CONVERSE ENVIRONMENTAL WEST

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June 28, 1991
88-44-359-20-1284
WIC No. 204-5508-5504

Ms. Penny Silzer
San Francisco Bay Regional Water
Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612

Subject: Report of Activities, Quarter 2, 1991
Shell Retail Gas Station
285 Hegenberger Road
Oakland, California

Dear Ms. Silzer:

This letter presents the results of investigations conducted by Converse Environmental West (Converse) during Quarter 2, 1991 at the above Shell retail gas station (Drawing 1) for Shell Oil Company. Descriptions of site location, conditions, soil stratigraphy, soil borings, and well installations have been included in previous quarterly reports on file with the regulatory agencies of jurisdiction.

Quarter 2, 1991 investigations consisted of monitoring the physical conditions of groundwater (depth to water, depth to product, thickness of floating product if present, etc.), and collecting groundwater samples from 10 monitoring wells. Well locations are shown on Drawing 2.

Activities planned for next quarter consist of monitoring the physical conditions of groundwater (depth to water, depth to product, thickness of floating product if present etc.), and collecting groundwater samples from all monitoring wells. A soil gas survey is also planned to attempt to determine the extent of offsite hydrocarbons. This information will be used to locate offsite groundwater monitoring wells, if necessary.

Work conducted is consistent with the Tri-Regional Water Quality Control Board guidelines for underground storage tanks. Samples, chain-of-custody protocols, and recommended analytical methods have been included in previous quarterly reports and are on file with the regulatory agencies.

Chemical and physical data acquired from these activities are tabulated in Tables 1 & 2. Laboratory reports and chain-of-custody forms are attached. Groundwater contours are illustrated in Drawing 3.

Higher concentrations of petroleum hydrocarbons were observed in samples from monitoring wells MW-1, MW-5, MW-7, MW-9 and MW-10 compared to the previous quarter. Concentrations of petroleum hydrocarbons were lower in wells MW-3 and MW-6.

The groundwater measurements indicate that the surface elevation has risen approximately 2 feet since the last quarter.

Please call if you have any questions.

Very truly yours,

Converse Environmental West

Charles R. Comstock
Technical Director

cc: Mr. Rafat Shahid - Alameda County Health Care Services Agency
Mr. Jack Brastad - Shell Oil Company
Mr. Michael Gallagher - Converse Environmental West

Attachments:

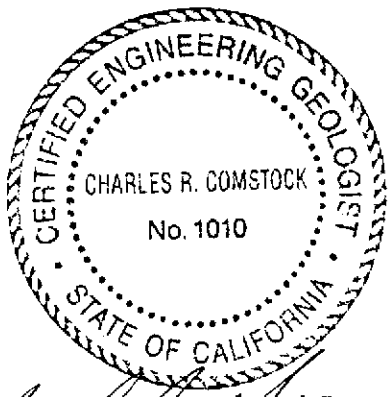
Certification
Drawing 1 - Site Location
Drawing 2 - Site Plot Plan
Drawing 3 - Groundwater Contour Map
Table 1 - Results of Groundwater Chemical Analyses
Table 2- Groundwater Monitoring Well Information
Table 3 - Chronological Summary
Laboratory Results
Chain-of-Custody Forms

CERTIFICATION

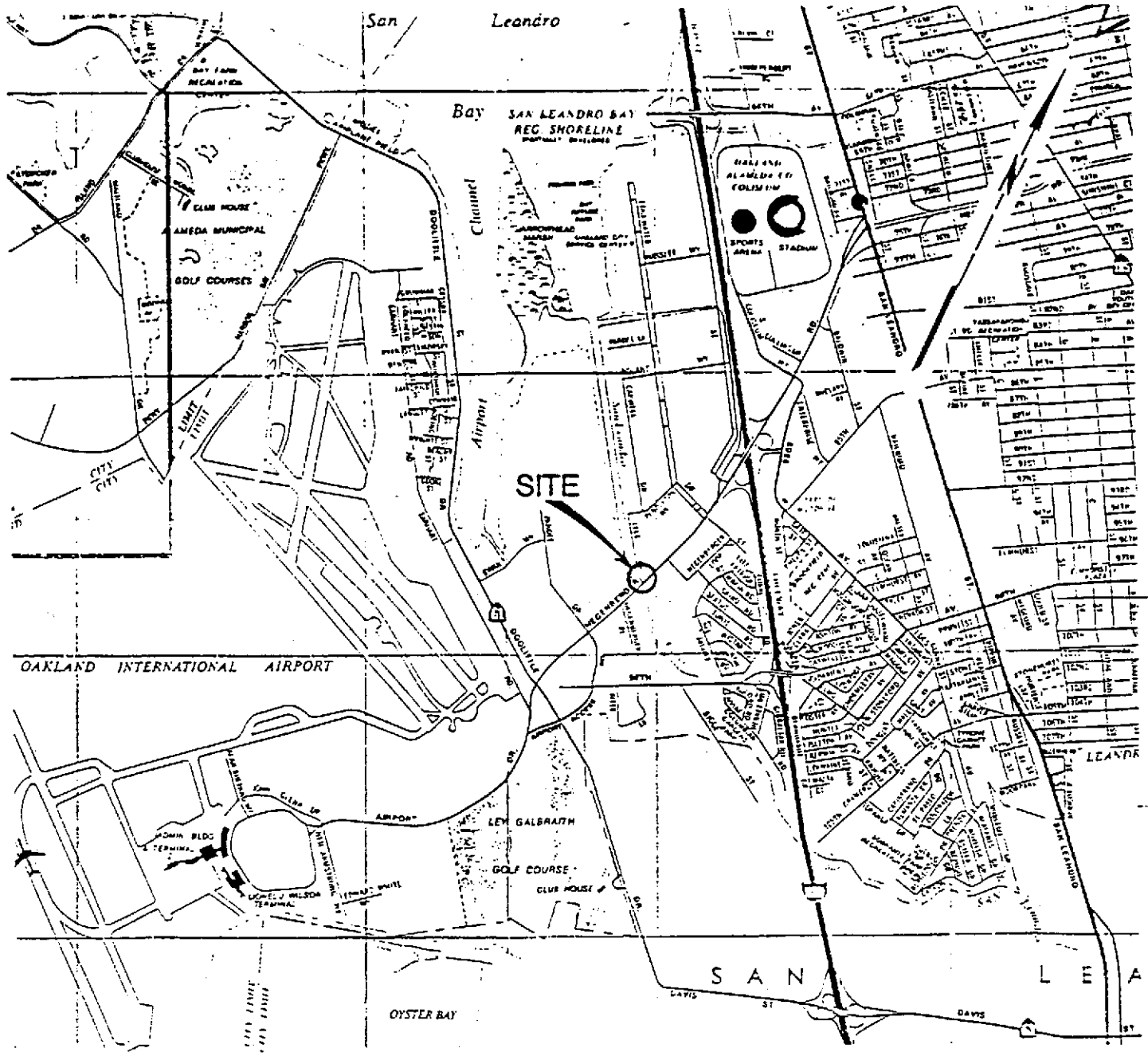
This report of activities for the Shell Oil Company facility at 285 Hegenberger Road, Oakland, California has been prepared by the staff of Converse Environmental West under the professional supervision of the Engineer and/or Geologist whose seal(s) and signature(s) appear hereon.

