91**		**NM**	**NM**	**NA**	**NA**	
OMW-10	01/05/90	77.91	9.92	67.99	No	0.0	
OMW-10	03/04/90		9.20	68.71	No	0.0	
OMW-10	06/01/90		9.42	68.49	Yes	0.0	
OMW-10	08/28/90		9.89	68.02	No	0.0	
OMW-10	11/16/90		10.03	67.88	No	0.0	
OMW-10	02/21/91		9.86	68.05	Yes	Sheen	
OMW-10	05/30/91		9.87	68.04	No	Sheen	
OMW-10	08/06/91		10.00	67.91	Yes	0.0	
OMW-10	**10/31/91**		**10.10**	**67.81**	**Slight**	**0.0**	
OMW-10	**12/02/91**		**10.33**	**67.58**	**NA**	**0.0**	
OMW-11	**11/22/91**	**75.76**	**11.90**	**63.86**	**NA**	**NA**	
OMW-11	**12/02/91**		**NM**	**NM**	**NA**	**NA**	
OMW-12	**12/02/91**	**75.65**	**10.31**	**65.34**	**NA**	**NA**	
OMW-13	**11/22/91**	**76.36**	**11.96**	**64.40**	**NA**	**NA**	
OMW-13	**12/02/91**		**NM**	**NM**	**NA**	**NA**	

NOTES:

ft bgs	feet below ground surface
Boldface	indicates work completed this quarter
NM	Not measured-well inaccessible
NA	Data not available



SOURCE: California State Automobile Association.

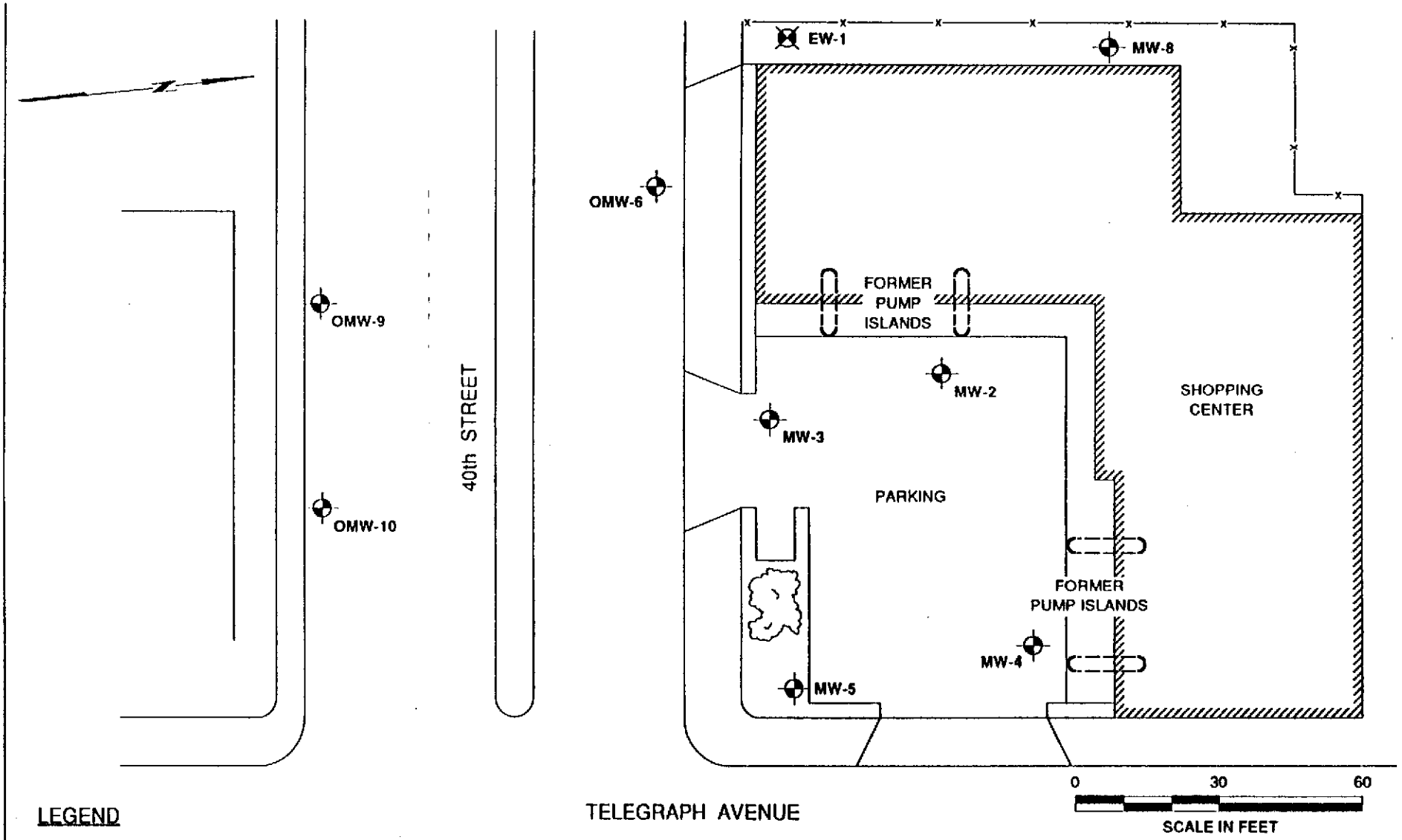
WIC No. 204-5508-4903

SITE LOCATION MAP

SHELL OIL COMPANY
500 40th Street
Oakland, California

Scale: AS SHOWN	Project No.: 88-44-361-20
Prepared by: KGC	Date: 9/30/90
Checked by: BG	Drawing No.: 1
Approved by: CRC	

Converse Environmental West



LEGEND

MW-1 GROUNDWATER MONITORING WELL

OMW-6 OFFSITE GROUNDWATER MONITORING WELL

EW-1 GROUNDWATER EXTRACTION WELL

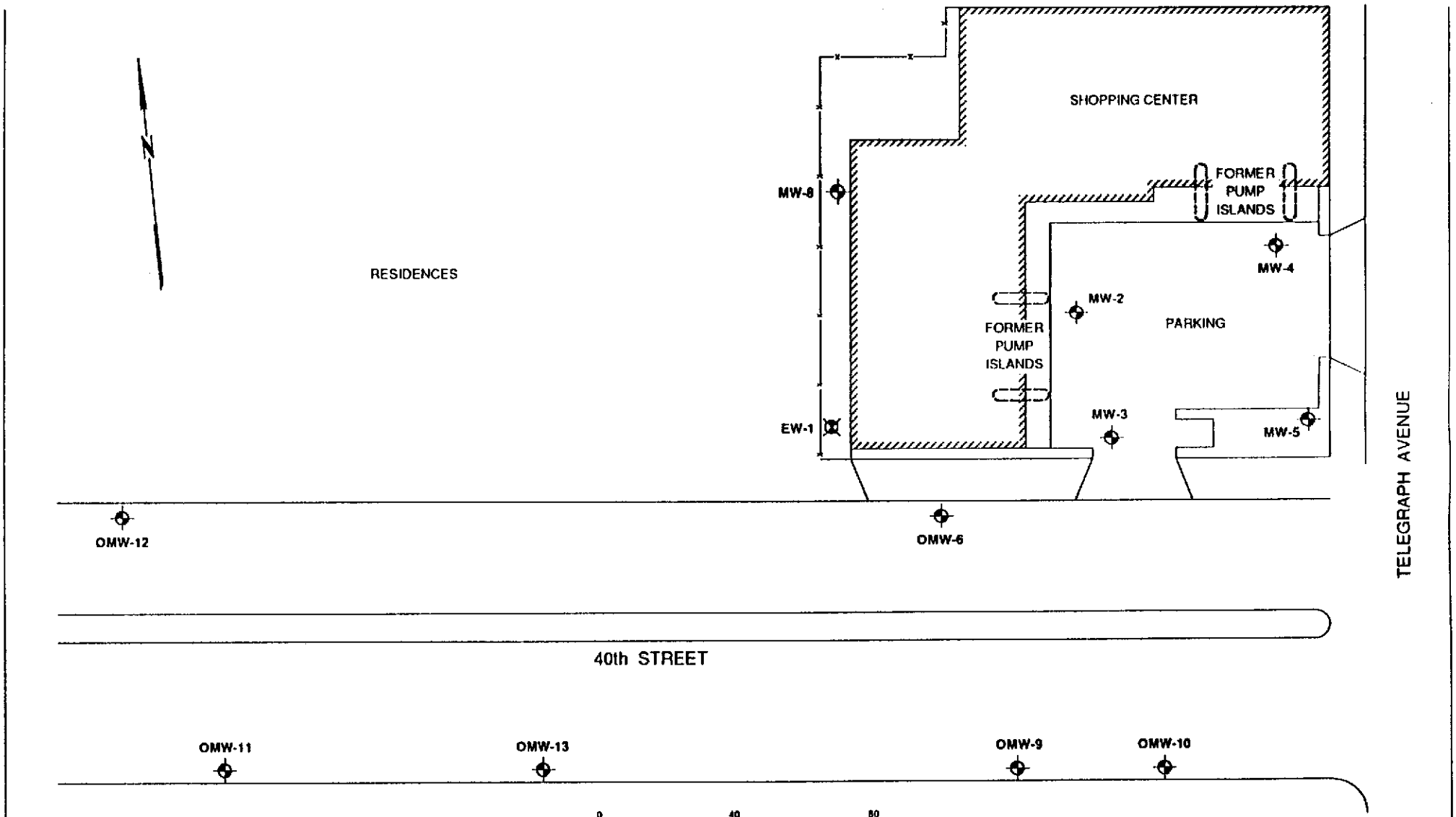
Base Map: Surveyed with Electronic Distance Meter by CEW, 1989

