REPORT OF ACTIVITIES
QUARTER 2, 1991

SHELL OIL COMPANY SITE
2724 CASTRO VALLEY BOULEVARD
CASTRO VALLEY, CALIFORNIA

Prepared for:

Shell Oil Company
1390 Willow Pass Road, Suite 900
Concord, California 94524

Prepared by:

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June 28, 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 (CEW) during Quarter 2, 1991 (Q2/91) for the former Shell Oil Company (Shell) station (site) located at 2724 Castro Valley Blvd, Castro Valley, California (Drawing 1). This report is prepared to fulfill the quarterly reporting requirements as specified in the Work Plan prepared by CEW and dated January 16, 1990 for achievement of environmental closure of the site. The Work Plan is on file with the regulatory agencies of jurisdiction.

This former retail gasoline station is located on the northeast corner of Castro Valley Blvd and Lake Chabot Road in Castro Valley, California. The site is approximately 160 feet long by 100 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 1989, but is now temporarily closed due to ongoing renovation work, tank replacement, and environmental remediation.

Topographically, the site is located on the western edge of a gentle valley (Castro Valley) on Recent alluvial fill. The terrain rises northward into the San Leandro Hills and the site is approximately 50 feet above the valley floor. An isolated hillside knob with 60 to 100 feet of relief exists 600 feet south of the site. An intermittent stream is shown 300 feet west on the 7 1/2 minute Hayward, California USGS topographic map. This stream enters San Lorenzo Creek approximately one mile south of the site.

During the past four years Shell and its environmental consultants Blaine Technical Services, Woodward-Clyde Consultants, Crosby and Overton, and Converse Environmental West (CEW) have investigated the extent of soil contamination associated with underground storage tanks and product lines at the site. Environmental investigation was initiated in November, 1986, when Shell replaced the waste oil tank and discovered minor soil contamination in tank backfill.

In March, 1989, Shell removed the underground gasoline storage tanks and discovered subjacent soil contamination. The contaminated soil was removed in three successive stages.

During June 1989, soil around the former storage tanks was excavated to a depth of 12 feet, the approximate depth of the water table (Excavation I, Drawing 2). In July 1989, Excavation I was extended from the existing building on the north, to the sidewalk of Castro Valley Boulevard on the South. The spoils from the excavation were removed from the site, by Crosby and Overton, a licensed hazardous waste transporter, and disposed of at a Class I landfill at Buttonwillow, California. Verification samples collected from the excavation sidewalls indicated the absence of petroleum hydrocarbons in the exposed soils, except at the northeast corner, where further excavation was impractical due to obstruction from buildings and underground utilities. Mr. Larry Seto of ACHCSA was notified of the sample results in letters dated July 11 and July 27, 1989, and the excavation was backfilled soon thereafter (Drawing 2).

In late August, 1989, exploratory test pits were excavated under the drive pad area, to determine the extent of suspected contamination in shallow soil near the former pump islands. Local areas of contaminated soil were discovered between the pump islands. In early October 1989, the test pits were expanded into Excavation II (Drawing 2), and contaminated soil was removed. Soil samples were taken from the sidewalls and bottom of the excavation, and the excavation was expanded slightly where residual soil contamination was present.

Final verification samples collected in January 1990 showed that the exposed soils did not contain detectable levels of petroleum hydrocarbons. Three samples taken in the deepest portion of the excavation showed some contamination. These samples were all taken in the capillary or saturated zone.

A letter was sent to ACHCSA dated May 31, 1990 describing these sampling results, and requesting permission to backfill the excavation and fully restore the site. Excavation II was backfilled on July 10, 1990.

On May 9, 1990 hand-auger boring SB-2 was drilled at an angle under the building foundation, 20 feet to the west of MW-2 (Drawing 2). Two soil samples were taken at depths of 4.5 and 6.5 feet below the building, and analyzed for all waste oil parameters.

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 Q2/91 were authorized under an existing purchase order and blanket number from Shell for environmental services at the site. The work completed during Q1/91 consisted of the following activities:

- Sampling and physical monitoring of wells MW-1, MW-2, MW-3 and MW-5. The samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPH-g) and diesel (TPH-d); and

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

SECTION 2

WORK COMPLETED THIS QUARTER

Work initiated and completed during Q2/91 followed the task descriptions of the Work Plan dated January 16, 1990, and the CEW protocols on file with the regulatory agencies of jurisdiction. Modifications and additions to the Work Plan are contained in a Site Restoration Plan and Schedule for Future Work, dated May 31, 1990.

2.1 SOIL SAMPLING AND ANALYSIS

No additional soil sampling was conducted during Q2/91. Previous soil information and laboratory results are summarized in Tables 2 through 4.

2.2 MONITORING WELL INSTALLATION

No new monitoring wells were installed during Q2/91. Well installation information is provided in Table 5.

2.3 GROUNDWATER SAMPLING AND ANALYSES

Groundwater samples were collected on April 19, 1991 from monitoring wells MW-1, MW-2, MW-3, and MW-5. These samples were submitted, under chain of custody protocols, to NET Pacific, Inc., a California-certified analytical laboratory located in Santa Rosa, California. The samples were analyzed for TPH-g, TPH-d, and BTEX following the recommended analytical methods listed in Table 3. Analytical data for the samples collected from the monitoring wells are summarized in Table 6. Copies of analytical laboratory reports and chain-of-custody forms are provided in Appendix B.

2.4 Physical Monitoring

During Q2/91, wells MW-1, MW-2, MW-3 and MW-5 were physically measured once for depth-to-water, and the presence of floating product. A summary of these results is presented in Table 7. Floating product was not present in wells at the site during Q2/91 monitoring activities. No petroleum odors were noted in any of the wells. Field parameters measured during groundwater sampling activities are summarized in Table 8.

SECTION 3

FINDINGS AND DISCUSSION

3.1 SOIL

Stratigraphy is discussed in detail in previous quarterly reports currently on file with the local Implementing Agency (LIA).

3.2 GROUNDWATER

3.2.1 Elevation and Gradient

Depth to groundwater at the time of the Q2/91 monitoring ranged from 5.58 to 7.92 ft. bgs. Groundwater flow has transitioned to westerly flow during Q2/91 with a gradient of approximately 0.006 ft/ft (Table 7 and Drawing 4).

3.2.2 Results of Chemical Analyses

A summary of groundwater chemistry data is presented in Table 6. Groundwater samples collected from monitoring wells MW-3 and MW-5 showed no detectable concentrations of hydrocarbons. MW-2 contained detectable concentrations of TPH-g (3.9 mg/L), TPH-d (0.36 mg/L), and BTEX (including 1.00 mg/L benzene). Well MW-1 contained benzene at a concentration of 0.0074 mg/L.

3.2.3 Discussion

Groundwater monitoring well MW-2 continues to show detectable concentrations of TPH-g, BTEX and TPH-d. The sample from MW-1 contained a detectable concentration of benzene. Wells MW-3 and MW-5 continue to indicate no detectable concentrations of these constituents.

SECTION 4

NEXT QUARTER ACTIVITIES

4.1 PROPOSED ACTIVITIES

The following activities will be continued in Q3/91:

- Continue monitoring groundwater conditions. Groundwater samples will be analyzed for TPH-g, BTEX, and TPH-d following the analytical methods listed in Table 3.

- Implementation of the Site Restoration Plan and Schedule for Future Activities will begin during Q3/91.

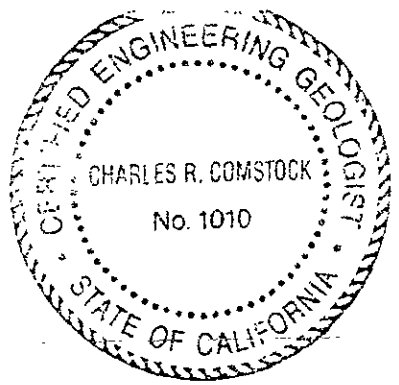
- Activities conducted during Q3/91 will be reported in Report of Activities for Q3/91 scheduled for submittal to the regulating agencies of jurisdiction on September 30, 1991.