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,



CHARLES R. COMSTOCK
Principal Geologist



SOURCE: California State Automobile Association

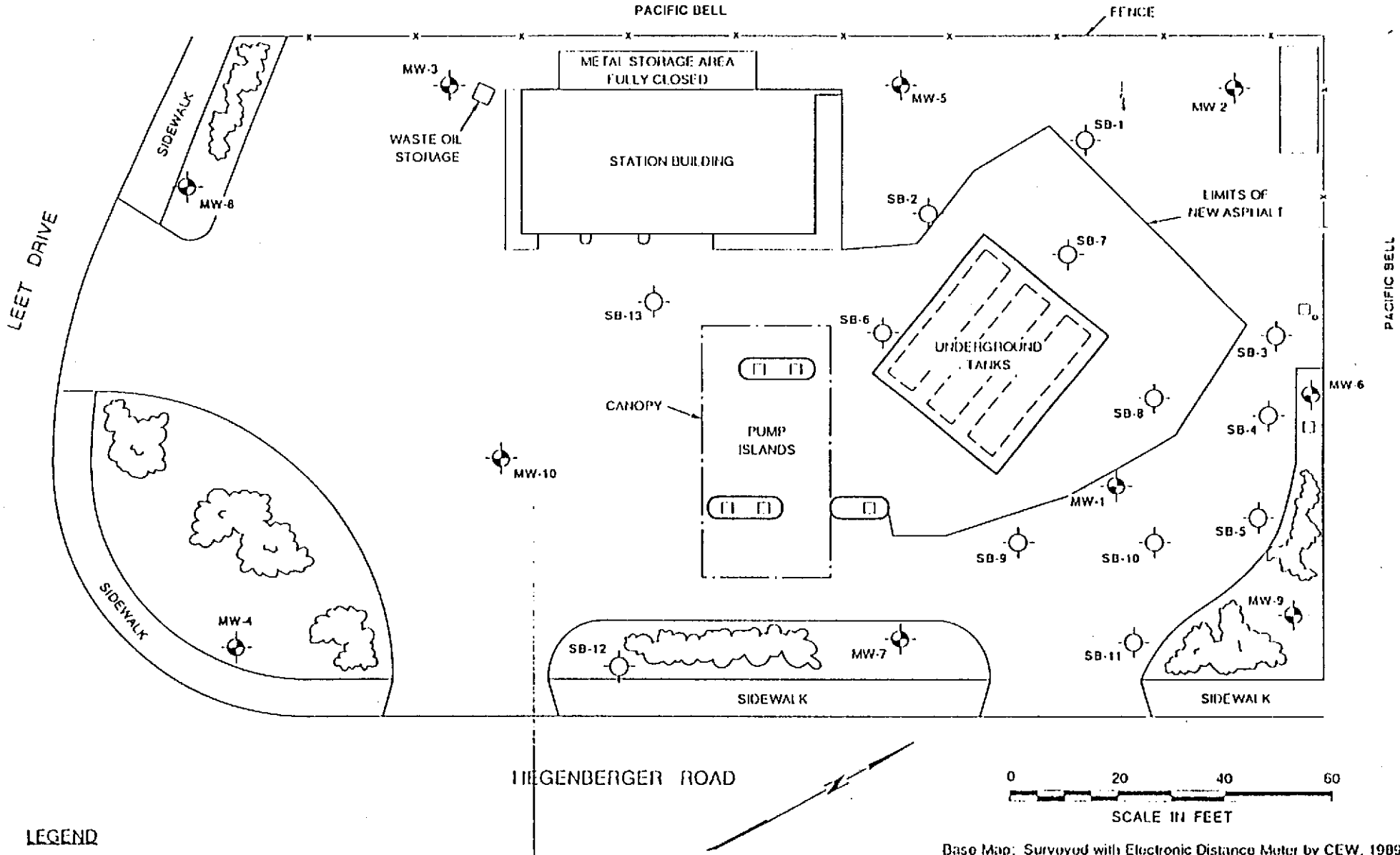
WIC No. 204-5508-5504

SITE LOCATION

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Scale	AS SHOWN
Project No.	86-44-359-20
Prepared by	LQL
Date	3/28/90
Checked by	RMB
Drawing No.	1
Approved by	CRC

Converse Environmental West



LEGEND

SB-1 ⊕ SOIL BORING (locations approximate)