PLOT PLAN

SHELL OIL COMPANY
500 40th Street
Oakland, California

Converse Environmental West

Scale: AS SHOWN	Project No.: 88-44-361-20
Prepared by: LQL	Date: 9/17/91
Approved by: DS	Drawing No.: 2
WIC No.: 204-5508-4903	



Base Map: Surveyed with Electronic Distance Meter by CEW, 1989

LEGEND

MW-1 — GROUNDWATER MONITORING WELL

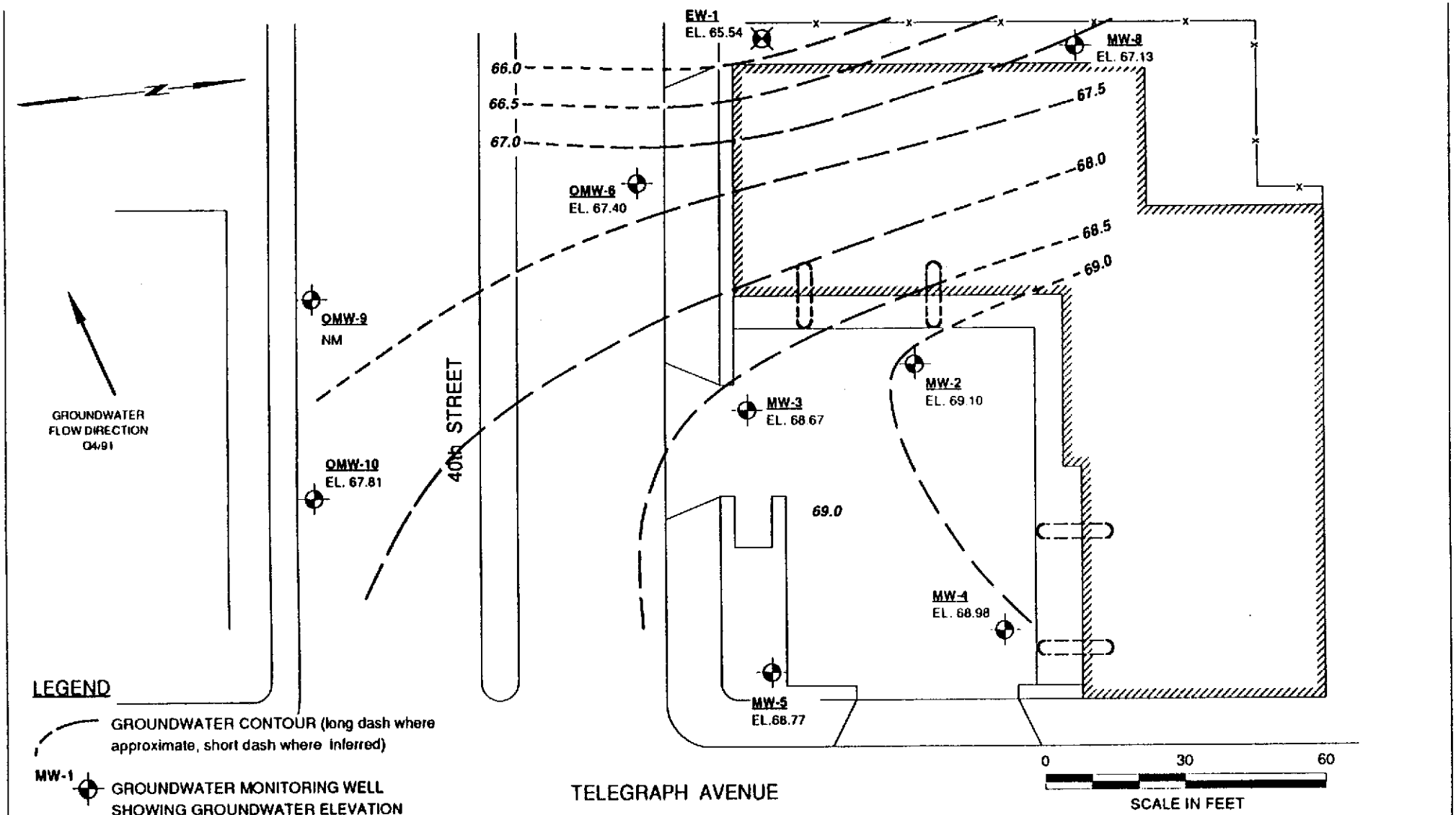
OMW-1 — OFFSITE GROUNDWATER MONITORING WELL

OFFSITE PLOT PLAN

SHELL OIL COMPANY
500 40th Street
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-361-20
Prepared by	LQL
Date	12/30/91
Approved by	DS
Drawing No.	3
WIC No.	204-5508-4903



Base Map: Surveyed with Electronic Distance Meter by CEW, 1989

LEGEND

- GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)
- MW-1 — GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION
- OMW-6 — OFFSITE GROUNDWATER MONITORING WELL
- EW-1 — GROUNDWATER EXTRACTION WELL
- NM = NOT MEASURED

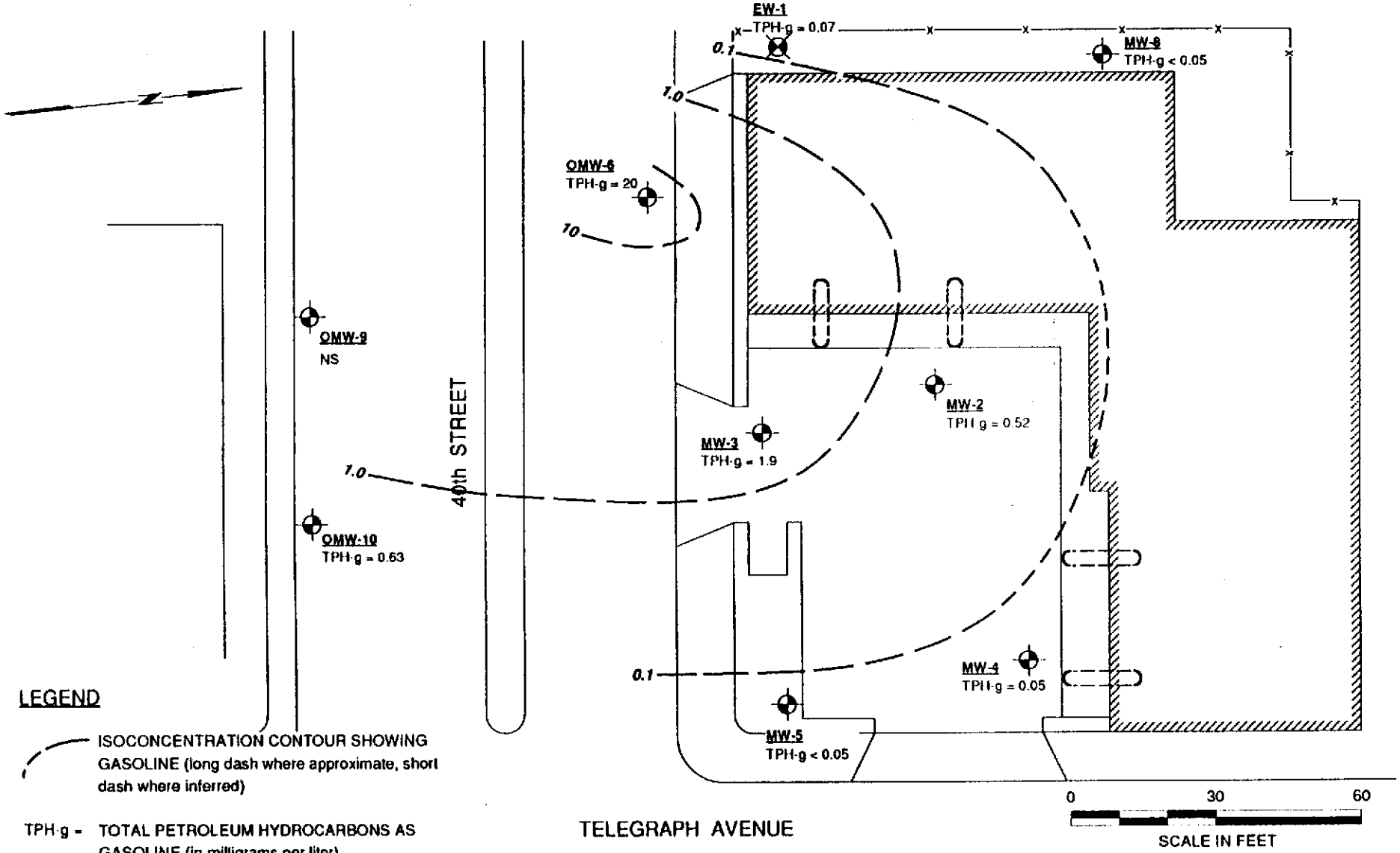
NOTE: GROUNDWATER ELEVATIONS GIVEN IN FEET ABOVE MEAN SEA LEVEL.