CERTIFICATION

This report of activities for the Shell Oil Company facility at 2724 Castro Valley Boulevard, Castro Valley, 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
Technical Director

PRIMARY CONTACTS

Shell Oil Company Facility
2724 Castro Valley Boulevard
Castro Valley, California

Quarter 2, 1991

Regional Water Quality Control Board Representative:	Ms. Penny Silzer San Francisco Bay Regional Water Quality Control Board 2101 Webster Street, Suite 500 Oakland, California 94612
LIA Representative:	Mr. Lawrence Seto Alameda County Health Care Services Agency Department of Public Health 80 Swan Way, Room 200 Oakland, California 94621
Shell Engineer:	Mr. Jack Brastad Shell Oil Company 1390 Willow Pass Road, Suite 900 Concord, California 94520
Shell Legal Staff:	Ms. Barbara J. Ellis 900 Louisiana 1 Shell Plaza #4809 Houston, Texas 77001
Shell Legal Representative:	Mr. Michael K. Johnson, Esq. Larson, Burnham and Turner 1901 Harrison Street, 11th Floor Oakland, California 94604
Converse Project Manager:	Mr. Charles R. Comstock Converse Environmental West 55 Hawthorne Street, Suite 500 San Francisco, California 94105
Registered Geologist in Charge:	Mr. Charles R. Comstock

PRIMARY CONTACTS (continued)

Shell Oil Company Facility
2724 Castro Valley Boulevard
Castro Valley, California

Quarter 2, 1991

Owner Legal Representative:	Mr. Matthew Righetti, Esq. Righetti Law Firm Signature Center 4900 Hopyard Road, Suite 220 Pleasanton, California 94588-3346
Owner Consultant	Dr. Mohsen Mehran 18218 Mc Dermott East Suite G Irvine, California 92714

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TABLES

TABLE 1. ACTIVITY SUMMARY - QUARTER 2, 1991

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

	PERCENT COMPLETE			
	Quarter 2, 1991		Total to Date	
Activity	Onsite	Offsite	Onsite	Offsite
Soil Characterization	0	N/A	90	NA
Groundwater Characterization (Dissolved Product)	0	0	30	0
Groundwater Characterization (Floating Product)	NA	NA	NA	NA
Soil Remediation	0	NA	90*	N/A
Groundwater Remediation (Dissolved Product)	0	0	0	0
Groundwater Remediation (Floating Product)	NA	NA	NA	NA

NOTES:

* Presumes that excavation to 11 feet below ground surface will be accepted as the full vertical extent of the unsaturated zone

NA Not Applicable

TABLE 2. SOIL BORING INFORMATION

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Boring No.	Date Drilled	Total Depth (ft bgs)	Completion	Unsaturated Soil Samples (ft bgs)	Saturated Soil Samples (ft bgs)
MW-1	1/18/90	16	4" diameter well	5, 10	NC
MW-2	1/19/90	15	4" diameter well	5, 9, 15, 20, 25	NC
MW-3	1/19/90	25	4" diameter well	5, 10, 15	NC
MW-5	1/22/90	23	4" diameter well	5, 9, 15, 20, 25	NC
SB-1	1/18/90	15	Abandoned 01/18/90	5, 9	NC
SB-2	5/9/90	6.5	Abandoned 5/9/90	4.5, 6.5	NC

NOTES:

ft bgs feet below ground surface
NC None collected

Shell Oil Company

San Francisco District

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P.O. Box 5500
San Bruno, CA 94066
(415) 737-2200
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June 28, 1991
88-44-380-20-1294

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

Subject: Shell Oil Company - Quarterly Report - Q2/1991
Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Dear Ms. Silzer:

Enclosed please find one copy of the Shell Oil Company Quarterly Report of Activities Quarter 2, 1991, prepared by Converse Environmental West (CEW) for the Shell Oil Company (Shell) Site (site) located at 2724 Castro Valley Boulevard in Castro Valley, California.

Please call if you have any questions.

Very truly yours,

Shell Oil Company

Jack P. Brastad

Enclosure

cc: **Mr. Lawrence Seto** - Alameda County Health Care Services Agency (w/ encl.)
Ms. Barbara J. Ellis - Shell Oil Company (w/ encl.)
Mr. Charles R. Comstock - Converse Environmental West (w/o encl.)
Dr. Mohsen Mehran - Owner Consultant (w/ encl.)
Mr. Michael K. Johnson - Larson, Burnham and Turner (w/ encl.)
Mr. Mathew Righetti - Righetti Law Firm (w/ encl.)

TABLE 3. RECOMMENDED MINIMUM VERIFICATION ANALYSES FOR UNDERGROUND TANK LEAKS

FROM: Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites (Revised August 10, 1990)

HYDROCARBON LEAK	SOIL ANALYSIS		WATER ANALYSIS	
Unknown Fuel	TPH-g	GCFID (5030)	TPH-g	GCFID (5030)
	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
	TPH & BTEX	8260	BTEX	602, 624 or 8260
Leaded Gas	TPH-g	GCFID (5030)	TPH-g	GCFID (5030)
	BTEX	8020 or 8240	BTEX	602, 625 or 8260
	TPH & BTEX	8260	BTEX	602, 624 or 8260
	TOTAL LEAD AA		TOTAL LEAD AA	
		OPTIONAL		
	TEL	DHS-LUFT	TEL	DHS-LUFT
	EDB	DHS-AB1803	EDB	DHS-AB1803
Unleaded Gas	TPH-g	GCFID (5030)	TPH-g	GCFID (5030)
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
	TPH & BTEX	8260		
Diesel	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
	TPH & BTEX	8260		
Jet Fuel	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
	TPH & BTEX	8260		
Kerosene	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
Fuel/Heating Oil	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
Chlorinated Solvents	CL HC	8010 or 8240	CL HC	601 or 624
	BTEX	8020 or 8240	BTEX	602 or 624
	CL HC & BTEX	8260	CL HC & BTEX	8260
Non Chlorinated Solvents	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	BTEX	8020 or 8240	BTEX	602 or 624
	TPH & BTEX	8260	TPH & BTEX	8260
Waste and Used Oil and Unknown	TPH-g	GCFID (5030)	TPH-g	5520 C&F
	TPH-d	GCFID (3550)	TPH-d	GCFID (3510)
	TPH & BTEX	8260		
	O & G	5520 D&F	O & G	5520 C&F
	BTEX	8020 or 8240	BTEX	602, 624 or 8260
	CL HC	8010 or 8240	CL HC	601 or 624
	ICAP or AA TO DETECT METALS: Cd, Cr, Pb, Zn, Ni			
	METHOD 8270 FOR SOIL OR WATER TO DETECT:			
	PCB*		PCB*	
	PCP*		PCP*	
	PNA		PNA	
	CREOSOTE		CREOSOTE	

* If found analyze for dibenzofurans (PCBs) or dioxins (PCP).

TABLE 4. RESULTS OF SOIL CHEMICAL ANALYSES (mg/kg)

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Boring No.	Sample Depth (ft bgs)	Date Sampled	TPH-g	TPH-d	TPH-mo	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
MW-1	5'	1/18/90	<1.0	5.8	73	<2.5	<2.5	<2.5	<2.5	4.4
MW-1	10'	1/18/90	<1.0	4.4	39	<2.5	<2.5	<2.5	<2.5	4.3
MW-2[1]	5'	1/19/90	<1.0	14	90	<2.5	<2.5	<2.5	<2.5	4.6
MW-2[2]	9'	1/19/90	<1.0	<1.0	23	<2.5	<2.5	<2.5	<2.5	5.3
MW-2[3]	15'	1/19/90	<1.0	3.1	<10	3.2	2.9	<2.5	54	6.3
MW-2[4]	20'	1/19/90	<1.0	3.2	<10	8.4	21	<2.5	16	7.9
MW-2[5]	25'	1/19/90	<1.0	8.2	19	23	34	3.6	23	8.0
MW-3	5'	1/19/90	<1.0	<1.0	<1.0	<2.5	5.9	<2.5	<2.5	6.2
MW-3	10'	1/19/90	<1.0	<1.0	<1.0	<2.5	11	<2.5	<2.5	5.8
MW-3	15'	1/19/90	<1.0	2.4	<1.0	<2.5	23	<2.5	7.4	6.5
MW-5	5'	1/22/90	<1.0	<1.0	<10	<2.5	6.5	<2.5	2.6	5.5
MW-5	9'	1/22/90	<1.0	<1.0	<10	<2.5	3.1	<2.5	,2.5	6.4
MW-5	15'	1/22/90	<1.0	<1.0	<10	<2.5	4.4	<2.5	2.7	8.0
MW-5	20'	1/22/90	<1.0	1.6	<10	3.0	11	<2.5	6.1	35
MW-5	25'	1/22/90	<1.0	<1.0	<10	<2.5	6.0	<2.5	4.9	3.9
SB-1	5'	1/18/90	<1.0	<1.0	<10	<2.5	6.7	<2.5	4.6	4.7
SB-1	9'	1/18/90	<1.0	<1.0	<10	<2.5	7.7	<2.5	3.4	6.5
SB-1	10'	1/18/90	<1.0	<1.0	<10	<2.5	18	<2.5	6.8	NR

TABLE 4 (cont'd). RESULTS OF SOIL CHEMICAL ANALYSES (mg/kg)