MW-1 ⊕ GROUNDWATER MONITORING WELL

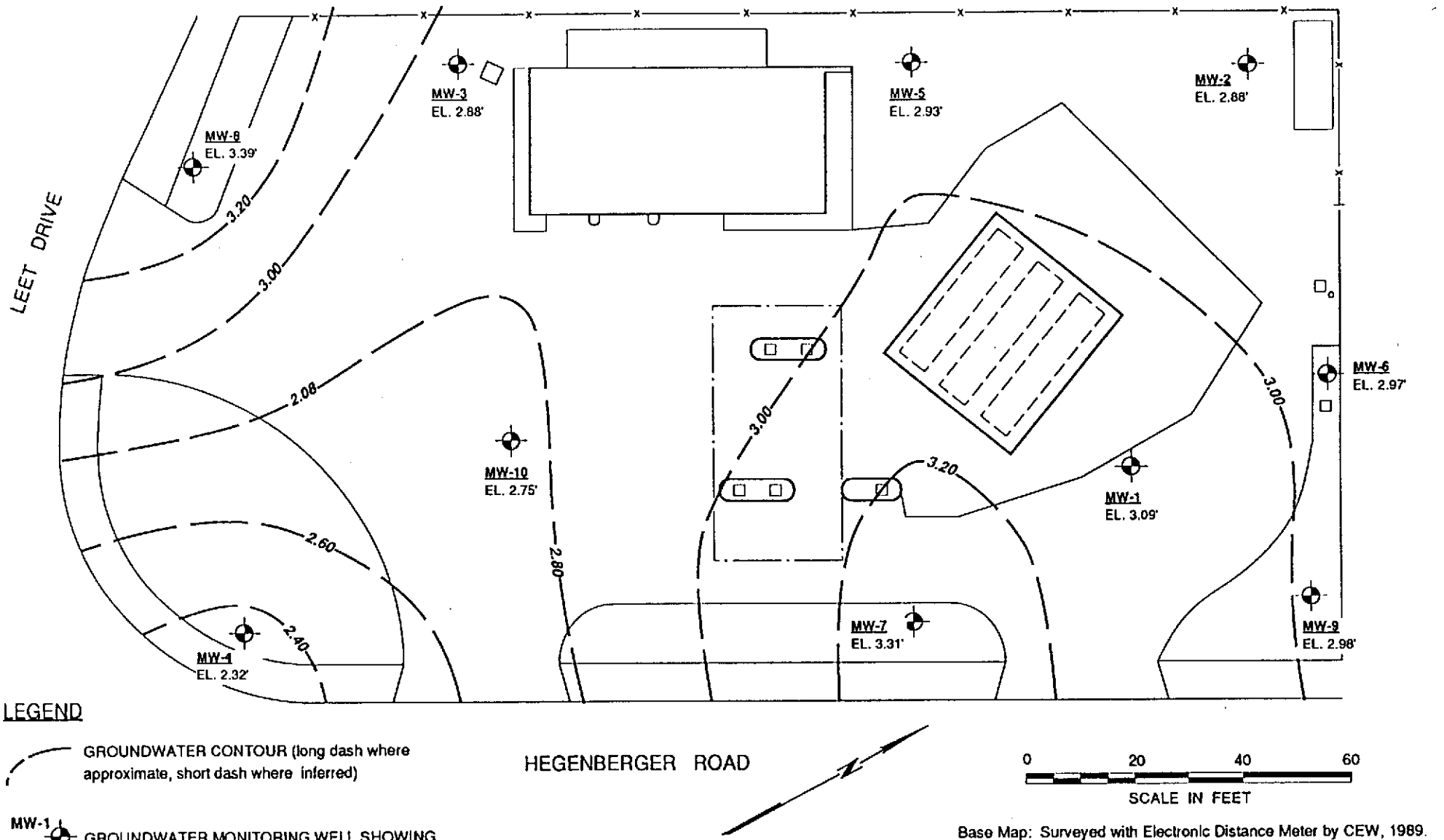
Base Map: Surveyed with Electronic Distance Meter by CEW, 1989.

PLOT PLAN

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-359 20
Prepared by	CRB
Date	3/18/91
Approved by	CRC
Drawing No.	2
WIC No.	204-5508-5504



LEGEND

GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTES: 1. Groundwater elevations in feet above mean sea level.

2. Groundwater flow direction is not specified due to irregular response to tidal effects.

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

GROUNDWATER CONTOUR MAP Q2/91

SHELL OIL COMPANY
285 Hegenberger Road
Oakland, California

Converse Environmental West

Scale: AS SHOWN	Project No.: 88-44-359-20
Prepared by: LQL	Date: 6/28/91
Approved by: CRC	Drawing No.: 3
WIC No.: 204-5508-5504	

TABLE 1. RESULTS OF GROUNDWATER CHEMICAL ANALYSES

Shell Oil Company Facility
285 Hegenberger Road
Oakland, California

Concentration (mg/L)