GROUNDWATER CONTOUR MAP Q4/91

SHELL OIL COMPANY
500 40th Street
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Prepared by	LQL/TNW
Approved by	DS
WIC No.	204 5508 4903
Project No.	88-44-361-20
Date	12/12/91
Drawing No.	4



Base Map: Surveyed with Electronic Distance Meter by CEW, 1989

LEGEND

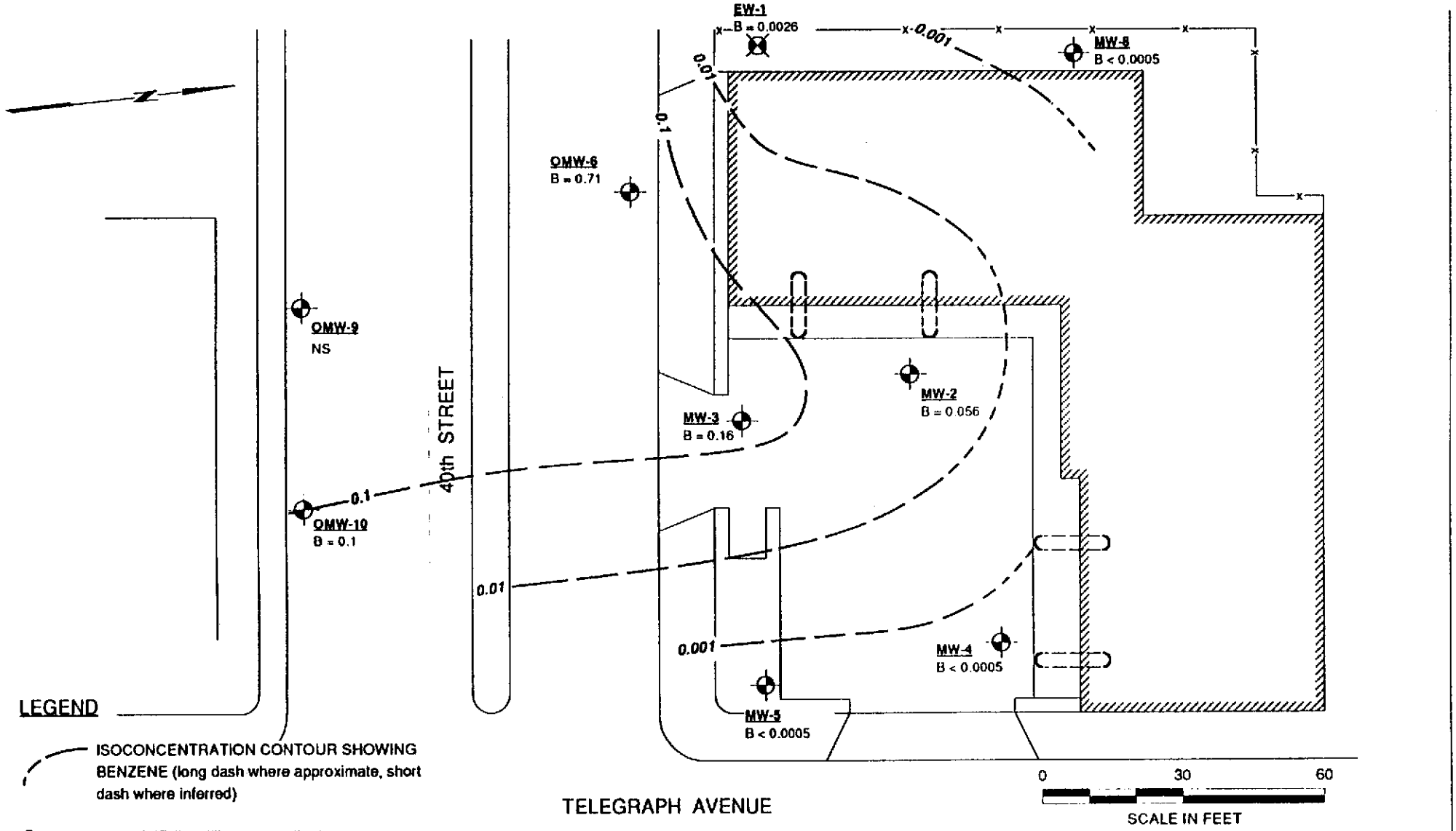
- ISOCONCENTRATION CONTOUR SHOWING GASOLINE (long dash where approximate, short dash where inferred)
- TPH-g = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (in milligrams per liter)
- MW-1 — GROUNDWATER MONITORING WELL
- OMW-6 — OFFSITE GROUNDWATER MONITORING WELL
- EW-1 — GROUNDWATER EXTRACTION WELL
- NS = NOT SAMPLED

PLAN: GROUNDWATER TPH-g

SHELL OIL COMPANY
500 40th Street
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-361-20
Prepared by	LQL/TNW
Date	12/12/91
Approved by	DS
Drawing No.	5
WIC No.	204 5508 4903



Base Map: Surveyed with Electronic Distance Meter by CEW, 1989

LEGEND

ISOCONCENTRATION CONTOUR SHOWING BENZENE (long dash where approximate, short dash where inferred)

B = BENZENE (in milligrams per liter)

MW-1 GROUNDWATER MONITORING WELL

OMW-6 OFFSITE GROUNDWATER MONITORING WELL

EW-1 GROUNDWATER EXTRACTION WELL

NS = NOT SAMPLED

PLAN: GROUNDWATER BENZENE

SHELL OIL COMPANY
500 40th Street
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Prepared by	LQL/TNW
Approved by	DS
WIC No.	204 5508 4903
Project No.	88-44-361-20
Date	12/12/91
Drawing No.	6

APPENDIX A

CHRONOLOGICAL SUMMARY

CHRONOLOGICAL SUMMARY

The following chronological summary is based on information provided to Converse Environmental West (Converse) by Shell Oil Company (Shell). Converse was not provided with certain information related to the construction, operational, and environmental history of the facility. According to Shell, the following information is not available in Shell files: volume of contaminated soil removed at the time of tank removal, geometry of the excavation created during tank removal, if any, and date and volume of any possible releases at the facility.

Date	Description of Activity
7/82	IT installed 8 six inch diameter groundwater monitoring wells to 30 feet below ground surface (bgs) onsite. The wells were screened from 5 to 30 feet bgs. Combustible vapors were detected in the storm sewer system in the BART Station across the street.
7/82	IT Progress Report 1: Well installations and constructions were reported, and free product was noted in wells B-7 and B-8. Groundwater gradient was shown to be westward, towards the BART Station.
11/82	IT Progress Report 6: Groundwater gradient still towards well B-3. From September 1 to November 19, 1982, IT removed 35 pints of product from B-4. Well tops of casings (TOCs) were re-surveyed and groundwater gradient was confirmed toward B-3. Maximum product thickness was in B-4, at several inches.
12/82	IT Progress Report 7: Product thickness increased in B-3 in apparent response to rising water table. Product in B-4 remained at several inches.
1/83	IT Progress Report 8: Product in B-4 had diminished to film thickness.
2/83	IT Progress Report 9: Rainfall records were researched, and the relationship between rainfall, water table and product removed was charted by graph. Amount of product in B-4 appeared to vary inversely with water table; as water table rose with winter rains, the amount product in B-4 dropped. IT proposed that product was displaced downgradient as water table rose.
3/83	IT Progress Report 10: Vapor concentrations of TPH (expressed as percent lower explosive limit) were rising in wells B-1, B-2, B-3 and B-7. No product was measurable in B-4.
6/83	Rapid reappearance of product in well B-4, from negligible in May to 4+ feet by June 30 and 6.34 feet on July 15. Increase was also measured B-3, to a thickness of 0.66 feet in July. IT concluded that a reservoir of product existed in the tank backfill, and that as water table dropped in summer time this reservoir was allowed to escape by way of gravel lenses which were saturated at high water table seasons.
7/83	IT installed 8 inch diameter monitoring wells B-9 and B-10 to 20 feet bgs in native soils next to the tank backfill.