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Boring No.	Sample Depth (ft bgs)	Date Sampled	TPH-g	TPH-d	TPH-mo	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
SB-2-2A[6]	4.5	5/9/90	1.0	14	73	<2.5	<2.5	3.9	16	9.1
SB-2-3A[7]	6.5	5/9/90	<1	18	26	<2.5	<2.5	<2.5	<2.5	7.0

NOTES:

1 Sample contained 370 ppm total oil grease, 350 ppm non-polar oil and grease, 18 ppm chromium, and 67 ppm zinc
2 Sample contained 45 ppm chromium and 56 ppm zinc
3 Sample contained 40 ppm chromium, 60 ppm zinc, 240 ppb total xylenes, and 380 ppb bis (2-ethylhexyl) phthalate
4 Sample contained 53 ppm chromium, 99 ppm zinc, and 550 ppb bis (2-ethylhexyl) phthalate
5 Sample contained 48 ppm chromium and 110 ppm zinc
6 Sample contained 33 ppm chromium and 46 ppm zinc
7 Sample contained 32 ppm chromium and 46 ppm zinc
NR Not requested
ft bgs Feet below ground surface
mg/Kg Milligrams per kilograms

TABLE 5. WELL INSTALLATION INFORMATION

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Well No.	Date Installed	Well Diameter (inches)	Total Depth of Well (ft bgs)	Screened Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Grout Seal Interval (ft bgs)
MW-1	1/18/90	4	16	6 to 16	4 to 6	0 to 4
MW-2	1/19/90	4	15	5 to 15	3 to 4	0 to 3
MW-3	1/19/90	4	25	5 to 25	3 to 4	0 to 3
MW-5	1/22/90	4	23	9 to 23	6 to 8	0 to 6

NOTES:

ft bgs feet below ground surface
MW Monitoring well

TABLE 6. RESULTS OF GROUNDWATER CHEMICAL ANALYSIS

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

(mg/L)

Well No.	Date Sampled	TPH-g	TPH-d	Benzene	Toluene	Ethyl-Benzene	Xylenes
MW-1	02/09/90	<1.0	NS	0.00058	0.00063	<0.0005	<0.0005
MW-1	04/20/90	<0.05	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	07/31/90	<0.05	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	10/25/90	0.10	<0.05	<0.0005	<0.0005	<0.0006	<0.0006
MW-1	[illegible]	[illegible]	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-1Dup	[illegible]	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-1	**04/19/91**	**<0.05**	**<0.05**	**0.0077**	**<0.0005**	**<0.0005**	**<0.0005**
MW-1Dup	**04/19/91**	**<0.05**	**<0.05**	**0.0074**	**<0.0005**	**<0.0005**	**<0.0005**
MW-2	02/09/90	8.6	4.1	0.360	0.410	0.0065	0.670
MW-2	04/20/90	9.1	1.8	0.500	0.330	0.110	0.900
MW-2	07/31/90	5.3	0.6	0.550	0.038	<0.0005	0.280
MW-2	10/25/90	4.8	0.30	0.490	0.022	0.021	0.156
MW-2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MW-2	**04/19/91**	**3.9**	**0.36**	**1.00**	**0.077**	**0.100**	**0.093**
MW-3	02/09/90	<1.0	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	04/20/90	<0.05	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	07/31/90	<0.05	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	10/25/90	<0.05	<0.05	<0.0005	<0.0005	<0.0006	<0.0006
MW-3	01/15/91	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	**04/19/91**	**<0.05**	**<0.05**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**
MW-5	02/09/90	<1.0	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	04/20/90	<0.05	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	07/31/90	<0.05	NS	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	10/25/90	<0.05	<0.05	<0.0005	0.0007	<0.0006	<0.0006
MW-5	01/15/91	<0.05	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-5	**04/19/91**	**<0.05**	**<0.05**	**<0.0005**	**<0.0005**	**<0.0005**	**<0.0005**

NOTES:

Dup duplicate sample
TPH-g total petroleum hydrocarbons as gasoline (GCFID)
TPH-d total petroleum hydrocarbons as diesel (GCFID)
NS Not sampled
MW-4 was not completed as groundwater monitoring well
Bold items indicate the results of chemical analyses conducted during Quarter 2, 1991

TABLE 7. GROUNDWATER MONITORING INFORMATION

Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Well No.	Date Monitored	Depth to Water (ft bgs)	Water Table Elevation (ft)	Floating Product Thickness (inches)	Petroleum Odor in Water
MW-1	02/08/90	8.39	91.39	None	None
El. 99.78'	04/20/90	9.21	90.57	None	None
	07/30/90	9.21	90.57	None	None
	10/25/90	9.44	90.34	None	None
	01/15/91	9.11	90.67	None	None
	04/19/91	**5.58**	**94.20**	**None**	**None**
MW-2	02/08/90	7.33	93.50	None	None
El. 100.83'	04/20/90	8.63	92.20	None	Slight
	07/30/90	8.78	92.05	None	Slight
	10/25/90	9.50	91.33	None	Strong
	01/15/91	8.52	92.31	None	Slight
	04/19/91	**6.90**	**93.93**	**None**	**Slight**
MW-3	02/08/90	8.91	92.57	None	None
El. 101.48'	04/20/90	10.20	91.28	None	None
	07/30/90	10.61	90.87	None	None
	10/25/90	10.00	91.48	None	None
	01/15/91	9.74	91.74	None	None
	04/19/91	**7.92**	**93.56**	**None**	**None**
MW-4	02/08/90	8.80	91.10	None	None
El. 99.90'	04/20/90	9.35	90.55	None	None
	07/30/90	9.49	90.41	None	None
	10/25/90	10.12	89.78	None	None
	01/15/91	9.26	90.64	None	None
	04/19/91	**6.52**	**93.38**	**None**	**None**

NOTES:

ft bgs feet below ground surface
all elevations are tied into a temporary benchmark elevation of 100.00 feet
Boldface items indicate the results of measurements conducted during Quarter 2, 1991.

TABLE 8. FIELD PARAMETERS MEASURED DURING GROUNDWATER SAMPLING

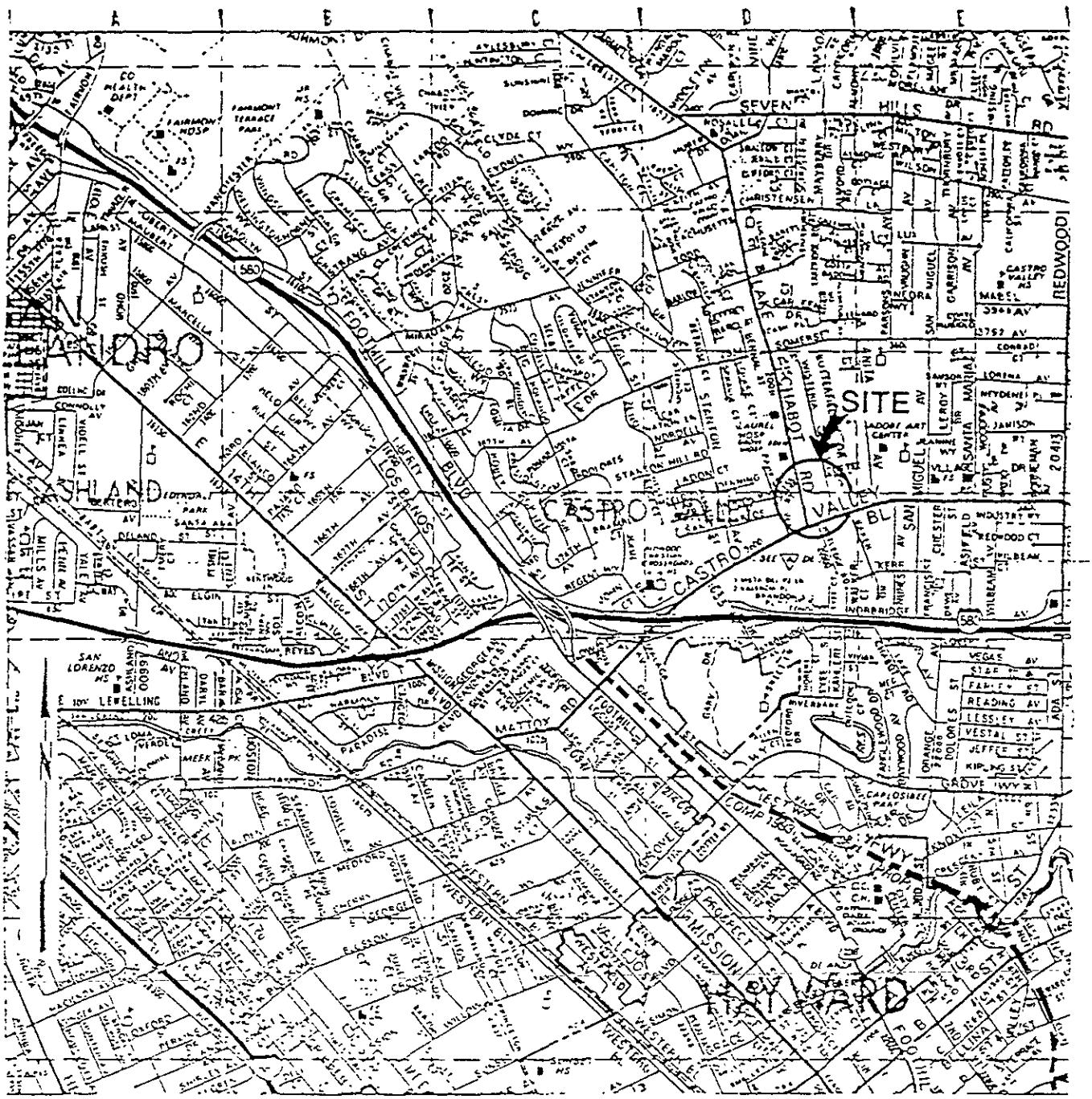
Former Shell Oil Company Site
2724 Castro Valley Boulevard
Castro Valley, California