Well No.	Date Sampled	TPH-g	TPH-d	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-1	02/16/89	99.0	NA	20	23	5.7	23
MW-1	05/23/89	48.0	11.0	4.2	5.2	1.2	7.7
MW-1	08/04/89	63.0	11.0	5.5	5.5	3.2	9.5
MW-1	12/15/89	30.0	11.0	<0.005	<0.0005	<0.0005	<0.0005
MW-1	02/07/90	93.0	10.0	13.0	9.6	2.4	14.0
MW-1	04/18/90	55.0	8.7	14.0	8.4	3.2	13.0
MW-1	07/24/90	73.0	3.6	16.0	7.40	2.80	15.0
MW-1[2]	07/24/90	57.0	3.6	18.0	8.0	3.0	16.0
MW-1	10/01/90	45.0	1.7	8.0	4.3	2.0	11.0
MW-1	01/03/91	43.0	3.10	10.0	3.40	1.90	11.0
MW-1	**04/10/91**	**67**	**1.8**	**20.0**	**9.60**	**3.50**	**16.0**
MW-2	02/16/89	20.0	NA	0.2	0.9	2.7	9.6
MW-2	05/23/89	1.5	1.6	0.0043	0.0029	0.011	0.15
MW-2	08/04/89	15.0	7.4	0.075	0.12	0.85	2.2
MW-2	12/15/89	5.0	2.6	0.052	0.013	0.0041	0.29
MW-2	02/07/90	13.0	4.8	0.032	0.034	0.23	0.640
MW-2	04/18/90	9.8	3.2	0.033	0.019	0.46	1.7
MW-2	07/24/90	9.6	2.7	0.041	0.027	0.540	0.940
MW-2	10/01/90	0.39	1.6	0.0034	0.015	0.0085	0.025
MW-2	01/03/91	1.8	0.83	0.056	0.0044	0.0048	0.092
MW-2	**04/10/91**	**1.9**	**0.28**	**<0.0005**	**0.028**	**0.140**	**0.490**
MW-3	02/16/89	60.0	NA	5.5	0.2	3.2	5.2
MW-3	05/23/89	<0.05	1.5	<0.0005	<0.0005	<0.0015	<0.0015
MW-3	08/04/89	2.0	1.2	0.12	0.012	<0.0015	0.086
MW-3	12/15/89	5.2	1.7	0.38	0.047	0.017	0.410
MW-3	03/08/90	0.26	0.23	0.017	<0.0005	0.0054	0.0025
MW-3	04/19/90	0.26	<0.05	<0.0005	<0.0005	<0.0005	0.0094
MW-3	07/24/90	0.51	0.21	0.046	0.0012	<0.0005	0.0093
MW-3	09/28/90	0.46	0.35	0.0063	0.0017	<0.0005	0.015
MW-3	01/03/91	4.8	0.63	0.920	0.0088	<0.0005	0.190
MW-3	**04/10/91**	**0.12**	**0.06**	**0.0012**	**0.0008**	**0.0035**	**0.021**
MW-4	05/23/89	<0.05	NA	<0.0005	<0.0005	<0.0015	<0.0015
MW-4[4]	08/04/89	<0.05	<0.05	<0.0005	<0.0005	<0.0015	<0.0015
MW-4	12/15/89	<0.05	0.09	<0.0005	<0.0005	<0.0005	<0.0005
MW-4[1]	03/08/90	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-4	07/25/90	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-4	09/28/90	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.0005
MW-4	01/03/91	<0.05	NA	<0.0005	<0.0005	<0.0005	<0.0005
MW-4	**04/10/91**	**<0.05**	**<0.05**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**

TABLE 1 (cont'd). RESULTS OF GROUNDWATER CHEMICAL ANALYSES

Shell Oil Company Facility
285 Hegenberger Road
Oakland, California

Concentration (mg/L)

Well No.	Date Sampled	TPH-g	TPH-d	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-5	05/23/89	26.0	7.0	1.5	0.28	<0.0015	8.1
MW-5	08/04/89	12.0	8.7	0.86	0.094	<0.0015	2.6
MW-5	12/15/89	1.00	0.71	0.022	0.035	0.018	0.044
MW-5	02/08/90	<0.05	0.62	0.0008	<0.0005	<0.0005	<0.0005
MW-5	04/19/90	19.0	5.0	4.5	0.85	0.097	8.0
MW-5	07/24/90	23.0	2.7	3.6	0.400	0.160	6.50
MW-5	09/28/90	5.4	0.55	1.40	0.026	0.013	1.30
MW-5	01/03/91	0.86	0.56	0.280	0.0028	0.0008	0.045
MW-5	**04/10/91**	**12**	**1.8**	**0.710**	**0.130**	**0.500**	**2.400**
MW-6	05/23/89	22.0	7.0	0.016	0.0065	0.0066	3.4
MW-6	08/04/89	28.0	8.8	1.2	0.13	2.1	2.8
MW-6	12/15/89	16.0	5.5	0.37	0.092	0.20	0.18
MW-6	02/07/90	22.0	2.6	0.52	0.085	0.63	0.77
MW-6	04/18/90	21.0	5.7	0.9	0.077	2.7	2.7
MW-6	07/24/90	24.0	3.0	1.00	0.094	3.40	2.70
MW-6	10/01/90	22.0	<0.05	0.70	0.093	2.50	2.40
MW-6	01/03/91	25.0	0.96	1.00	0.088	2.60	3.70
MW-6	**04/10/91**	**18**	**0.92**	**0.560**	**0.190**	**0.480**	**0.830**
MW-7	05/23/89	47.0	11	3.5	5.0	1.5	7.8
MW-7	08/04/89	68.0	22	6.2	6.6	3.6	8.8
MW-7	12/15/89	100.0	12	4.5	5.3	1.3	5.3
MW-7	02/08/90	96.0	8.1	15.0	15.0	2.5	14.0
MW-7	04/19/90	94.0	10.0	25.0	13.0	3.3	13.0
MW-7	07/24/90	84.0	3.8	26.0	13.0	3.0	12.0
MW-7	09/28/90	43.0	<0.05	25.0	6.10	2.40	9.00
MW-7	01/03/91	78.0	3.10	26.0	16.0	3.0	14.0
MW-7[2]	01/03/91	77.0	3.60	29.0	19.0	3.0	15.0
MW-7	**04/10/91**	**140**	**1.8**	**26.0**	**16.0**	**2.20**	**14.0**
MW-8	05/23/89	<0.05	0.10	<0.0005	<0.0005	<0.0015	<0.0015
MW-8	08/04/89	<0.05	0.075	<0.0005	<0.0005	<0.0015	<0.0015
MW-8	12/15/89	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	03/08/90	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	07/25/90	<0.05	<0.05	<0.0005	0.0013	<0.0005	<0.0005
MW-8	09/28/90	<0.05	1.1	<0.0005	<0.0005	<0.0005	<0.0005
MW-8	01/03/91	<0.05	<0.05	0.0013	<0.0005	<0.0005	<0.0005
MW-8	**04/10/91**	**0.05**	**<0.05**	**0.0007**	**0.0011**	**0.0008**	**0.0010**