CHRONOLOGICAL SUMMARY (continued)

Shell Oil Company Site
500 40th Street
Oakland, California

Date	Description of Activity
8/83	IT Progress Report 11: IT repeated the concept that product was released in surges through gravel lenses exposed to the water table during summer.
8/83	IT installed groundwater monitoring well B-11 and sand backfill in the southwest corner of the tank bed. No free-flowing product was encountered in this well.
9/83	IT drilled two 18 inch diameter borings to 30 feet bgs and completed same as 12 inch diameter recovery wells with screen intervals from 5 to 30 feet bgs. These wells, R-1 and R-2, were located near wells B-3 and B-4, directly west of the tank backfill.
10/83	IT purged and developed wells R-1 and R-2, holding a strong depression on the water table for 2 hours.
11/83	According to IT reference, the tanks were removed and, as part of this excavation wells R-1 and R-2 were also removed. No information was provided on tank excavation or associated soils/groundwater testing and reporting to regulatory agencies.
1/84	IT Progress Report 13: Wells B-3 and B-4 continued to contain measurable product, to thicknesses of 2 feet. In general, product thicknesses decreased during December and January. Product thicknesses also decreased after tank removal. Groundwater piezometric map showed a westward-trending, low area encompassing wells R-1, R-2, B-3 and B-4. This extended offsite, suggesting a paleodrainage which controlled product collection and migration offsite.
5/84	IT Report: The thicknesses of product in B-3 and B-4 measured from several inches to one foot during the period January to May 1984.
7/84	IT Report: Product thicknesses increased starting in mid-May in response to lowering water tables. This pattern was similar to the pattern observed in 1983.
8/84	IT Report: The thickness of product in B-3 remained one foot, while the amount of product in B-4 decreased. IT recommended looking for possible upgradient offsite sources.
9/84	IT Report: The thickness of product in B-4 started to increase (still at less than one inch) while the thickness of product in B-3 decreased (still on the order of one foot).
10/84	IT Report: New construction was noted.

CHRONOLOGICAL SUMMARY (continued)

Shell Oil Company Site
500 40th Street
Oakland, California

Date	Description of Activity
1/85	IT Report: The thickness of product of B-3 had decreased to several inches and B-4 contained negligible measurable product. This pattern of decreasing product in the winter (high water table) months was consistent with that observed in the winters of 1982-83, and 1983-84.
2/85	IT Report: Significant measurable gasoline (1.64 feet) was discovered in B-8. The gasoline appeared degraded and "old". IT concluded that this gasoline could be from the same source as that contributing to observed in wells B-3 and B-4.
6/85	IT Report: Product thicknesses in B-3, B-4 and B-8 decreased from January to mid-May, with a dramatic decrease in B-8. IT repeated its interpretation that product thickness decreased as water tables rose and increased as water tables fell. IT further proposed that the product was trapped in permeable lenses, and migrated to different geographic areas as the water tables rose and fell.
12/85	IT Report: The thickness of product in B-3 increased to approximately 2 feet during the summer, showing the seasonal increase of prior years period. Simultaneously, no product was measured in B-8 after June 3, and product reappeared in B-2 in September and October. Product thickness in B-4 fluctuated at less than one foot thick during this period. IT recommended installing a recovery extraction trench along the west boundary of the property.
5/86	IT Quarterly Report: Product thickness decreased in wells B-3 and B-4 in response to seasonal rise in the water table.
6/86	IT requested permission to abandon B-6.
7/86	IT stated that Shell planned to remove the underground storage tanks in the near future.
8/86	IT Quarterly Report: IT noted seasonal decline in water table and negligible measurable product in wells B-2 and B-4, with approximately 2 feet of floating product in B-3.
9/86	A groundwater sample from B-3 contained volatile organics: 0.90 ppm; benzene: 0.32 ppm; toluene: 0.23 ppm; xylene: 0.16 ppm.
1/04/87(?)	A commercial shopping center building was erected on the property, covering wells B-2, B-6, B-7, B-9 and B-10. Wells B-1, B-3, B-4, B-5 and B-8 were covered by site parking and a rear driveway.

CHRONOLOGICAL SUMMARY (continued)

Shell Oil Company Site
500 40th Street
Oakland, California

Date	Description of Activity
1/89	Shell transfers project to Converse.
4/07/89	Revised Work Plan submitted to RWQCB.
5/23/89	Monitoring wells MW-2, MW-3 and MW-4 installed, soil sampled.
6/20/89	Groundwater sampled, wells MW-2 through MW-4.
7/07/89	Converse issued Quarterly Report.
7/19/89	Groundwater sampled, wells MW-2 through MW-4.
8/01/89	Right-of-Entry Agreement sent to property owners of 518 40th Street.
8/08/89	Groundwater was sampled, wells MW-2 through MW-4.
9/11/89	Groundwater was sampled, wells MW-2 through MW-4.
9/19/89	Converse installed well MW-5; soils were sampled and analyzed.
10/10/89	Groundwater was sampled MW-2 through MW-5.
10/16/89	Converse installed well OMW-6; soils were sampled and analyzed.
10/17/89	Converse installed boring SB-1; soils sampled and analyzed; and bored OMW-9. During well drilling, Loma Prieta Earthquake struck. Oakland municipal services were severely disrupted.
10/21/89	OMW-9 pilot boring was sealed.
11/13/89	OMW-9 boring was reamed and the well installed. OMW-10 installed; soils sampled and analyzed. Proposed well OMW-8 boring attempted and abandoned; location was in sewer main backfill.
11/17/89	Discharge permit application for interim groundwater treatment system submitted to EBMUD.
12/01/89	OMW-6 was developed.
12/10/89	OMW-10 and OMW-9 were developed.
1/5/90	Converse sampled groundwater wells MW-2, MW-3, MW-4, MW-5, OMW-6, OMW-9 and OMW-10.

CHRONOLOGICAL SUMMARY (continued)

Shell Oil Company Site
500 40th Street
Oakland, California

Date	Description of Activity
8/89-3/90	Ongoing unsuccessful attempts to gain right-of-entry for installation of extraction wells EW-11 and EW-12, as the commencement of onsite groundwater remediation. This process has continued without resolution since August, 1989.
2/15-20/90	Conducted underground utilities location survey in the west alley behind the building; survey was needed for the proposed groundwater monitoring well location selection.
3/2-3/4/90	Converse sampled groundwater wells MW-2, MW-3, MW-4, MW-5, OMW-6, OMW-9 and OMW-10.
3/22/90	Shell obtained the right-of-entry agreement from the owners of 518 40th Street.
5/31-6/1/90	Converse sampled groundwater wells MW-2, MW-3, MW-4, MW-5 OMW-6, OMW-9 and OMW-10.
6/27-28/90	Converse installed onsite wells MW-8 and EW-1.
7/03/90	Converse sampled groundwater from wells MW-8 and EW-1.
8/28-29/90	Converse sampled groundwater monitoring wells MW-2 through MW-5, OMW-6, OMW-9 and OMW-10.
11/16/90	Converse sampled groundwater monitoring wells MW-2, MW-3, MW-5, MW-8, OMW-6, OMW-9, OMW-10 and extraction well EW-1.
2/21-2/22/91	Converse sampled groundwater monitoring wells MW-2 through MW-5, MW-8, EW-1, OMW-6, OMW-9, and OMW-10.
5/30-5/31/91	Converse sampled groundwater monitoring wells MW-2, MW-3 and MW-5, MW-8, EW-1, OMW-6, OMW-9, and OMW-10.
8/6-8/7/91	Converse sampled groundwater monitoring wells MW-2, MW-3 and MW-5, MW-8, EW-1, OMW-6, OMW-9, and OMW-10.