Well No.	Date Sampled	Time	Purge Method	Total Gallons Purged	pH (pH units)	Conductivity (µmhos)	Temperature (°C)	Notes
MW-1	04/19/91	12:58	Hand Bailed	P.P.	7.29	890	17.1	Clear
			Cent. Pump	5	7.49	940	16.7	Clear
			Cent. Pump	10	7.62	990	16.7	Clear
			Cent. Pump	15	7.69	910	16.8	Clear
		1:11	Cent. Pump	20	7.89	930	16.8	Purged dry
MW-2	04/19/91	12:30	Hand Bailed	P.P.	6.88	1300	17.7	Trace odor
			Hand Bailed	5	6.98	1250	17.2	Clear
			Hand Bailed	8	7.04	1210	17.4	Clear, odor
		12:37	Hand Bailed	12				Purged dry
		14:10	Hand Bailed	16	7.07	1290	17.5	Clear, odor
MW-3	04/19/91	15:02	Hand Bailed	P.P.	7.27	1070	18.6	
		15:19	Hand Bailed	10	7.28	1080	18.5	
		15:23	Hand Bailed	20	7.32	1150	19.0	
		15:25	Hand Bailed	25	7.37	1350	19.6	
		15:26	Hand Bailed	28	7.53	1360	19.4	
MW-5	04/19/91	14:35	Hand Bailed	P.P.	7.08	1600	18.1	No odor or sheen
		14:40	Cent. Pump	10	7.04	1640	18.4	Clear
		14:43	Cent. Pump	15	7.14	1760	18.5	Clear
		14:46	Cent. Pump	20	7.17	1700	18.8	Purged dry
			Cent. Pump	22				

NOTES:

Cent. Pump	Centrifugal Pump
P.P.	Pre-purge
NM	Not Measured

DRAWINGS



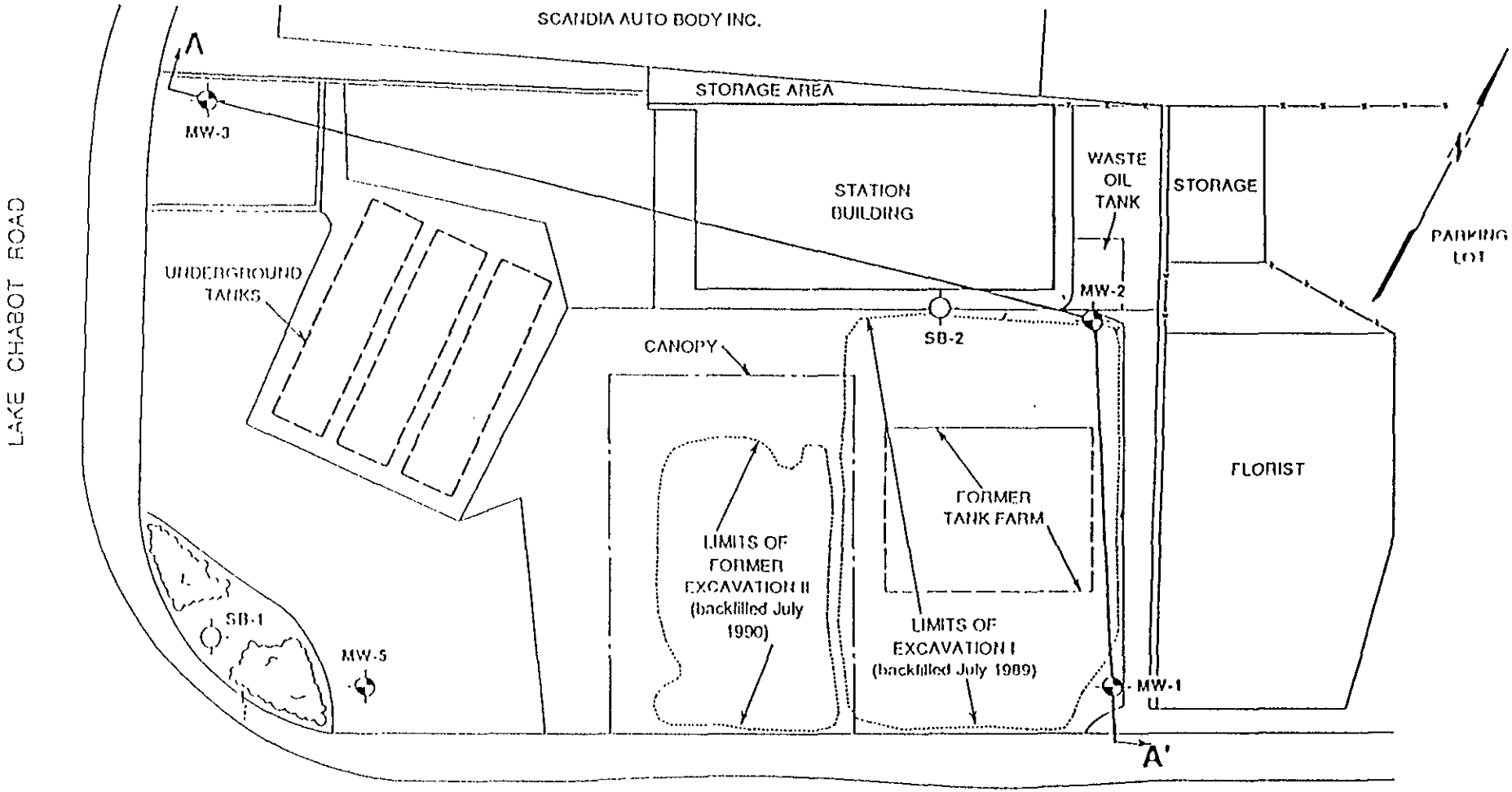
SOURCE: Thomas Brothers Maps, 1989.

SITE LOCATION MAP

SHELL OIL COMPANY
2724 Castro Valley Boulevard
Castro Valley, California

Scale: AS SHOWN	Project No.: 89-44-380-20
Prepared by: LOL	Date: 6/8/90
Checked by: MCC	Drawing No.:
Approved by: CRC	1

