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LS

January 2, 1992  
88-44-380-20-1500  
WIC No. 204-1381-0407

Mr. Paul Hayes  
SHELL OIL COMPANY  
P.O. Box 5278  
Concord, California 94524

Subject: Transmittal of the Quarter 4, 1991 Report of Activities  
Former Shell Oil Site  
2724 Castro Valley Boulevard  
Castro Valley, California

Dear Mr. Hayes:

Enclosed with this letter is a copy of the quarterly report prepared by Converse Environmental West for the former Shell Oil Company Site located at 2724 Castro Valley Boulevard in Castro Valley, California.

Copies of the enclosed report have been forwarded to Mr. Thomas Callahan of the San Francisco Bay Regional Water Quality Control Board, and Mr. Lawrence Seto of the Alameda County Health Care Services Agency.

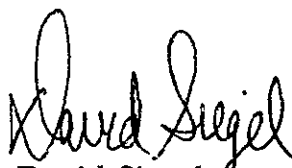
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Mr. Paul Hayes  
Shell Oil Company  
January 2, 1992  
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Please call the undersigned if you have any questions or require additional information.

Very truly yours,

**Converse Environmental West**

  
David Siegel  
Project Geologist

  
Peter A. Fuller  
Project Manager

cc: Mr. Lawrence Seto - Alameda County Health Care Services  
Agency (w/ 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.)  
Mr. Richard A. Schoenberger, Esq. - Walkup, Shelby, Bastian,  
Melodia, Kelly, Echeverria and Link  
Mr. David Swope - Shell Oil Company

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**REPORT OF ACTIVITIES  
QUARTER 4, 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 94520

Prepared by:  
CONVERSE ENVIRONMENTAL WEST  
55 Hawthorne Street, Suite 500  
San Francisco, California 94105



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

## 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 2724 Castro Valley Blvd, Castro Valley, California (Drawing 1). The Activity Summary for Q4/91 is presented as Table 1. This report is prepared to fulfill the quarterly reporting requirements as specified in the Work Plan prepared by Converse 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 and extend down both roads on all sides. Single family houses or residences are located on nearby side streets. The site was an active service station prior to 1989, but is now closed.

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 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 the 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 of excavation.

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). 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 soils 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 the presence of buildings and underground utilities. Mr. Larry Seto of the Alameda County Health Care Services Agency (ACHCSA) was notified of the sample results in letters dated July 11 and July 27, 1989, and the excavation was subsequently backfilled with clean imported soil.

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, 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 from Excavation II 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 waste oil parameters.

On July 8 and 9, 1991, Converse bored and sampled SB-4, and MW-7, at the site and SB-5, OMW-6 and OMW-8 on Castro Valley Florist property located adjacent to the site to the east. Offsite monitoring wells OMW-6 and OMW-8 were installed and onsite well MW-7 was installed. The soil samples were analyzed for petroleum hydrocarbons.

On August 22, 1991, the three underground fuel tanks and the underground waste oil tank were removed and properly disposed of. Converse collected samples from the bottoms and sidewalls of both excavations. The excavations were subsequently filled.

On September 18, 1991 Converse bored and sampled SB-6, SB-7, SB-8 and SB-9 inside the station building. Borings SB-7 and SB-8 were drilled near the hydraulic lifts. Borings SB-6 and SB-9 were drilled near a sump which connected to the former waste oil tank. Soil samples were analyzed for oil and grease. Selected samples from borings SB-6 and SB-9 were also analyzed for waste oil parameters.

*Have not  
rec'd lab  
results as of  
3-27-92*



A chronological summary of environmental activities conducted at the site is presented in Appendix A. Soil boring information is presented in Table 2. Past available soil sample analytical data for the site is compiled in Table 3. Soil analytical data for the borings at the Castro Valley Florist is summarized in Table 4. Well installation information is summarized in Table 5.

## 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:

- Sampling and physical monitoring of wells MW-1, MW-2, MW-3, MW-5, OMW-6, MW-7 and OMW-8. 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.

## SECTION 2

### WORK COMPLETED THIS QUARTER

Work initiated and completed during Q4/91 followed the task descriptions of the Work Plan dated January 16, 1990, and the Converse 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 GROUNDWATER SAMPLING AND ANALYSES

Groundwater samples were collected on October 22, 1991 from monitoring wells MW-1, MW-2, MW-3, MW-5, OMW-6, MW-7 and OMW-8. 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, TPH-mo, and BTEX following the recommended analytical methods listed in Table 6. Copies of analytical laboratory reports and chain-of-custody forms are provided in Appendix C.

#### 2.2 PHYSICAL MONITORING

During Q4/91, wells MW-1, MW-2, MW-3, MW-5, OMW-6, MW-7 and OMW-8 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 Q4/91 monitoring activities.

## SECTION 3

### FINDINGS AND DISCUSSION

#### 3.1 GROUNDWATER

##### 3.1.1 Elevation and Gradient

Depth to groundwater at the time of the Q4/91 monitoring ranged from 8.25 to 9.62 ft. bgs. The inferred groundwater flow direction was toward the south at the time of measurements during Q4/91 under a gradient of approximately 0.014 ft/ft (Drawing 4).

##### 3.1.2 Results of Chemical Analyses

###### *Former Shell - 2724 Castro Valley Boulevard*

A summary of groundwater chemistry data for the former Shell - 2724 Castro Valley Boulevard Shell site is presented in Table 8. Groundwater samples collected from monitoring wells MW-1, MW-3, and MW-5 showed no detectable concentrations of hydrocarbons. Well MW-2 contained detectable concentrations of TPH-g, TPH-d, benzene, ethylbenzene, and xylenes. Well MW-7 contained detectable concentrations of TPH-g and BTEX. Groundwater chemical concentrations for TPH-g and BTEX are shown on Drawing 5.