TABLE 1 (cont'd). RESULTS OF GROUNDWATER CHEMICAL ANALYSES

Shell Oil Company Facility
285 Hegenberger Road
Oakland, California

Concentration (mg/L)

Well No.	Date Sampled	TPH-g	TPH-d	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-9	08/04/89	47.0	12.0	5.6	6.6	1.5	8.5
MW-9	12/15/89	88.0	9.2	4.3	5.4	0.14	5.6
MW-9	02/08/90	50.0	7.4	1.8	1.4	3.2	1.8
MW-9	04/19/90	50.0	7.5	14.0	11.0	0.73	10.0
MW-9	07/24/90	62.0	3.20	19.0	16.0	0.950	15.0
MW-9	09/28/90	30.0	2.70	16.0	6.50	0.980	11.0
MW-9	01/03/91	34.0	2.50	9.20	3.20	0.770	7.00
MW-9	**04/10/91**	**66**	**2.2**	**17.0**	**13.0**	**1.40**	**14.0**
MW-10	12/15/89	<0.05	3.1	1.5	<0.0005	<0.0005	<0.0005
MW-10	03/08/90	25.0	1.8	17	0.330	2.1	1.4
MW-10	04/19/90	23.0	3.6	15.0	1.2	0.19	3.3
MW-10	07/25/90	18.0	1.9	12.0	0.380	<0.0005	1.40
MW-10	09/28/90	9.5	0.43	13.0	0.100	1.80	0.23
MW-10	01/03/91	4.3	0.63	3.70	0.0097	<0.0005	0.110
MW-10	**04/10/91**	**45**	**1.4**	**16.0**	**4.60**	**3.0**	**6.90**

NOTES:

*MW-4 Analysis 601 was ND for all compounds.
TPH-g Total Petroleum Hydrocarbons of Gasoline (GCFID)
TPH-d Total Petroleum Hydrocarbons of Diesel (GCFID)
Bold Indicates work completed this quarter
[1]Analyzed semi-annually
[2]Duplicate sample

TABLE 2. GROUNDWATER MONITORING INFORMATION

Shell Oil Company Facility
285 Hegenberger Road
Oakland, California

Well No.	Date Monitored	Depth to Water (ft bgs)	Groundwater Elevation (msl)	Petroleum Odor in Water	Floating Product Thickness (inches)	Comments
MW-1	02/16/89	3.83	2.81	Slight	0	----
El. 6.64	05/23/89	3.59	3.05	Slight	0	----
	08/03/89	4.04	2.06	Slight	0	----
	12/15/89	4.22	2.42	Slight	0	----
	02/07/90	4.60	2.58	Slight	0	----
	04/18/90	4.02	2.62	None	0	Yellow
	07/23/90	4.17	2.47	None	0	Floating sludge
	09/27/90	4.60	2.04	Slight	0	Yellow in color
	01/02/91	4.88	1.76	Slight	0	
	04/09/91	**3.55**	**3.09**	**None**	**0**	**Pale yellow**
MW-2	02/16/89	5.33	2.35	Slight	0	----
El. 7.68	05/23/89	5.23	2.45	Slight	0	----
	08/03/89	6.03	1.65	Slight	0	----
	12/15/89	6.43	1.25	Strong	0	----
	02/07/90	5.82	1.86	Slight	0	----
	04/18/90	5.88	1.80	None	0	Yellow
	07/23/90	6.05	1.63	Slight	0	
	09/27/90	6.82	0.86	Strong	0	None
	01/02/91	6.66	1.02	Slight	0	Yellow tint
	04/09/91	**4.80**	**2.88**	**None**	**0**	**Putrid odor**
MW-3	02/16/89	5.17	2.64	None	0	----
El. 7.81	05/23/89	5.09	2.72	None	0	----
	08/03/89	5.34	2.47	Slight	0	----
	12/15/89	6.02	1.79	None	0	----
	02/07/90	4.95	2.86	Moderate	0	Cloudy
	04/18/90	5.55	2.26	Slight	0	Clear
	07/23/90	5.81	2.00	None	0	Floating sludge
	09/27/90	6.86	0.95	None	0	----
	01/02/91	6.84	0.97	None	0	Yellow tint
	04/09/91	**4.93**	**2.88**	**None**	**0**	
MW-4	05/23/89	5.60	1.78	None	0	----
El. 7.38	08/03/89	6.37	1.01	None	0	----
	12/15/89	6.91	0.47	Slight	0	----
	03/08/90	6.06	1.32	Moderate	0	Greenish
	04/18/90	5.84	1.54	None	0	Clear
	07/23/90	6.92	0.46	None	0	No sample taken
	07/23/90	6.92	0.46	None	0	No sample taken
	09/27/90	8.03	0.65	None	0	----
	01/02/91	7.54	0.16	Slight	0	Yellow tint
	04/09/91	**5.06**	**2.32**	**None**	**0**	**Very pale yellow**