Converse Environmental West



LEGEND

MW-1 GROUNDWATER MONITORING WELL

SB-1 SOIL BORING

A A' LINE OF GEOLOGIC CROSS SECTION

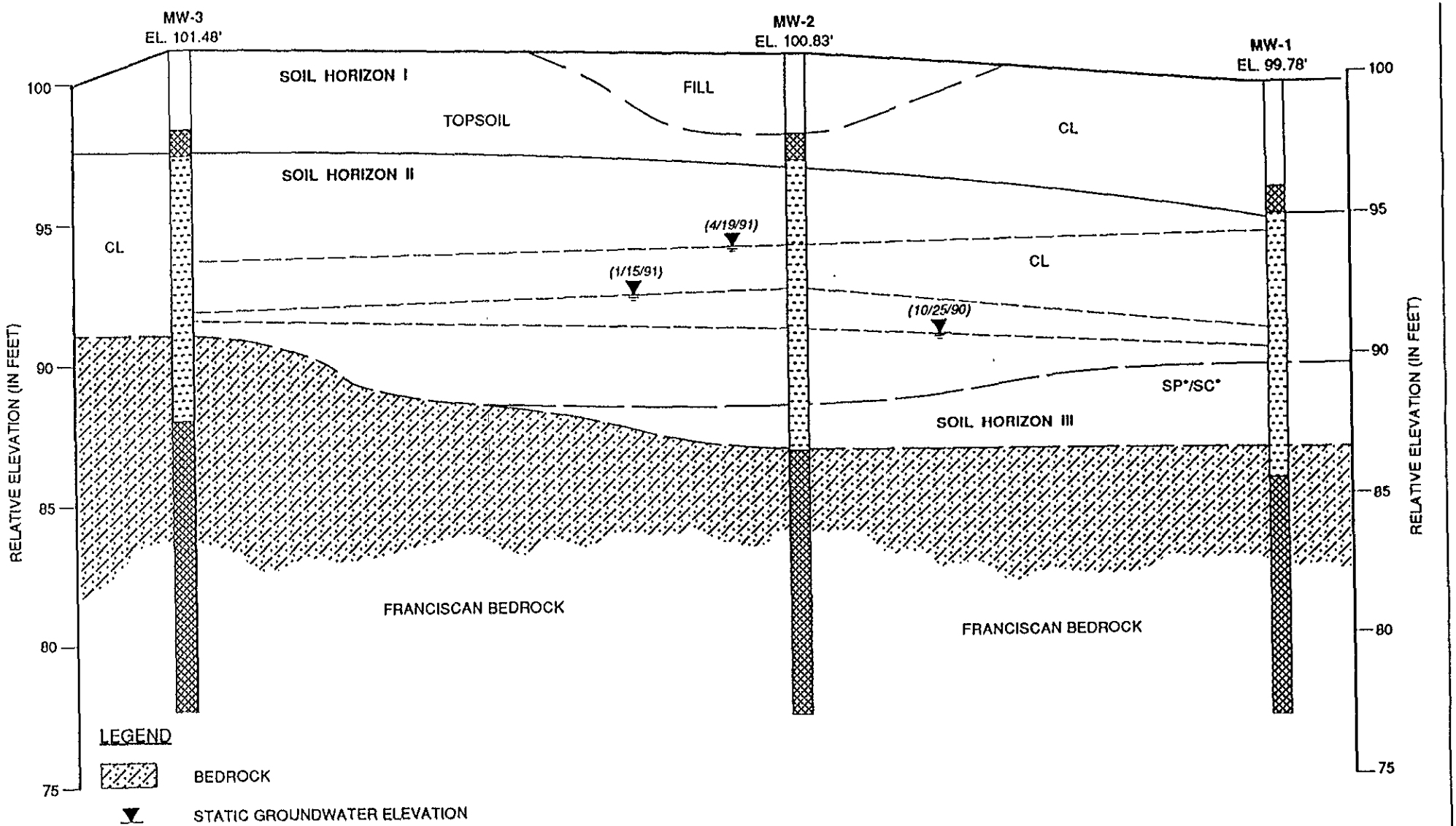
Base Map: Surveyed with electronic distance meter by CEW, 1990

PLOT PLAN

SHELL OIL COMPANY
2724 Castro Valley Boulevard
Castro Valley, California

Converse Environmental West

Scale	AS SHOWN
Project No	88 44 380 20
Prepared by	DEN
Date	9/25/90
Checked by	MCC
Drawing No	2
Approved by	CRC



LEGEND

BEDROCK

STATIC GROUNDWATER ELEVATION

MONITORING WELL/BORE HOLE

Blank Casing

Screen Casing

Bentonite Backfill

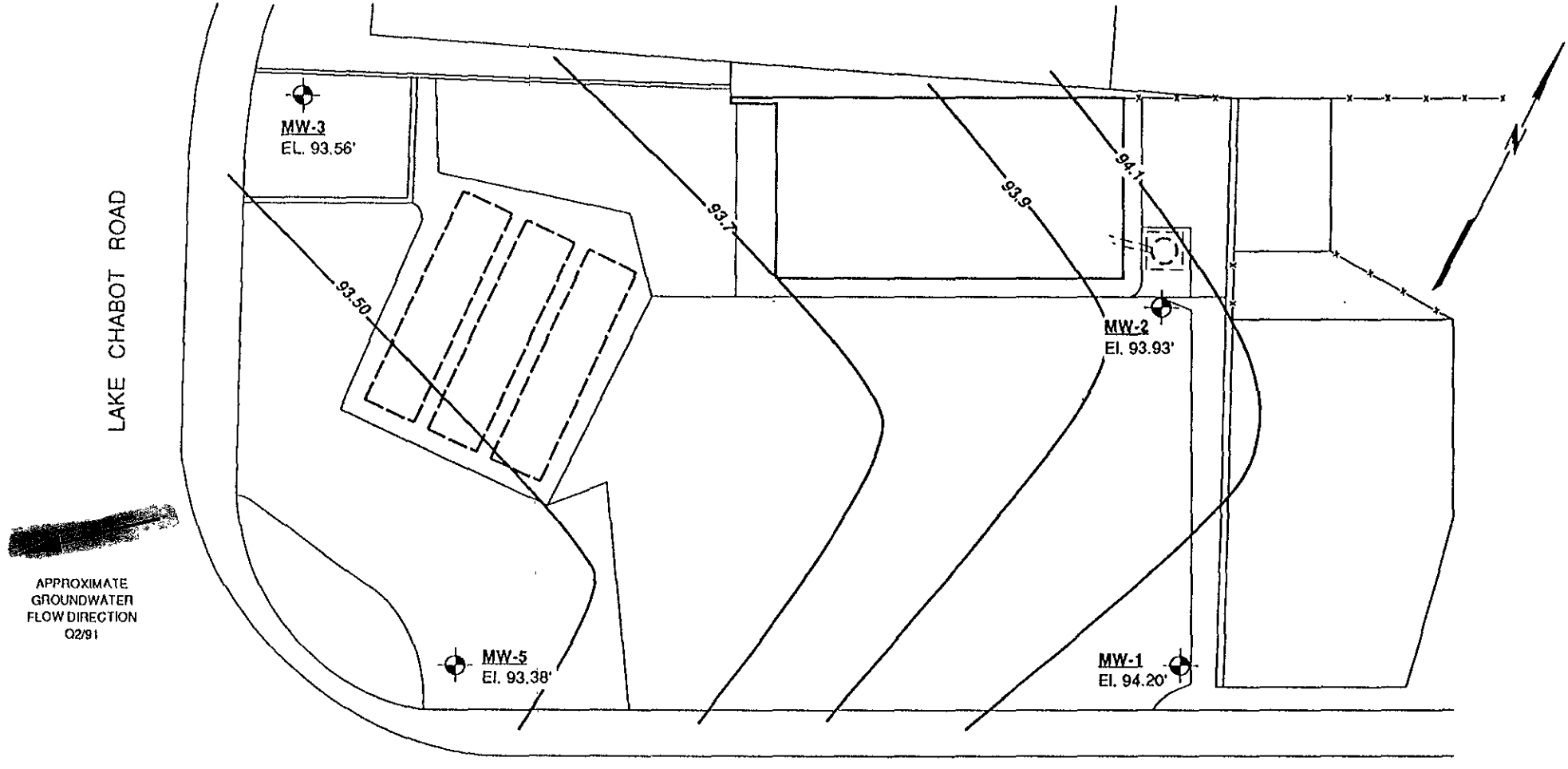
* WITH SHALE FRAGMENTS (PALEOREGOLITH ?)

SCHEMATIC GEOLOGIC CROSS SECTION A-A'

SHELL OIL COMPANY
2724 Castro Valley Blvd.
Castro Valley, California

Converse Environmental West

Scale	NOT TO SCALE
Project No.	88-44-380-20
Prepared by	LQL
Date	3/27/91
Checked by	KRL
Drawing No.	3
Approved by	CRC