CHRONOLOGICAL SUMMARY (continued)

Shell Oil Company Site
500 40th Street
Oakland, California

Date	Description of Activity
10/30-10/31/91	**Converse sampled groundwater monitoring wells EW-1, MW-2, MW-3, MW-4, MW-5, MW-8, OMW-6, and OMW-10.**
11/20-11/23/91	**Converse installed and surveyed offsite monitoring wells OMW-11, OMW-12, and OMW-13. Wells OMW-11 and OMW-13 were sampled.**
12/02/91	**Converse measured depths to water in wells EW-1, MW-2, MW-3, MW-4, MW-5, MW-8, OMW-10, and OMW-12. Well OMW-12 was sampled.**

NOTE:

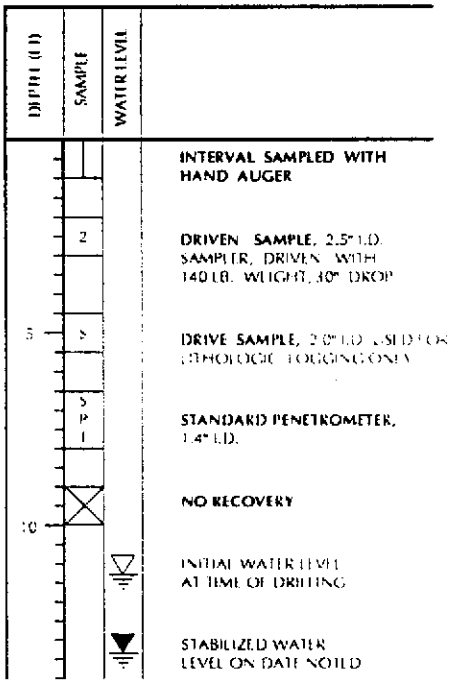
Bold indicates work completed this quarter.

APPENDIX B

BORING LOGS

MAJOR DIVISIONS			SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS MORE THAN HALF IS LARGER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 12 % FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 12 % FINES	SM	SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE GRAINED SOILS MORE THAN HALF IS SMALLER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAY
			OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE, SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

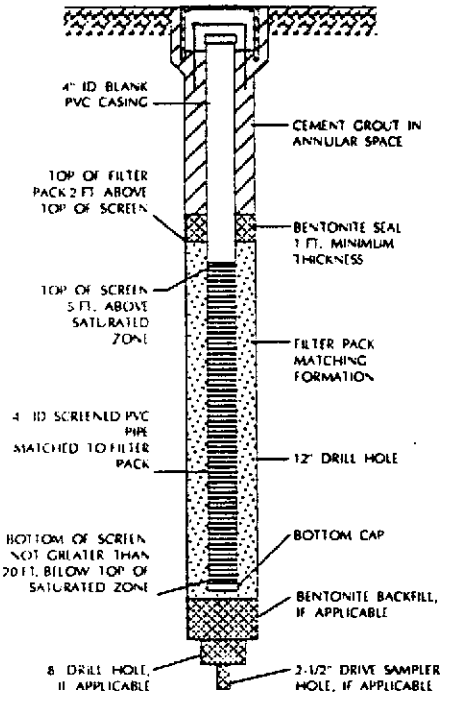
SAMPLE TYPE



NOTE:

SOIL CONDITIONS INDICATED BY BORING LOGS APPLY ONLY AT THE LOCATION OF THE PARTICULAR BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THE BORING LOCATION WITH THE PASSAGE OF TIME. DATA PRESENTED IN THE LOGS REPRESENT A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED. SOIL CONDITIONS INDICATED BY BETWEEN SAMPLE [illegible] ARE INTERPRETED.

WELL CONSTRUCTION



UNIFIED SOIL CLASSIFICATION, BORING LOG, AND WELL CONSTRUCTION SYMBOLS

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-1

LOG OF BORING NO. OMW-11

Start: *11/21/91* Completion: *11/21/91* Water Measure: *11/22/91*	Geologist: *C. Brown* Assistant Geol.: *N/A* Drilling Co.: *A.T.D.*	Driller/Helper: *N/A* Drilling Method: *Hollow Stem Auger* Auger/Bit Dia.: *3.75" x 8" - 7.25" x 13"*

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION		MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
					8" Concrete, 7" Base				gray brown		
							moist	dense			
					Silty Clay	CL		stiff	black		
	S									4	
5	1						moist	stiff	brown	9	
	S				Clayey Sand, little fine Gravel	SC	moist	medium dense	gray with rust	5	
	2									13	
10	S									10	
	S									14	
										16	
										18	
	SPT 1						moist to very moist			9	
										11	
										14	
										18	
	3				Slightly Clayey, coarse Sand, trace to little fine Gravel	SP/SC	wet	loose		5	
	S									5	
15	S				Fine Sandy Clay	CL	very moist	stiff	gray with rust	4	
										5	
	S									5	
										7	
					Clayey fine Sand	SC		medium dense		4	
	SPT 2									5	
					Silty fine Sand	SP/SM			brown	6	
										6	
	S				Coarse Sand and fine Gravel, trace Clay	GP/GC	wet			9	
20										20	

REGISTERED GEOLOGIST
GERARD L. SLATTERY
No. 5038
STATE OF CALIFORNIA

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-2

LOG OF BORING NO. OMW-11

Continued - Page 2

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION		MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
	S				Clayey coarse Sand and fine Gravel	SC/GC	wet	dense	brown	11 19	
	S				Fine Gravelly coarse Sand, trace Clay	SP				21 16	
	S P T 3				Very Sandy Clay/Clayey Sand	CL/SC			rust with gray	4 5 10	
					Fine Gravelly fine to medium Sand	SP			gray	11	
25					Total Depth of Boring: 24 ft. Casing: Blank 4" ID Sch. 40 PVC Screen: Slotted 4" ID Sch. 40 PVC, 0.020" slots Filter Pack: 2/12 sand						
30											
35											
40											

REGISTERED GEOLOGIST
GERARD L. SLATTERY
No. 5038
STATE OF CALIFORNIA

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-3

LOG OF BORING NO. OMW-12

Start: *11/20/91* Completion: *11/20/91* Water Measure: *12/2/91*	Geologist: *C. Brown* Assistant Geol.: *N/A* Drilling Co.: *A.T.D.*	Driller/Helper: *N/A* Drilling Method: *Hollow Stem Auger* Auger/Bit Dia.: *3.75" x 8" - 7.25" x 13"*

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION		MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
					≈8" Concrete, 8" Base, 6" Fill						
					6" layer Gravel						
					Silty Clay	CL	moist	stiff	black		
	S 1				trace black specks				brown	10 10	
5											
	S 2				Clayey Sand	SC	moist	medium dense	gray with rust	6 18	
10	S	▼								16	
					Fine Sandy Silt	ML				11	
	S									11	
					Clayey Sand, little fine Gravel	SC	very moist to wet		red brown	16	
	SPT 1				wet Sand lens					9	
					wet Sand lens					12	
					wet Sand lens					12	
										18	
	S				Coarse Sand, pea Gravel	SC/GC	wet			8	
	3				Fine Sandy Clay	CL	very moist	stiff	gray	10	
15										5	
	S								rust with gray	8	
					wet lens		wet			11	
	S						very moist			12	
										4	
	SPT 2									5	
					Silty Clay	CL				12	
							wet			15	
	S				Clayey Sand and fine Gravel	SC/GC	very moist	stiff		4	
20					Silty Clay	CL	moist			7	

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-4

LOG OF BORING NO. OMW-12

Continued - Page 2

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION	MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
	S				Silty Clay CL	moist	stiff	rust with gray	5 8	
	S								6 7	
	SPT 3				Becoming Sandy				4 5 6 8	
25					Total Depth of Boring: 24 ft. Casing: Blank 4" ID Sch. 40 PVC Screen: Slotted 4" ID Sch. 40 PVC, 0.020" slots Filter Pack: 2/12 sand					
30										
35										
40										

REGISTERED GEOLOGIST
GERARD L. SLATTERY
No. 5038
STATE OF CALIFORNIA

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-5

LOG OF BORING NO. OMW-13

Start: *11/21/91*	Geologist: *C. Brown*	Driller/Helper: *N/A*
Completion: *11/21/91*	Assistant Geol.: *N/A*	Drilling Method: *Hollow Stem Auger*
Water Measure: *11/22/91*	Drilling Co.: *A.T.D.*	Auger/Bit Dia.: *3.75" x 8" - 7.25" x 13"*

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION		MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
					8" Concrete, 8" Base						
					Silty Clay	CL	moist	stiff	dark gray black		
	S 1								mottled gray brown	4 8	
5	S									5 9	
	S				trace Sand				gray	12 14	
					Grading into fine Sandy Clay						
	S 2				Fine Sandy Clay/Clayey Sand	CL/SC				5 7	
10	S				Silty Clay	CL		stiff	light gray with rust	6 11	
	S				Clayey Sand and Gravel	SC/GC		dense		24 25	
	SPT 1									9 15 16	
	S						wet			20	
	S 3							medium dense		8 9	
15	S									10	
					Sandy Silt	ML		stiff	rust	7	
	S				Clayey Sand and Gravel	SC/GC			brown	12 16	
	SPT 2									12 19 23 34	
20	S						wet	medium dense		10 15	