TABLE 2 (cont'd). GROUNDWATER MONITORING INFORMATION

Shell Oil Company Facility
285 Hegenberger Road
Oakland, California

Well No.	Date Monitored	Depth to Water (ft bgs)	Groundwater Elevation (msl)	Petroleum Odor in Water	Floating Product Thickness (Inches)	Comments
MW-5	05/23/89	5.47	2.71	Moderate	0	No sheen
El. 8.18	08/03/89	5.94	2.24	None	0	----
	12/15/89	6.75	1.43	None	0	----
	02/07/90	6.03	2.15	Slight	0	Clear
	04/18/90	5.80	2.38	Slight	0	Clear
	07/23/90	6.00	2.18	None	0	
	09/23/90	7.18	1.00	Slight	0	Putrid odor
	01/02/91	7.17	1.01	Slight	0	Putrid odor
	04/09/91	**5.25**	**2.93**	**None**	**0**	**Putrid odor**
MW-6	05/23/89	5.47	2.74	Strong	0	Sheen
El. 8.21	08/03/89	5.91	2.30	None	0	
	12/15/89	5.98	2.23	Moderate	0	----
	02/07/90	5.47	2.74	Moderate	0	----
	04/18/90	5.80	2.41	Slight	0	Clear
	07/23/90	5.85	2.36	Slight	0	
	09/27/90	6.42	1.79	Slight	0	Putrid odor
	01/02/91	6.73	1.48	Slight	0	Putrid odor
	04/09/91	**5.24**	**2.97**	**Slight**	**Sheen**	**Putrid odor**
MW-7	05/23/89	5.48	1.96	Moderate	0	Slight sheen
El. 7.44	08/03/89	4.22	3.22	None	0	----
	12/15/89	4.58	2.86	Slight	0	----
	02/07/90	5.34	2.10	Slight	0	Brownish
	04/18/90	4.92	2.52	Slight	0	Organic, Dark Yellow
	07/23/90	4.99	2.45	Slight	0	Floating sludge, putrid odor
	09/27/90	6.16	1.28	Slight	0	Decaying odor
	01/02/91	4.96	2.48	Slight	0	Decaying odor
	04/09/91	**4.13**	**3.31**	**None**	**0**	**Decaying odor**
MW-8	05/23/89	6.62	1.17	None	0	----
El. 7.79	08/03/89	6.62	1.17	None	0	----
	12/15/89	6.71	1.08	None	0	----
	03/08/90	4.95	2.84	Moderate	0	Milky
	04/18/90	6.40	1.89	None	0	No sample taken
	07/23/90	6.62	1.17	None	<0.25"	Floating sludge
	09/27/90	6.98	0.81	Slight	0	Decaying odor
	01/02/91	7.03	0.76	Slight	0	Decaying odor
	04/09/91	**4.40**	**3.39**	**None**	**0**	**Decaying odor**

TABLE 2 (cont'd). GROUNDWATER MONITORING INFORMATION

Shell Oil Company Facility
285 Hegenberger Road
Oakland, California

Well No.	Date Monitored	Depth to Water (ft bgs)	Groundwater Elevation (msl)	Petroleum Odor In Water	Floating Product Thickness (inches)	Comments
MW-9	08/03/89	5.78	1.85	None	0	----
El. 7.63	12/15/89	5.24	2.39	None	0	----
	02/07/90	5.23	2.40	None	0	Yellow
	04/18/90	5.34	2.29	Slight	0	Yellow
	07/23/90	5.65	1.98	None	0	
	09/27/90	5.96	1.67	None	0	Yellow
	01/02/91	6.23	1.40	None	0	Yellow
	04/09/91	**4.65**	**2.98**	**Slight**		**Amber**
MW-10	12/15/89	6.33	0.82	None	0	----
El. 7.45	03/08/90	5.41	2.00	Strong	0	Clear
	04/18/90	5.60	1.85	Slight	0	No silt, Lt. Yellow
	07/23/90	5.81	1.64	None	0	Floating sludge
	09/27/90	6.64	0.81	Slight	0	Clear
	01/02/91	6.96	0.49	None	0	Yellow tint
	04/09/91	**4.70**	**2.75**	**None**	**0**	**Putrid odor**

NOTES:

ft bgs feet below ground surface
Elevations are in feet above Mean Sea Level
Bold indicates work completed this quarter

TABLE 3. CHRONOLOGICAL SUMMARY

The following chronological summary is based on information provided to Converse Environmental West (CEW) by Shell Oil Company (Shell). CEW 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
1984	Underground storage tanks replaced with single-wall fiberglass tanks.
01/89	Shell transferred this case to CEW.
02/15/89	CEW drilled and sampled MW-1 to MW-3 and SB-1 and SB-2.
04/28/89	CEW installed MW-4 through MW-8.
05/26/89	CEW drilled, sampled and abandoned borings SB-3, SB-4 and SB-5.
07/13/89	CEW drilled, sampled and abandoned borings SB-6 through SB-11.
9/20-21/89	CEW conducted a tidal influence test.
10/17/89	Loma Prieta Earthquake struck.
10/26/89	CEW performed slug tests on existing wells.
11/16/89	CEW drilled, sampled and abandoned SB-12 and SB-13.
11/16/89	CEW installed MW-10.
12/15/89	CEW developed MW-10 and collected Q4/89 groundwater samples.
1/17/90 and 2/02/90	CEW performed offsite survey and survey calculations of property adjacent to site.
2/7/90	CEW sampled wells MW-1, MW-2, MW-5, MW-6, MW-7, MW-9.
2/8/90	CEW sampled wells MW-5, MW-7, MW-9.
3/8/90	CEW sampled wells MW-3, MW-4, MW-8, MW-10.
4/90	CEW applied for an encroachment permit from the City of Oakland.
4/18/90 and 4/19/90	CEW sampled wells MW-1, MW-2, MW-3, MW-5, MW-7, MW-9, MW-10.