LEGEND

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

MW-1 GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

NOTE: GROUNDWATER ELEVATIONS GIVEN WITH RESPECT TO A POINT HAVING AN ARBITRARY DATUM OF 100.00 FEET

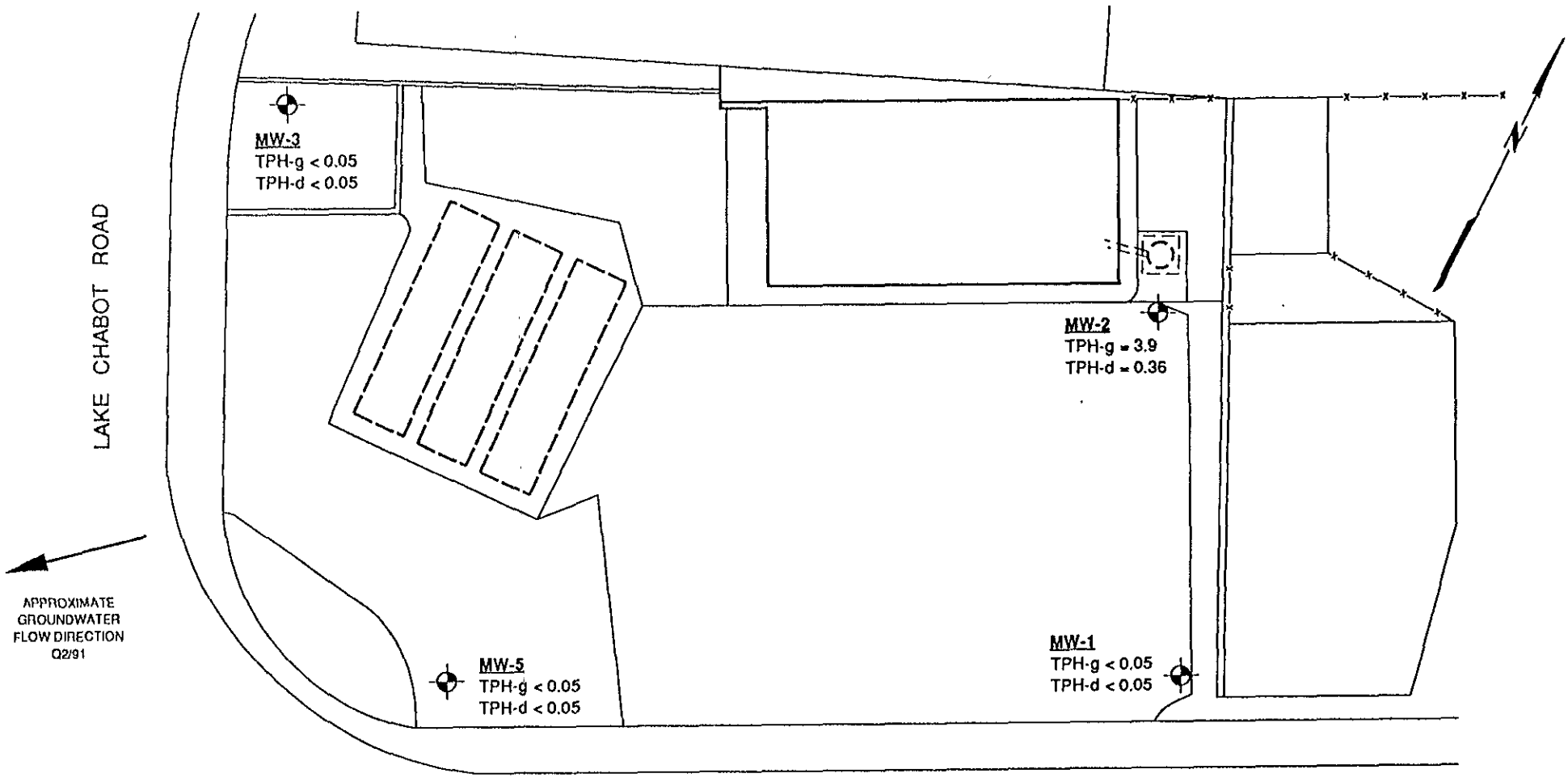
Base Map: Surveyed with electronic distance meter by CEW, 1990.

GROUNDWATER CONTOUR MAP Q2/91

SHELL OIL COMPANY
2724 Castro Valley Boulevard
Castro Valley, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-380-20
Prepared by	KGC
Date	4/7/91
Checked by	DS
Drawing No.	4
WIC Number	204-1381-0407



LEGEND

MW-1 ⊕ GROUNDWATER MONITORING WELL

TPH-g = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (in milligrams per liter)

TPH-d = TOTAL PETROLEUM HYDROCARBONS AS DIESEL (in milligrams per liter)

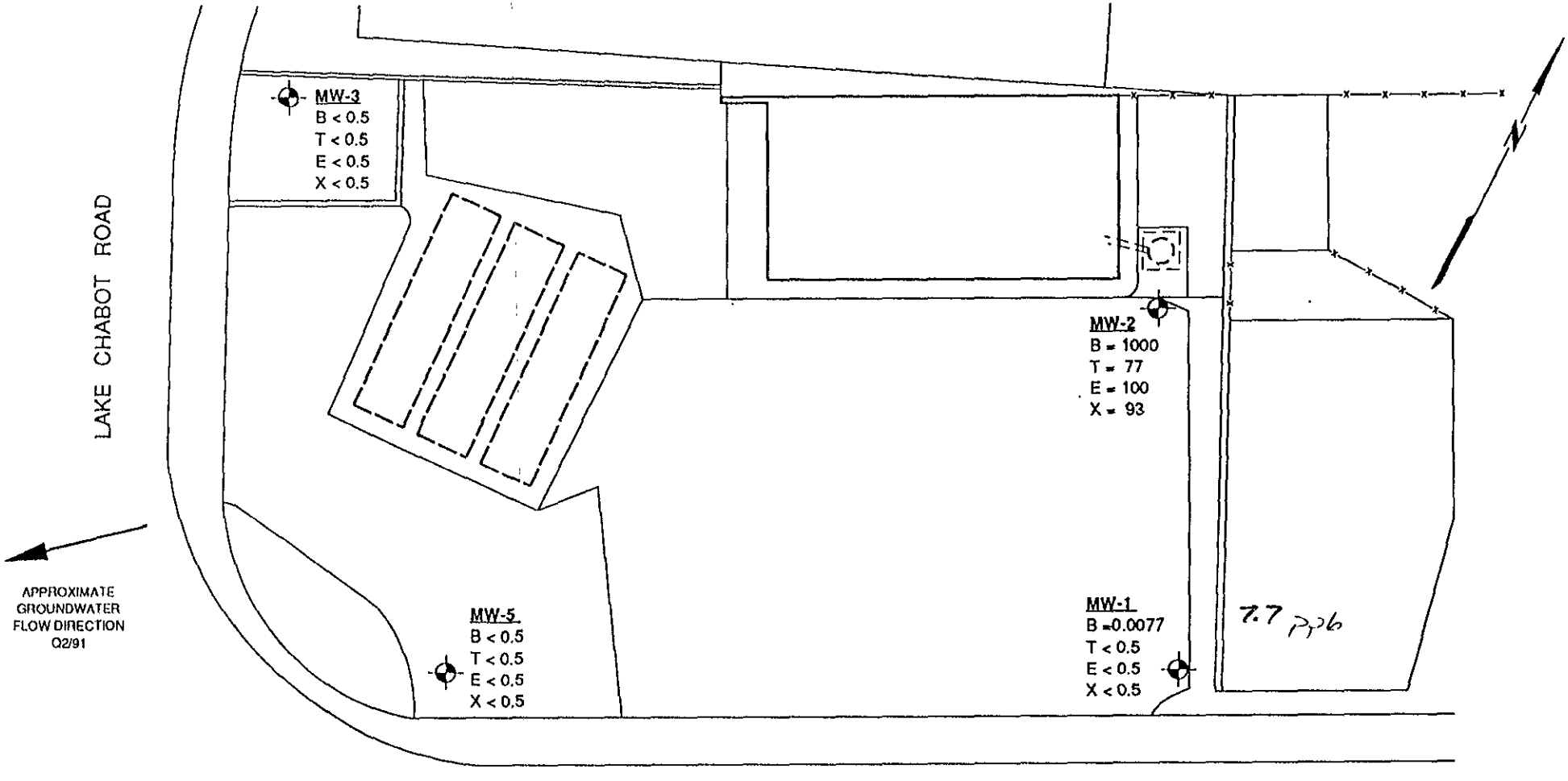
Base Map: Surveyed with electronic distance meter by CEW, 1990.

PLAN: GROUNDWATER TPH-g AND TPH-d

SHELL OIL COMPANY
2724 Castro Valley Boulevard
Castro Valley, California

Converse Environmental West

Scale	AS SHOWN
Project No.	88-44-380-20
Prepared by	KGC
Date	6/25/91
Checked by	DS
Drawing No.	5
WIC Number	204-1381-0407



LEGEND

MW-1 ⊕ GROUNDWATER MONITORING WELL

B = BENZENE (in micrograms per liter)

T = TOLUENE (in micrograms per liter)

E = ETHYLBENZENE (in micrograms per liter)

X = XYLENES (in micrograms per liter)

Base Map: Surveyed with electronic distance meter by CEW, 1990.

PLAN: GROUNDWATER BTEX Q2/91

SHELL OIL COMPANY
2724 Castro Valley Boulevard
Castro Valley, California

Converse Environmental West

Scale: AS SHOWN	Project No.: 88-44-380-20
Prepared by: KGC	Date: 6/25/91
Checked by: DS	Drawing No.: 6
WIC Number: 204-1381-0407	

APPENDIX A

CHRONOLOGICAL SUMMARY

CHRONOLOGICAL SUMMARY

For Shell Property at
2724 Castro Valley Blvd., Castro Valley, California

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
11/21/86	Blaine Tech Services removed one 550 gallon waste oil tank and conducted field sampling.
04/22/88	Woodward-Clyde drilled and sampled three soil borings around the existing underground storage tank (UST) complex.
03/06/89	Crosby & Overton, Inc conducted field sampling during removal of 4 underground storage tanks. Contaminated soil was discovered and additional excavation and sampling was performed.
03/31/89	Field sampling in the vicinity of the new tank hole was performed.
05/05/89	Converse Environmental West (CEW) was retained by Shell Oil Co to supervise environmental activities at the site.
06/12/89	Soil samples SW-1 through SW-7 were collected.
07/05/89	Soil samples SW-8 through SW-11 were collected.
07/06/89	One water sample in the excavation pit was collected.
07/11/89	CEW sent an "Interim Sampling Report and Recommendations" to the Alameda County Health Care Services Agency (ACHCSA).
07/27/89	CEW sent an "Addendum to July 11, 1989 Interim Sampling Report and Recommendations" to the ACHCSA.
08/30/89	Soil samples SS-1 through SS-7 were collected.
10/02/89 to 10/11/89	Soil samples 1 through 4 and S-1 through S-7 were collected.
10/26/89	Samples 20 through 23, and stockpile samples were collected.