REGISTERED GEOLOGIST GERARD L. SLATTERY No. 5038 STATE OF CALIFORNIA

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-6

LOG OF BORING NO. OMW-13

Continued - Page 2

DEPTH (FT)	SAMPLE	WATER LEVEL	SYMBOL	WELL CONSTRUCT.	DESCRIPTION	MOISTURE	SOIL CONSISTENCY OR ROCK HARDNESS	COLOR	BLOWS / 6"	PERCENT RECOVERY
	S				Silty Clay CL	very moist	stiff	gray brown	5 8	
	S					moist			6 7	
	S P T 3				Sandy Clay with occasional Clayey Sand lens	very moist		gray with rust	4 5 6 8	
25					Total Depth of Boring: 24 ft. Casing: Blank 4" ID Sch. 40 PVC Screen: Slotted 4" ID Sch. 40 PVC, 0.020" slots Filter Pack: 2/12 sand					
30										
35										
40										

REGISTERED GEOLOGIST
GERARD L. SLATTERY
No. 5038
STATE OF CALIFORNIA

SHELL OIL COMPANY
500 40th Street
Oakland, California

Project No.
88-44-361-20

Converse Environmental West

Drawing No.
A-7

APPENDIX C

ANALYTICAL LABORATORY REPORT and CHAIN-OF-CUSTODY FORMS

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

RECEIVED
NOV 14 1991
CONVERSE ENVIRONMENTAL

Dave Siegel
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 11/12/1991
NET Client Acct No: 35340
NET Pacific Log No: 91.0349
Received: 10/31/1991

Client Reference Information

SHELL, 500 40th St., Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc

Client No: 35340
Client Name: Converse Consultants
NET Log No: 91.0349

Date: 11/12/1991
Page: 2

Ref: SHELL, 500 40th St., Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-8 10/30/1991 103550	OMW-6 10/30/1991 103551**	Units
GC Ext. (Liquid,3510)			11-06-91	11-06-91	
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			1	100	
as Gasoline	5030	0.05	ND	20	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			1	100	
Benzene	8020	0.5	ND	710	ug/L
Ethylbenzene	8020	0.5	ND	410	ug/L
Toluene	8020	0.5	ND	240	ug/L
Xylenes (Total)	8020	0.5	ND	1,700	ug/L
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-06-91	11-06-91	
DATE ANALYZED			11-10-91	11-10-91	
as Diesel	3510	0.05	ND	4.6	mg/L
as Motor Oil	3510	0.5	ND	ND	mg/L

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 35340
Client Name: Converse Consultants
NET Log No: 91.0349

Date: 11/12/1991
Page: 3

Ref: SHELL, 500 40th St., Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 911030 10/30/1991 103552**	 Field Blank 10/30/1991 103553**	Units
GC Ext. (Liquid,3510)			11-06-91	11-06-91	
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			100	1	
as Gasoline	5030	0.05	7.4	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			100	1	
Benzene	8020	0.5	600	0.9	ug/L
Ethylbenzene	8020	0.5	320	ND	ug/L
Toluene	8020	0.5	170	1.3	ug/L
Xylenes (Total)	8020	0.5	1,200	ND	ug/L
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-06-91	11-06-91	
DATE ANALYZED			11-10-91	11-10-91	
as Diesel	3510	0.05	3.3	0.11	mg/L
as Motor Oil	3510	0.5	ND	ND	mg/L

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 35340
Client Name: Converse Consultants
NET Log No: 91.0349

Date: 11/12/1991
Page: 4

Ref: SHELL, 500 40th St., Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-2 10/30/1991 103554**	MW-3 10/30/1991 103555**	Units
GC Ext. (Liquid,3510)			11-06-91	11-06-91	
TPH (Gas/BTXE,Liquid)			--	--	
METHOD 5030 (GC,FID)					
DATE ANALYZED			11-08-91	11-08-91	
DILUTION FACTOR*			10	10	
as Gasoline	5030	0.05	0.52	1.9	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-08-91	11-08-91	
DILUTION FACTOR*			10	10	
Benzene	8020	0.5	56	160	ug/L
Ethylbenzene	8020	0.5	56	63	ug/L
Toluene	8020	0.5	ND	28	ug/L
Xylenes (Total)	8020	0.5	100	180	ug/L
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-06-91	11-06-91	
DATE ANALYZED			11-10-91	11-10-91	
as Diesel	3510	0.05	0.30	0.48	mg/L
as Motor Oil	3510	0.5	ND	ND	mg/L

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 35340 Date: 11/12/1991
Client Name: Converse Consultants
NET Log No: 91.0349 Page: 5

Ref: SHELL, 500 40th St., Oakland

			Descriptor, Lab No. and Results		
			MW-4 10/30/1991	MW-5 10/30/1991	
Parameter	Method	Reporting Limit	103556**	103557	Units
GC Ext. (Liquid,3510)			11-06-91	11-06-91	
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			1	1	
as Gasoline	5030	0.05	0.05	ND	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	ND	ND	ug/L
Ethylbenzene	8020	0.5	ND	ND	ug/L
Toluene	8020	0.5	ND	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ND	ug/L
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-06-91	11-06-91	
DATE ANALYZED			11-10-91	11-10-91	
as Diesel	3510	0.05	ND	ND	mg/L
as Motor Oil	3510	0.5	ND	ND	mg/L

** Note: The positive result for the PETROLEUM HYDROCARBONS as Gasoline analysis on this sample does not appear to have typical gasoline pattern.

NET Pacific, Inc

Client No: 35340
Client Name: Converse Consultants
NET Log No: 91.0349

Date: 11/12/1991
Page: 6

Ref: SHELL, 500 40th St., Oakland

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	87	ND	64	79	21
Motor Oil	0.5	mg/L	84	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	112	ND	94	96	2.1
Benzene	0.5	ug/L	99	ND	93	95	1.8
Toluene	0.5	ug/L	97	ND	94	92	1.2

COMMENT: Blank Results were ND on other analytes tested.

Gasoline	0.05	mg/L	99	ND	86	82	4.7
Benzene	0.5	ug/L	89	ND	109	96	12
Toluene	0.5	ug/L	78	ND	92	90	2.2

COMMENT: Blank Results were ND on other analytes tested.

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
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Fax: (707) 526-9623

Dave Siegel
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 11/14/1991
NET Client Acct No: 35340
NET Pacific Log No: 91.0446
Received: 11/01/1991

Client Reference Information

SHELL, 500 40th St., Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc

Client No: 35340
Client Name: Converse Consultants
NET Log No: 91.0446

Date: 11/14/1991
Page: 2

Ref: SHELL, 500 40th St., Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results EW-1 10/30/1991 103996**	OMW-10 10/31/1991 103997***	Units
GC Ext. (Liquid,3510)			11-06-91	11-06-91	
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			1	1	
as Gasoline	5030	0.05	0.07	0.63	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			11-07-91	11-07-91	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	2.6	100	ug/L
Ethylbenzene	8020	0.5	ND	33	ug/L
Toluene	8020	0.5	ND	ND	ug/L
Xylenes (Total)	8020	0.5	ND	26	ug/L
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-06-91	11-06-91	
DATE ANALYZED			11-12-91	11-12-91	
as Diesel	3510	0.05	ND	0.15	mg/L
as Motor Oil	3510	0.5	ND	0.73	mg/L

** Note: The positive result for the PETROLEUM HYDROCARBONS as Gasoline analysis on this sample does not appear to have typical gasoline pattern.

*** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 35340 Date: 11/14/1991
Client Name: Converse Consultants
NET Log No: 91.0446 Page: 3

Ref: SHELL, 500 40th St., Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results Trip Blank 10/31/1991 103998	Units
GC Ext. (Liquid,3510)			11-06-91	
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			11-07-91	
DILUTION FACTOR*			1	
as Gasoline	5030	0.05	ND	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			11-07-91	
DILUTION FACTOR*			1	
Benzene	8020	0.5	ND	ug/L
Ethylbenzene	8020	0.5	ND	ug/L
Toluene	8020	0.5	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			11-06-91	
DATE ANALYZED			11-12-91	
as Diesel	3510	0.05	ND	mg/L
as Motor Oil	3510	0.5	ND	mg/L

NET Pacific, Inc

Client No: 35340
Client Name: Converse Consultants
NET Log No: 91.0446

Date: 11/14/1991
Page: 4

Ref: SHELL, 500 40th St., Oakland

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	89	ND	87	78	13
Motor Oil	0.5	mg/L	88	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	103	ND	97	88	10
Benzene	0.5	ug/L	96	ND	96	87	10
Toluene	0.5	ug/L	102	ND	97	88	10

COMMENT: Blank Results were ND on other analytes tested.

NET Pacific, Inc

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

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

1886

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: _____

Date: 10-31-91
Page 1 of 1

Address: 200 40th ST., OAKLAND Ca.