TABLE 3 (cont'd.). CHRONOLOGICAL SUMMARY

Date	Description of Activity
7/24/90 and 7/25/90	CEW sampled wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9 and MW-10.
8/06/90 and 8/07/90	CEW drilled and sampled SG-1 through SG-13.
9/07/90	CEW performed constant head test on monitoring wells MW-1, MW-5, MW-6, MW-7, MW-9, and MW-10.
9/13/90	CEW drilled and sampled SG-14 through SG-17.
9/27/90 - 10/01/90	CEW monitored and sampled monitoring wells MW-1 through MW-10.
1/2-3/91	CEW monitored and sampled monitoring wells MW-1 through MW-10.
4/9/91	**CEW monitored and sampled monitoring wells MW-1 through MW-10.**

Boldface items were conducted during this quarter

NATIONAL
ENVIRONMENTAL
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CONVERSE ENVIRONMENTAL

Chuck Comstock
Converse Consultants
55 Hawthorne St, Ste 500
San Francisco, CA 94105

Date: 04-17-91
NET Client Acct No: 18.02
NET Pacific Log No: 6944
Received: 04-11-91 0800

Client Reference Information

SHELL, 285 Hegenberger; Project: 88-44-359-20

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: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 2

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 910410 04-10-91 1100 82288**	 MW-2 04-10-91 1120 82289**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			100	5	
DATE ANALYZED			04-13-91	04-15-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	76	1.9	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			2000	20	
DATE ANALYZED			04-14-91	04-14-91	
Benzene		0.5	21,000	ND	ug/L
Ethylbenzene		0.5	4,200	140	ug/L
Toluene		0.5	11,000	28	ug/L
Xylenes, total		0.5	19,000	490	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	1.8	0.28	mg/L
as Motor Oil		0.5	ND	ND	mg/L

** Note: The positive results for the PETROLEUM HYDROCARBONS as Diesel analyses on these samples are lighter hydrocarbons than diesel.

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 3

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-5 04-10-91 1130 82290**	MW-6 04-10-91 1145 82291**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			100	100	
DATE ANALYZED			04-14-91	04-13-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	12	18	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			100	100	
DATE ANALYZED			04-14-91	04-13-91	
Benzene		0.5	710	560	ug/L
Ethylbenzene		0.5	500	480	ug/L
Toluene		0.5	130	190	ug/L
Xylenes, total		0.5	2,400	830	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	1.8	0.92	mg/L
as Motor Oil		0.5	ND	ND	mg/L

** Note: The positive results for the PETROLEUM HYDROCARBONS as Diesel analyses on these samples are lighter hydrocarbons than diesel.

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 4

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-9 04-10-91 1150 82292**	MW-1 04-10-91 1200 82293**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			100	100	
DATE ANALYZED			04-13-91	04-13-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	66	67	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			2000	2000	
DATE ANALYZED			04-14-91	04-14-91	
Benzene		0.5	17,000	20,000	ug/L
Ethylbenzene		0.5	1,400	3,500	ug/L
Toluene		0.5	13,000	9,600	ug/L
Xylenes, total		0.5	14,000	16,000	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	2.2	1.8	mg/L
as Motor Oil		0.5	ND	ND	mg/L

** Note: The positive results for the PETROLEUM HYDROCARBONS as Diesel analyses on these samples are lighter hydrocarbons than diesel.

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 5

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

			Descriptor, Lab No. and Results		
			MW-7 04-10-91 1220	MW-10 04-10-91 1230	
Parameter	Method	Reporting Limit	82294**	82295**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1000	100	
DATE ANALYZED			04-14-91	04-15-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	140	45	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1000	1000	
DATE ANALYZED			04-14-91	04-14-91	
Benzene		0.5	26,000	16,000	ug/L
Ethylbenzene		0.5	2,200	3,000	ug/L
Toluene		0.5	16,000	4,600	ug/L
Xylenes, total		0.5	14,000	6,900	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	1.8	1.4	mg/L
as Motor Oil		0.5	ND	ND	mg/L

** Note: The positive results for the PETROLEUM HYDROCARBONS as Diesel analyses on these samples are lighter hydrocarbons than diesel.

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 5

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

			Descriptor, Lab No. and Results		
			MW-7 04-10-91 1220	MW-10 04-10-91 1230	
Parameter	Method	Reporting Limit	82294**	82295**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1000	100	
DATE ANALYZED			04-14-91	04-15-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	140	45	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1000	1000	
DATE ANALYZED			04-14-91	04-14-91	
Benzene		0.5	26,000	16,000	ug/L
Ethylbenzene		0.5	2,200	3,000	ug/L
Toluene		0.5	16,000	4,600	ug/L
Xylenes, total		0.5	14,000	6,900	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	1.8	1.4	mg/L
as Motor Oil		0.5	ND	ND	mg/L

** Note: The positive results for the PETROLEUM HYDROCARBONS as Diesel analyses on these samples are lighter hydrocarbons than diesel.

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 6

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-4 04-10-91 1250 82296	MW-8 04-10-91 1300 82297	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-15-91	04-13-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	0.05	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-15-91	04-13-91	
Benzene		0.5	ND	0.7	ug/L
Ethylbenzene		0.5	ND	0.8	ug/L
Toluene		0.5	ND	1.1	ug/L
Xylenes, total		0.5	ND	1.0	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	ND	ND	mg/L
as Motor Oil		0.5	ND	ND	mg/L

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 7

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

			Descriptor, Lab No. and Results		
			MW-3 04-10-91 1315	trip blank 04-10-91	
Parameter	Method	Reporting Limit	82298**	82299	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-13-91	04-13-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	0.12	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-13-91	04-13-91	
Benzene		0.5	1.2	ND	ug/L
Ethylbenzene		0.5	3.5	ND	ug/L
Toluene		0.5	0.8	ND	ug/L
Xylenes, total		0.5	21	ND	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-12-91	04-12-91	
DATE ANALYZED			04-14-91	04-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	0.06	ND	mg/L
as Motor Oil		0.5	ND	ND	mg/L

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

NET Pacific, Inc.