CHRONOLOGICAL SUMMARY (cont'd)

Date	Description of Activity
10/31/89	CEW sent a report titled "Soil Sampling Report" to the ACHCSA.
11/30/89	CEW sent a Draft Work Plan to the ACHCSA.
01/11/90	CEW sent a Progress Report for Q4/89 to the ACHCSA.
01/18/90 to 01/23/90	Bored and sampled MW-2 through MW-5 and installed MW-2, MW-3 and MW-5. MW-4 grouted. Surface completed: MW-2 and MW-3.
02/08/90	Developed MW-5. Surveyed wells MW-1, MW-2, MW-3, MW-5 and soil borings site survey.
02/09/90	Developed, sampled MW-1, MW-2, MW-3 and MW-5.
02/22/90	Sampled MW-2 for pesticides and oil and grease.
3/12/90	CEW requested permission from ACHA to backfill the existing excavation onsite.
3/16/90	CEW obtained site assessment information on uses of nearby properties, and reported fuel leaks from nearby underground tanks.
4/02/90	CEW conducted E.D.M. survey of adjacent streets, extending 200 to 300 feet from the site.
4/20/90	CEW conducted Q2/90 water sampling in MW-1, MW-2, MW-3 and MW-5. Requested analyses of TPH-g, TPH-d, BTEX, 601/602, oil and grease.
4/23/90	CEW arranged to have one segment of chain-link fence moved, to protect MW-3.
4-26-90	CEW, Shell, ACHCSA and Rheghetti meet at site to discuss backfilling of the existing excavation.
5-2-90	Shell received permission from ACHCSA to backfill the existing excavation.
5-31-90	CEW issues site restoration plan and schedule for future work.
6-27-90	CEW personnel visit the site to assess current conditions.
6-29-90	CEW issues Q2/90 report.
7-30-90	CEW samples and analyzes groundwater from MW-1, MW-2, MW-3 and MW-5.
9-28-90	CEW issues Quarter 3, 1990 report.

CHRONOLOGICAL SUMMARY (cont'd)

Date	Description of Activity
10-25-90	CEW samples and analyzes groundwater from MW-1, MW-2, MW-3, and MW-5.
12-31-90	CEW issues Quarter 4, 1990 report.
1/15/91	CEW samples and analyzes groundwater from MW-1, MW-2, MW-3, and MW-5.
3/19/91	ACHCSA approves Site Restoration Plan.
3/28/91	CEW issues Quarter 1, 1991 report.
4/19/91	**CEW samples and analyzes groundwater from MW-1, MW-2, MW-3 and MW-5.**
6/28/91	**CEW issues Quarter 2, 1991 report.**

Bold Boldface indicates work completed this quarter.

APPENDIX B

ANALYTICAL LABORATORY REPORTS and CHAIN-OF-CUSTODY FORMS

NET NATIONAL ENVIRONMENTAL TESTING, INC.®

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

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

Date: 04-26-91
NET Client Acct No: 18.02
NET Pacific Log No: 7092
Received: 04-20-91 0800

Client Reference Information

SHELL, 2724 Castro Valley Blvd.; Project: 88-44-380-20

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
Client Name: Converse Consultants
NET Log No: 7092

Date: 04-26-91
Page: 2

Ref: SHELL, 2724 Castro Valley Blvd.; Project: 88-44-380-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-1 04-19-91 1335 83001	MW-2 04-19-91 1615 83002**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	10	
DATE ANALYZED			04-23-91	04-24-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	3.9	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	10	
DATE ANALYZED			04-23-91	04-24-91	
Benzene		0.5	7.7	1000	ug/L
Ethylbenzene		0.5	ND	100	ug/L
Toluene		0.5	ND	77	ug/L
Xylenes, total		0.5	ND	93	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-22-91	04-22-91	
DATE ANALYZED			04-23-91	04-23-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	ND	0.36	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: 04-26-91
Client Name: Converse Consultants
NET Log No: 7092 Page: 3

Ref: SHELL, 2724 Castro Valley Blvd.; Project: 88-44-380-20

			Descriptor, Lab No. and Results		
			MW-3 04-19-91 1640	field blank 04-19-91 1645	
Parameter	Method	Reporting Limit	83003	83004	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-23-91	04-23-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-23-91	04-23-91	
Benzene		0.5	ND	ND	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	ND	ND	ug/L
Xylenes, total		0.5	ND	ND	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-22-91	04-22-91	
DATE ANALYZED			04-23-91	04-23-91	
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: 04-26-91
Client Name: Converse Consultants
NET Log No: 7092 Page: 4

Ref: SHELL, 2724 Castro Valley Blvd.; Project: 88-44-380-20

			Descriptor, Lab No. and Results		
			MW-5 04-19-91 1710	trip blank 04-19-91	
Parameter	Method	Reporting Limit	83005	83006	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-23-91	04-23-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			04-23-91	04-23-91	
Benzene		0.5	ND	ND	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	ND	ND	ug/L
Xylenes, total		0.5	ND	ND	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			04-22-91	04-22-91	
DATE ANALYZED			04-23-91	04-23-91	
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: 04-26-91
Client Name: Converse Consultants
NET Log No: 7092 Page: 5

Ref: SHELL, 2724 Castro Valley Blvd.; Project: 88-44-380-20

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 04-19-91 04-19-91 83007	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			04-23-91	
METHOD GC FID/5030			--	
as Gasoline		0.05	ND	mg/L
METHOD 602			--	
DILUTION FACTOR *			1	
DATE ANALYZED			04-23-91	
Benzene		0.5	7.4	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			04-22-91	
DATE ANALYZED			04-23-91	
METHOD GC FID/3510			--	
as Diesel		0.05	ND	mg/L
as Motor Oil		0.5	ND	mg/L

Ref: SHELL, 2724 Castro Valley Blvd.; Project: 88-44-380-20

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	79	ND	63	64	1.0
Motor Oil	0.5	mg/L	61	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	96	ND	88	88	< 1
Benzene	0.5	ug/L	84	ND	92	94	1.7
Toluene	0.5	ug/L	88	ND	94	97	2.9
Gasoline	0.05	mg/L	96	ND	92	97	5.3
Benzene	0.5	ug/L	84	ND	93	99	6.0
Toluene	0.5	ug/L	88	ND	96	101	4.7
Gasoline	0.05	mg/L	89	ND	92	89	3.3
Benzene	0.5	ug/L	93	ND	97	95	1.4
Toluene	0.5	ug/L	96	ND	97	97	< 1

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.

AFE 086657
EXP 5440

7092

CONVERSE ENVIRONMENTAL WEST

CHAIN OF CUSTODY RECORD

P.M, C.C,

PROJECT NO.:	PROJECT NAME / CROSS STREET :
88-44-380-20	2224 CASTRO VALLEY BLVD @ LAKE CHABOT.
SAMPLERS: (Signature)	

STATION NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NUMBER OF CONTAINERS	ANALYSES: TPHG	BTEX	TPHD				REMARKS
MW-1	4/14/91	1335			VOA	4	X	X					STAT
MW1		1335			LITER	3			X				Detection
MW2		1615			VOA	3	X	X					TPH D 0.05 ppm
MW2		1615			LITER	2			X				TAG @ 105
MW3		1640			VOA	3	X	X					BTEX .0005
MW3		1640			LITER	2			X				
FIELD BLANK		1645			VOA	1	X	X					
FIELD BLANK		1645			LITER	1			X				
MW5		1710			VOA	3	X	X					CUSTODY SEALED 4/19/91
MW5		1710			LITER	2			X				@ 1400 MMW
TRIP		—			VOA	1	X	X					estimate
TRIP		—			LITER	1			X				
04-19-91		—			VOA	3	X	X					
04-19-91	4/19/91	—			LITER	2			X				