WIC #: 204-5508-4903

Shell Engineer: JACK BRAGTAD
Phone No. (415) 685-3881
Fax #:

Consultant Name & Address: Conversе Env. West 55 Hawthorne St, #500 San Franasco, Ca. 94105

Consultant Contact: DAVE SIEGEL
Phone No. (915) 543-4200
Fax #:

Comments:

Sampled By: Carol Morrison
Printed Name: CAROL MORRISON

Sample ID	Date	Soil	Water	Air	No. of conts.
EW-1	10-30-91		X		3
EW-1	10-30-91				2
OMW-10	10-31-91				3
OMW-10	10-31-91				2
TRIP BLANK	10/30-31/91				1
TRIP BLANK	10/30-31/91				1

Analysis Required

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal
X		X		
	X			
X		X		
	X			
X		X		
	X			

CUSTODY SEALED 10/31/91 @ 1600 MW

LAB: NET

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	X	5461
Site Investigation	[ ]	5441
Soil for disposal	[ ]	5442
Water for disposal	[ ]	5443
Air Sample - Sys O&M	[ ]	5452
Water Sample - Sys O&M	[ ]	5453
Other	[ ]	

TURN AROUND TIME
24 hours [ ]
48 hours [ ]
15 days X (Normal)
Other [ ] _____
NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.

Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
40 ml	X	N	GROUNDWATER	
1 l				
40 ml	X			
1 l				
40 ml	X		WATER	
1 l			WATER	

Relinquished By (signature): Carol Morrison	Printed name:	Date: 10/31/91	Received (signature): Mike Tavani	Printed name: MIKE TAVANI	Date: 10/31/91		
Relinquished By (signature): Mike Tavani	Printed name: MIKE TAVANI	Time: 1350	Received (signature):	Printed name:	Time: 1350		
Relinquished By (signature): (VIA NCL)	Printed name:	Date:	Received (signature): Kemple	Printed name: Kelly Temple	Date: 11/1/91		
		Time:			Time: 0800		

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

Last Revision Date: 10/15/91

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Siegel
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 12/06/1991
NET Client Acct. No: 1802
NET Pacific Log No: 91.0865
Received: 11/25/1991

Client Reference Information

SHELL 500 40th St. @ Telegraph

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: SHELL 500 40th St. @ Telegraph

SAMPLE DESCRIPTION: OMW-12 1 @ 4.5
Date Taken: 11/20/1991
LAB Job No: (-106129)

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			12-03-91	
DILUTION FACTOR*			1	
as Gasoline	5030	1	ND	mg/Kg
METHOD 8020 (GC,Solid)			--	
DATE ANALYZED			12-03-91	
DILUTION FACTOR*			1	
Benzene	8020	2.5	ND	ug/Kg
Ethlybenzene	8020	2.5	ND	ug/Kg
Toluene	8020	2.5	ND	ug/Kg
Xylenes (Total)	8020	2.5	ND	ug/Kg
METHOD 3550 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			11-26-91	
DATE ANALYZED			12-02-91	
as Diesel	3550	1	ND	mg/Kg
as Motor Oil	3550	10	56	mg/Kg

NET Pacific, Inc

Client Acct: 1802
Client Name: Converse Consultants
NET Log No: 91.0865

Date: 12/06/1991
Page: 3

Ref: SHELL 500 40th St. @ Telegraph

SAMPLE DESCRIPTION: OMW-12 2 @ 10
Date Taken: 11/20/1991
LAB Job No: (-106130)

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			12-03-91	
DILUTION FACTOR*			1	
as Gasoline	5030	1	ND	mg/Kg
METHOD 8020 (GC,Solid)			--	
DATE ANALYZED			12-03-91	
DILUTION FACTOR*			1	
Benzene	8020	2.5	ND	ug/Kg
Ethlybenzene	8020	2.5	ND	ug/Kg
Toluene	8020	2.5	ND	ug/Kg
Xylenes (Total)	8020	2.5	ND	ug/Kg
METHOD 3550 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			11-26-91	
DATE ANALYZED			11-27-91	
as Diesel	3550	1	ND	mg/Kg
as Motor Oil	3550	10	ND	mg/Kg

NET Pacific, Inc

Client Acct: 1802
Client Name: Converse Consultants
NET Log No: 91.0865

Date: 12/06/1991
Page: 4

Ref: SHELL 500 40th St. @ Telegraph

SAMPLE DESCRIPTION: OMW-12 4 @ 15
Date Taken: 11/20/1991
LAB Job No: (-106131)

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			12-03-91	
DILUTION FACTOR*			1	
as Gasoline	5030	1	ND	mg/Kg
METHOD 8020 (GC,Solid)			--	
DATE ANALYZED			12-03-91	
DILUTION FACTOR*			1	
Benzene	8020	2.5	ND	ug/Kg
Ethlybenzene	8020	2.5	ND	ug/Kg
Toluene	8020	2.5	ND	ug/Kg
Xylenes (Total)	8020	2.5	ND	ug/Kg
METHOD 3550 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			11-26-91	
DATE ANALYZED			11-27-91	
as Diesel	3550	1	ND	mg/Kg
as Motor Oil	3550	10	ND	mg/Kg

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.:

Date: 11-20-91
Page 1 of 1

Site Address: 500-40th ST AT TELEGRAPH
OAKLAND, CALIF

WIC #: 204-5508-4903

Shell Engineer: JACK BRADSTAD (510) Phone No. 685 3851 Fax #: 685 3943

Consultant Name & Address: CONVERSE ENVIRONMENT
55 HAWTHORNE SUITE 500
S.F. CAL 94105

Consultant Contact: DAVID SIEGEL (415) Phone No. 543 9206 Fax #: DM 3157

Comments:

Sampled By: Charles Brown

Printed Name: CHARLES BROWN

Analysis Required

LAB: N.E.T

CHECK ONE (1) BOX ONLY	CTR/T	TURN AROUND TIME
Quarterly Monitoring	[ ] 5461	24 hours [ ]
Site Investigation	[X] 5441	48 hours [ ]
Soil for disposal	[ ] 5442	15 days [X] (Normal)
Water for disposal	[ ] 5443	Other [ ]
Air Sample - Sys O&M	[ ] 5452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT
Water Sample - Sys O&M	[ ] 5453	
Other	[ ]	

Sample ID	Date	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	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
OMW-12-1 @ 45 FT	11-20-91	X			1	X	X	X			2½" ø x 6" Brass Liners			SILTY CLAY	
OMW 12-2 @ 10'	"	"			1	"	"	"						CLAYEY SAND	HOLD BELOW WATER
OMW 12-4 @ 15'	"	"			1	X	X	X						SANDY CLAY	HOLD BELOW WATER
OMW-6 @ 20'	11-20-91	X			1									SILTY CLAY	

Relinquished By (signature): Charles Brown
Printed name: CHARLES BROWN
Date: 11/25/91 Time: 0810

Relinquished By (signature):
Printed name:
Date: Time:

Relinquished By (signature):
Printed name:
Date: Time:

Received (signature):
Printed name:
Date: Time:

Received (signature):
Printed name:
Date: Time:

Received (signature): Kempale
Printed name: Kelly Temple
Date: 11/25/91 Time: 0840

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

Last Revision Date: 10/15/91

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

David Siegel
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 12/06/1991
NET Client Acct No: 1802
NET Pacific Log No: 91.0868
Received: 11/25/1991

Client Reference Information

SHELL 500 40th St. @ Telegraph, Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc

Client No: 1802 Date: 12/06/1991
Client Name: Converse Consultants
NET Log No: 91.0868 Page: 2

Ref: SHELL 500 40th St. @ Telegraph, Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results OMW-11-1 @ 5 11/21/1991 106139	 OMW-11-2 @ 10 11/21/1991 106140	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			12-04-91	12-04-91	
DILUTION FACTOR*			1	1	
as Gasoline	5030	1	ND	ND	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			12-04-91	12-04-91	
DILUTION FACTOR*			1	1	
Benzene	8020	2.5	ND	ND	ug/Kg
Ethlybenzene	8020	2.5	ND	ND	ug/Kg
Toluene	8020	2.5	ND	ND	ug/Kg
Xylenes (Total)	8020	2.5	ND	ND	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-26-91	11-26-91	
DATE ANALYZED			11-27-91	11-27-91	
as Diesel	3550	1	ND	ND	mg/Kg
as Motor Oil	3550	10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 1802
Client Name: Converse Consultants
NET Log No: 91.0868

Date: 12/06/1991
Page: 3

Ref: SHELL 500 40th St. @ Telegraph, Oakland

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results OMW-11-4 @14 11/21/1991 106141	 OMW-13-1 @ 5 11/21/1991 106142	Units
TPH (Gas/BTXE,Solid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			12-04-91	12-04-91	
DILUTION FACTOR*			1	1	
as Gasoline	5030	1	ND	ND	mg/Kg
METHOD 8020 (GC,Solid)			--	--	
DATE ANALYZED			12-04-91	12-04-91	
DILUTION FACTOR*			1	1	
Benzene	8020	2.5	ND	ND	ug/Kg
Ethlybenzene	8020	2.5	ND	ND	ug/Kg
Toluene	8020	2.5	ND	ND	ug/Kg
Xylenes (Total)	8020	2.5	ND	ND	ug/Kg
METHOD 3550 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-26-91	11-26-91	
DATE ANALYZED			11-27-91	11-27-91	
as Diesel	3550	1	ND	ND	mg/Kg
as Motor Oil	3550	10	ND	ND	mg/Kg