Client No: 18.02 Date: 04-17-91
Client Name: Converse Consultants
NET Log No: 6944 Page: 8

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results field blank 04-10-91 1340 82300	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			04-13-91	
METHOD GC FID/5030			--	
as Gasoline		0.05	ND	mg/L
METHOD 602			--	
DILUTION FACTOR *			1	
DATE ANALYZED			04-13-91	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (WATER)			--	
DILUTION FACTOR *			1	
DATE EXTRACTED			04-12-91	
DATE ANALYZED			04-14-91	
METHOD GC FID/3510			--	
as Diesel		0.05	ND	mg/L
as Motor Oil		0.5	ND	mg/L

Ref: SHELL, 285 Hegenberger; Project: 88-44-359-20

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	105	ND	62	64	2.8
Motor Oil	0.5	mg/L	104	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	91	ND	85	91	6.8
Benzene	0.5	ug/L	97	ND	95	98	3.2
Toluene	0.5	ug/L	102	ND	96	99	3.0
Gasoline	0.05	mg/L	105	ND	87	86	1.2
Benzene	0.5	ug/L	83	ND	86	85	< 1
Toluene	0.5	ug/L	97	ND	92	93	1.3
Benzene	0.5	ug/L	95	ND	90	82	9.7
Toluene	0.5	ug/L	99	ND	95	86	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, 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.

Page 1 of 2

WIC # 204-5508:5504
AFE # 088662
EXP CODE 5440
PM: CRC (6944

CONVERSE ENVIRONMENTAL WEST

CHAIN OF CUSTODY RECORD

PROJECT NO.: 88-44-359-20
SAMPLERS: (Signature)

PROJECT NAME / CROSS STREET: 285 Hegenberger SHELL

STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	ANALYSES: TPH-G	BTEX	TPH-D				REMARKS
910410	4/10/91	11:00		x	40 mL VOA	3	x	x					STANDARD TURNAROUND TIME
910410		11:00		x	1-Litre Amber	1			x				
MW-2		11:20		x	40 mL VOA	4	x	x					
MW-2		11:20		x	1-Litre Amber	3			x				
MW-5		11:30		x	40 mL VOA	3	x	x					
MW-5		11:30		x	1-Litre Amber	2			x				Detection Limits:
MW-6		11:45		x	40 mL VOA	3	x	x					
MW-6		11:45		x	1-Litre Amber	2			x				TPH-G - 0.05 ppm
MW-9		11:50		x	40 mL VOA	3	x	x					BTEX - 0.0005 ppm
MW-9		11:50		x	1-Litre Amber	2			x				TPH-D - 0.05 ppm
MW-1		12:00		x	40 mL VOA	3	x	x					CUSTODY SEALED 4/10/91
MW-1		12:00		x	1-Litre Amber	2			x				@ 19:00 J.W.

RELINQUISHED BY: (Signature)	DATE: 4/10/91	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)
	TIME: 15:05		DATE: 4/10/91
			TIME: 19:00
RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)
	TIME:		DATE:
			TIME:
RELINQUISHED BY COURIER: (Sign.)	DATE:	RECEIVED BY MOBILE LAB: (Sign.)	RELINQ. BY MOBILE LAB: (Signature)
	TIME:		DATE:
			TIME:
METHOD OF SHIPMENT (VIA NCL)		SHIPPED BY: (Signature)	RECEIVED FOR LAB: (Signature)
			DATE: 4-11-91
			TIME: 0100

RECEIVED BY: (Signature)	
RECEIVED BY: (Signature)	
RECEIVED BY COURIER: (Signature)	
COURIER FROM AIRPORT: (Signature)	

Page 2 of 2

WIC# 204-5508-550
AFE# 086662
EXPCODE 5440
PM: CRC
(944)

CONVERSE ENVIRONMENTAL WEST

CHAIN OF CUSTODY RECORD

PROJECT NO.: 88-44-359-20
PROJECT NAME / CROSS STREET: 285 Hegenberger SHELL
SAMPLERS: (Signature)

STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	ANALYSES: TPH-G	BTEX	TPH-D	REMARKS
MW-7	4/10/91	12:20		X	40 mL VOA	3	X	X		STANDARD TURNAROUND TIME
MW-7		12:20		X	1-Litre Amber	2			X	
MW-10		12:30		X	40mL VOA	3	X	X		
MW-10		12:30		X	1-Litre Amber	2			X	
MW-4		12:50		X	40 mL VOA	3	X	X		Detection Limits -
MW-4		12:50		X	1-Litre Amber	2			X	
MW-8		1:00		X	40 mL VOA	3	X	X		TPH-G - 0.05 ppm
MW-8		1:00		X	1-Litre Amber	2			X	BTEX - 0.0005 ppm
MW-3		1:15		X	40 mL VOA	3	X	X		TPH-D - 0.05 ppm
MW-3		1:15		X	1-Litre Amber	2			X	
TRIP BLANKS	4/10/91	4/11/91		X	40 mL VOA / 1-Litre Amber	1/1	X	X	X	
FIELD BLANKS	4/10/91	1:40			40mL VOA / 1-Litre Amber	1/1	X	X	X	

RELINQUISHED BY: (Signature)	DATE: 4/10/91	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE: 4/10/91	RECEIVED BY: (Signature)
	TIME: 15:05			TIME: 19:00	
RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE:	RECEIVED BY: (Signature)
	TIME:			TIME:	
RELINQUISHED BY COURIER: (Sign.)	DATE:	RECEIVED BY MOBILE LAB: (Sign.)	RELINQ. BY MOBILE LAB: (Signature)	DATE:	RECEIVED BY COURIER: (Signature)
	TIME:			TIME:	
METHOD OF SHIPMENT (VIA WIC)		SHIPPED BY: (Signature)	RECEIVED FOR LAB: (Signature)	DATE: 4-11-91	COURIER FROM AIRPORT: (Signature)
				TIME: 0800	