RELINQUISHED BY : (Signature)	DATE : 4/19/91 TIME : 530pm	RECEIVED BY : (Signartue)	RELINQUISHED BY : (Signature)	DATE : 4/19/91 TIME :	RECEIVED BY : (Signature)
RELINQUISHED BY : (Signature)	DATE : TIME :	RECEIVED BY : (Signartue)	RELINQUISHED BY : (Signature)	DATE : TIME :	RECEIVED BY : (Signature)
RELINQUISHED BY COURIER: (Sign.)	DATE : TIME :	RECEIVED BY MOBILE LAB : (Sign.)	RELINQ. BY MOBILE LAB : (Signatue)	DATE : TIME :	RECEIVED BY COURIER : (Signature)
METHOD OF SHIPMENT: LUM VAN		SHIPPED BY : (Signatue)	RECEIVED FOR LAB : (Signature)	DATE : 4-20-91 TIME : 0800	COURIER FROM AIRPORT : (Signature)

APPENDIX C

COPIES OF FIELD MEASUREMENT RECORDS

CONVERSE ENVIRONMENTAL WEST
Water Sampling Form

Job # 88-44-380-2 Site 2724 Castro Valley Sampling Team DP

Date 4/19/91 Well #/Source MW-1 Lab Sample I.D.# _____

Field conditions OVERCAST WARM BREEZY

Describe Equipment D-Con Before Sampling This Well DEDICATED SUCTION + DISPOSABLE BAILER

Describe All Meter/Equipment Calibration BUFFER SOLUTION

Total Depth of Well 15.3 Time _____ OVM Reading High _____ Average _____

Depth to Water Before Pumping 5.6 Product Present YES (NO) (Circle) Thickness _____

Height of Water Column (ft) 9.7 2" .16 3" .37 (4" .65) 6" 1.47 = Volume 6.3 * Purge Multiple 3 = Volume to Purge 19 (Gal)

Depth Purging From 15.1

Time Purging Begins _____ Notes on Initial Discharge _____

Pre-Purge Sample (Check) Sheen _ Petro Odor ___ Clear ✓ · Other (Describe under comments)

Time	Volume Purged	pH	Conductivity	T °C	Notes	Time	Volume Purged	pH	Conductivity	T	Notes
1258	P.P.	7.29	890	17.1	O ODOR						
	5	7.19	940	16.7							
	10	7.62	990	16.7							
	15	7.69	910	16.8							
1311	20	7.89	930	16.8	"DRY"						

Time Sample Collection Begins _____ Time Sample Collection Ends 1335 Total Volume Purged _____

Depth to Water for 80% Recharge 7.5 Depth to Water After Total Purge _____

DTW = 11.6 at 1312
DTW = 8.6 at 1320
DTW = 7.3 at 1330

DTW = _____ at _____
DTW = _____ at _____
DTW = _____ at _____

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure _____ Ambient D.O. ppm _____

Sample Temp _____ Sample D.O. _____ ppm

Comments: DUPLICATE

CONVERSE ENVIRONMENTAL WEST
Water Sampling Form

Job # 8844-380.2a Site 2224 Castro Valley Sampling Team BS

Date 4/19/91 Well #/Source MW-2 Lab Sample I.D.# _____

Field conditions OVERCAST WARM

Describe Equipment D-Con Before Sampling This Well DEIONIZED SUCTION + DISPOSABLE BAILER

Describe All Meter/Equipment Calibration BUFFER SOLUTION

Total Depth of Well 14.9 Time _____ OVM Reading High _____ Average _____

Depth to Water Before Pumping 6.9 Product Present YES/NO (Circle) Thickness _____

Height of Water Column (ft) 8.0 2" .16 3" .37 (4" .65) 6" 1.47 = Volume 5.2 * Purge Multiple 3 = Volume to Purge 15.6 (Gal)

Depth Purging From _____

Time Purging Begins _____ Notes on Initial Discharge _____

Pre-Purge Sample (Check) Sheen _ Petro Odor Trace Clear ✓ Other (Describe under comments)

Time	Volume Purged	pH	Conductivity	T °C	Notes
1230	PP	6.88	1300	17.7	
	5	6.98	1250	17.2	
	8	7.04	1210	17.4	
1237	12	—	—	—	WELL DRY
1410	16	7.07	1290	17.5	

Time	Volume Purged	pH	Conductivity	T	Notes

Time Sample Collection Begins _____ Time Sample Collection Ends _____ Total Volume Purged _____

Depth to Water for 80% Recharge 8.5 Depth to Water After Total Purge _____

DTW = 13.9 at 1237
DTW = 13.3 at 1240
DTW = 7.66 at 1407

2ND PUMPING
DTW = _____ at _____
DTW = 10.32 at 1412
DTW = 7.15 at 1600

1615

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure _____ Ambient D.O. ppm _____
Sample Temp _____ Sample D.O. _____ ppm
Comments: 1235, let well Recharge NO FOOT VALVE

CONVERSE ENVIRONMENTAL WEST
Water Sampling Form

Job # 88-44-380-20 Site 2024 CASTRO VALLEY Sampling Team 83

Date 4/19/91 Well #/Source MW-3 Lab Sample I.D.# _____

Field conditions OVER CAST WINDY

Describe Equipment D-Con Before Sampling This Well DEDICATED SUCTION + DISPOSABLE BAILER

Describe All Meter/Equipment Calibration BUFFER SOLUTION

Total Depth of Well 24.35' Time _____ OVM Reading High _____ Average _____

Depth to Water Before Pumping 7.97.2 Product Present YES/NO (Circle) Thickness _____

Height of Water Column (ft) 16.5 2" .16 3" .37 (4" .65) 6" 1.47 = Volume 10.7 * Purge Multiple 3 = Volume to Purge 32 (Gal)

Depth Purging From _____

Time Purging Begins _____ Notes on Initial Discharge _____

Pre-Purge Sample (Check) Sheen ___ Petro Odor ___ Clear ___ Other (Describe under comments)

Time	Volume Purged	pH	Conductivity	T°C	Notes	Time	Volume Purged	pH	Conductivity	T	Notes
502	PP.	7.27	1070	18.6	O=23GAL						
509	10	7.28	1080	18.5							
523	20	7.32	1150	19.0							
25	25	7.39	1350	19.6							
526	28	7.53	1360	19.4							
	1ST DAY										

Time Sample Collection Begins _____ Time Sample Collection Ends 1640 Total Volume Purged _____

Depth to Water for 80% Recharge _____ Depth to Water After Total Purge _____

1ST DAY
DTW = 23.6 at 1530 DTW = 4.4 at 1630
DTW = 18.2 at 1600 DTW = _____ at _____
DTW = ~~9.23~~ at _____ DTW = _____ at _____

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure _____ Ambient D.O. ppm _____

Sample Temp _____ Sample D.O. _____ ppm

Comments: SHORT PIECE ON TOP SUCKING AIR (D.S.)

CONVERSE ENVIRONMENTAL WEST
Water Sampling Form

Job # 88-44-380-20 Site 2724 Gateway/Unocal Sampling Team _____

Date 4/14/91 Well #/Source MW5 Lab Sample I.D.# _____

Field conditions OVERCAST WINDY

Describe Equipment D-Con Before Sampling This Well DEDICATION SUCTION + DISPOSABLE BAILER

Describe All Meter/Equipment Calibration BUFFER SOLUTION

Total Depth of Well 22.8 Time _____ OVM Reading High _____ Average _____

Depth to Water Before Pumping 6.5 Product Present YES/NO (Circle) Thickness _____

Height of Water Column (ft) 16.3 2" .16 3" .37 (4" .65) 6" 1.47 = Volume 10.6 * Purge Multiple 3 = Volume to Purge 31.2 (Gal)

Depth Purging From 22.4

Time Purging Begins _____ Notes on Initial Discharge _____

Pre-Purge Sample (Check) Sheen __ Petro Odor __ Clear _____ · Other (Describe under comments)

Time	Volume Purged	pH	Conductivity	T C	Notes
1435	P-P.	7.08	1600	18.1	
1440	10	7.04	1640	18.4	
1443	15	7.14	1760	18.5	
1446	20	7.17	1900	18.8	
—	23	—	WELL DRY"		

Time	Volume Purged	pH	Conductivity	T	Notes
—	32	—	—	—	—
1552	27	7.30	1790	18.6	DRY
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

Time Sample Collection Begins _____ Time Sample Collection Ends 1710 Total Volume Purged _____

Depth to Water for 80% Recharge _____ Depth to Water After Total Purge _____

DTW = _____ at _____
DTW = 16.8 at 1520
DTW = REPUMP at _____

2 HR DRY
DTW = 22.3 at 1550
DTW = 17.4 at 1655
DTW = _____ at _____

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure _____ Ambient D.O. ppm _____

Sample Temp _____ Sample D.O. _____ ppm

Comments:

PIPE 2" BACK WELL

SAMPLE AS SOON AS HAVE WATER