2551

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: _____

Date: 11-21-91
Page 1 of 1

Site Address: 500-40th ST AT TELEGRAPH
OAKLAND, CALIF

WIC #: 204 -5508 -4903

Shell Engineer: JACK BRADSTAD (510) Phone No. 685 3851 Fax #: 685 3947

Consultant Name & Address: CONVERSE ENVIRONMENTAL
55 HAWTHORNE SUITE 500
S.F. CAL 94105

Consultant Contact: Phone No. 543 9206

LAB: N.E.T

Analysis Required

(gas)	(diesel)		(8240)							
SN	RPI	NTI	ND	NA	N/A	MPN	mL/	mg/	mg/	mea

ICV:

*

^

CHECK ONE (1) BOX ONLY		CTADT	TURN AROUND TIME	
Quarterly Monitoring	[ ]	5461	24 hours	[ ]
Site Investigation	[X]	5441	48 hours	[ ]
Soil for disposal	[ ]	5442	15 days	[X] (Normal)
Water for disposal	[ ]	5443	Other	[ ]
Air Sample - Sys O&M	[ ]	5452	NOTE: Notify Lab as soon as possible of	
Water Sample - Sys O&M	[ ]	5451		

Me
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NET Pacific, Inc

Client A
Client N
NET Log

Ref: SHELL

Parameter	Reporting Limits	Uni
Diesel	0.05	mg/
Motor Oil	0.5	mg/
Gasoline	0.05	mg/
Benzene	0.5	ug/
Toluene	0.5	ug/

COMMENT: Blank R

NET Pacific, Inc

Paramet

Diesel
Motor (
Gasoli
Benzen
Toluen

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

DEC 10 1991

David Siegel
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 12/09/1991
NET Client Acct No: 1802
NET Pacific Log No: 91.0867
Received: 11/25/1991

Client Reference Information

SHELL 500 40th St. @ Telegraph, Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc

Client No: 1802
Client Name: Converse Consultants
NET Log No: 91.0867

Date: 12/09/1991
Page: 2

Ref: SHELL 500 40th St. @ Telegraph, Oakland

			Descriptor, Lab No. and Results		
			OMW-11 11/22/1991	OMW-13 11/22/1991	
Parameter	Method	Reporting Limit	106137**	106138**	Units
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			12-05-91	12-05-91	
DILUTION FACTOR*			1	5	
as Gasoline	5030	0.05	0.45	0.90	mg/L
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			12-05-91	12-05-91	
DILUTION FACTOR*			1	5	
Benzene	8020	0.5	1.1	37	ug/L
Ethylbenzene	8020	0.5	ND	74	ug/L
Toluene	8020	0.5	ND	9.5	ug/L
Xylenes (Total)	8020	0.5	ND	130	ug/L
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			11-27-91	11-27-91	
DATE ANALYZED			12-02-91	12-02-91	
as Diesel	3510	0.05	0.24	1.0	mg/L
as Motor Oil	3510	0.5	ND	ND	mg/L

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 1802
Client Name: Converse Consultants
NET Log No: 91.0867

Date: 12/09/1991
Page: 3

Ref: SHELL 500 40th St. @ Telegraph, Oakland

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	98	ND	84	89	7.0
Motor Oil	0.5	mg/L	121	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	84	ND	92	90	2.2
Benzene	0.5	ug/L	92	ND	92	89	3.3
Toluene	0.5	ug/L	100	ND	101	98	3.0

COMMENT: Blank Results were ND on other analytes tested.

NET Pacific, Inc

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

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

2397

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.:

Date: 11-22-91
Page 1 of 1

Site Address: 500-40th ST AT TELEGRAPH
OAKLAND, CALIF

WIC #: 204-5508-4903

Shell Engineer: JACK BRADSHAW (510) Phone No. 685 3851 Fax #: 685 3947

Consultant Name & Address: CONVERSE ENVIRONMENT
55 HAWTHORNE SUITE 500
S.F. CAL 94105

Consultant Contact: DAVID SIEGEL (415) Phone No. 543 4206 Fax #: 777 3157

Comments:

Sampled By: Charles Brown

Printed Name: CHARLES BROWN

Sample ID	Date	Soil	Water	Air	No. of conts.
OMW-11	11-22-91		X		4
OMW-11			X		3
OMW-13			X		3
OMW-13	11-22-91		X		2

Analysis Required

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Container Size	Preservation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
X		X			VOA				HCL
	X				LITER				
X		X			VOA				HCL
	X				LITER				

LAB: N.E.T

CHECK ONE (1) BOX ONLY		CT&T
Quarterly Monitoring	X	$461
Site Investigation		$441
Soil for disposal		$442
Water for disposal		$443
Air Sample - Sys O&M		$452
Water Sample - Sys O&M		$451
Other		

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

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

Relinquished By (signature): Charles Brown
Printed name: CHARLES BROWN
Date: 11/25/91
Time: 0840

Relinquished By (signature):
Printed name:
Date:
Time:

Relinquished By (signature):
Printed name:
Date:
Time:

Received (signature):

Received (signature):

Received (signature): Kelly Temple

Printed name:

Printed name:

Printed name: Kelly Temple
Date: 11/25/91
Time: 0840

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

Last Revision Date: 10/15/91

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Dave Siegel
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 12/16/1991
NET Client Acct. No: 1802
NET Pacific Log No: 91.0987
Received: 12/04/1991

Client Reference Information

SHELL 500 40th St., Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: SHELL 500 40th St., Oakland

SAMPLE DESCRIPTION: OMW-12
Date Taken: 12/02/1991
Time Taken:
LAB Job No: (-106722)

Parameter	Method	Reporting Limit	Results	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			12-10-91	
DILUTION FACTOR*			1	
as Gasoline	5030	0.05	ND	mg/L
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			12-10-91	
DILUTION FACTOR*			1	
Benzene	8020	0.5	ND	ug/L
Ethylbenzene	8020	0.5	ND	ug/L
Toluene	8020	0.5	ND	ug/L
Xylenes (Total)	8020	0.5	ND	ug/L
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			12-05-91	
DATE ANALYZED			12-06-91	
as Diesel	3510	0.05	ND	mg/L
as Motor Oil	3510	0.5	ND	mg/L

Ref: SHELL 500 40th St., Oakland

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	96	ND	103	107	4.0
Motor Oil	0.5	mg/L	98	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	100	ND	101	99	2.4
Benzene	0.5	ug/L	95	ND	98	96	1.9
Toluene	0.5	ug/L	94	ND	1063	100	3.3

COMMENT: Blank Results were ND on other analytes tested.

NET Pacific, Inc

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

2465

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No.: _____

Date: 12-2-91
Page 1 of 1

Site Address: 500 - 40th OAKLAND CALIF

WIC #: 204 - 5508 - 4903

Shell Engineer: JACK BRADSTAD — Phone No. 685-3851 — Fax #: 685-3943

Consultant Name & Address: CONVERSE ENVIRONMENTAL 55 HAWTHORNE SUITE 500 S.F. CAL 94105

Consultant Contact: DAVE SIEGEL 415- — Phone No. 543 4200 — Fax #: 777-3157

Comments:

Sampled By: Charles Brown

Printed Name: CHARLES BROWN

LAB: NET

Sample ID	Date	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	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
OMW-42	12-2-91		X		4	X		X			VOA				
OMW-12	12-2-91		X		3		X				Liter				
										STLC		U	12/3/91		
									(2)	19:00					

Analysis Required

CHECK ONE (1) BOX ONLY | C/A/T

- Quarterly Monitoring [X] 5461
- Site Investigation [ ] 5441
- Soil for disposal [ ] 5442
- Water for disposal [ ] 5443
- Air Sample - Sys O&M [ ] 5452
- Water Sample - Sys O&M [ ] 5453
- Other [ ]

TURN AROUND TIME

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

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

Relinquished By (signature)	Printed name	Date / Time	Received (signature)	Printed name	Date / Time
Charles Brown	CHARLES BROWN	Date: 12/3/91 Time: 15:45	Jeff Winkler	J. Winkler	Date: 12/3/91 Time: 15:45
Jeff Winkler	J. Winkler	Date: 12/3 Time: 19:00			Date: Time:
Relinquished By (signature):	Printed name:	Date: Time:	Received (signature): Kelly Temple	Printed name: Kelly Temple	Date: 12/4/91 Time: 0800

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

Last Revision Date: 10/15/91