###### *Castro Valley Florist - 2728 Castro Valley Boulevard*

A summary of groundwater chemistry data for the Castro Valley Florist - 2728 Castro Valley Boulevard, Castro Valley Florist site is presented in Table 9. Groundwater samples collected from the two monitoring wells (OMW-6 and OMW-8) at the site showed no detectable concentrations of hydrocarbons.

### 3.1.3 Discussion

The groundwater flow direction and gradient calculated from data collected this quarter are generally consistent with those previously reported. Petroleum hydrocarbon concentrations in groundwater are generally consistent with those previously encountered. No petroleum hydrocarbons were detected in groundwater samples from the two offsite, upgradient monitoring wells installed in Q3/91. TPH-g, TPH-d, and BTEX were detected in samples from MW-7 near the downgradient property boundary.

## SECTION 4

### NEXT QUARTER ACTIVITIES

#### 4.1 PROPOSED ACTIVITIES

The following activities are planned for the site:

- Continue monitoring groundwater conditions. Groundwater samples should be analyzed for TPH-g, BTEX, and TPH-d following the analytical methods listed in Table 3.
- Install one offsite groundwater monitoring well in the public right-of-way on Castro Valley Boulevard south of the former Shell station.

## 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,



Handwritten signature of David Siegel in black ink.

DAVID SIEGEL  
Project Geologist

Handwritten signature of Gerard L. Slattery in black ink.

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

PRIMARY CONTACTS

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

Quarter 4, 1991

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San Francisco Bay Regional Water  
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PRIMARY CONTACTS (continued)

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Castro Valley, California

Quarter 4, 1991

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- \_\_\_\_\_, 1989, LUFT field manual revision, April 5, 1989.
- Converse Environmental West, 1989, Revised Work Plan, Shell Oil Company facility, 2724 Castro Valley Boulevard, Castro Valley, California, dated January 16, 1990.
- \_\_\_\_\_, 1990, Site Restoration Plan and Schedule, Shell Oil Company facility, 2724 Castro Valley Boulevard, Castro Valley, California, dated May 31, 1990.
- \_\_\_\_\_, 1991, Exploratory borings at former Shell Oil Company retail gas station, 2724 Castro Valley Boulevard, Castro Valley, California, dated October 31, 1991.
- Helley, E.J., La Joie, K.R., Spangle, W.E., and Blair, M.L., 1979, Flatland deposits of the San Francisco Bay Region, California - their geology and engineering properties, and their importance to comprehensive planning, U.S. Geological Survey Professional Paper 943, 88 p.
- Hickenbottom, K. and Muir, K., 1988. Geohydrology and groundwater - quality overview, of the East Bay Plain area, Alameda County, California 205(j) Report, Alameda County Flood Control and Water Conservation District, 83p. plus appendix.

**TABLES**

TABLE 1. ACTIVITY SUMMARY - QUARTER 4, 1991

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

Activity	PERCENT COMPLETE			
	Quarter 4, 1991		Total to Date	
	Onsite	Offsite	Onsite	Offsite
Soil Characterization	0	0	90	60
Groundwater Characterization (Dissolved Product)	0	0	70	70
Groundwater Characterization (Floating Product)	NA	NA	NA	NA
Soil Remediation	0	NA	90*	NA
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**

<b>Boring No.</b>	<b>Date Drilled</b>	<b>Total Depth (ft bgs)</b>	<b>Completion</b>	<b>Unsaturated Soil Samples (ft bgs)</b>	<b>Saturated Soil Samples (ft bgs)</b>
MW-1	01/18/90	16	4" diameter well	5, 10	NC
MW-2	01/19/90	15	4" diameter well	5, 9, 15, 20, 25	NC
MW-3	01/19/90	25	4" diameter well	5, 10, 15	NC
MW-5	01/22/90	23	4" diameter well	5, 9, 15, 20, 25	NC
OMW-6	07/08/91	23	4" diameter well	5, 10	NC
MW-7	07/08/91	20	2" diameter well	11, 14	NC
OMW-8	07/08/91	22	4" diameter well	5, 10, 14.5	NC
SB-1	01/18/90	15	Abandoned 01/18/90	5, 9	NC
SB-2	05/09/90	6.5	Abandoned 05/09/90	4.5, 6.5	NC
SB-4	07/08/91	15.5	Abandoned 07/09/91	6, 11, 15	NC
SB-5	07/09/91	20	Abandoned 07/09/91	5, 10, 15, 20	NC
SB-6	09/18/91	10	Abandoned 09/18/91	5, 10	NC
SB-7	09/18/91	10	Abandoned 09/18/91	5, 10	NC
SB-8	09/18/91	10	Abandoned 09/18/91	5, 10	NC
SB-9	09/18/91	10	Abandoned 09/18/91	5, 10	NC

NOTES:

The number SB-3 was not used for a boring at the site.  
 ft bgs                      feet below ground surface  
 NC                            None collected

TABLE 3. RESULTS OF SOIL CHEMICAL ANALYSES - FORMER SHELL SITE (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	01/18/90	<1.0	5.8	73	<0.0025	<0.0025	<0.0025	<0.0025	4.4
MW-1	10	01/18/90	<1.0	4.4	39	<0.0025	<0.0025	<0.0025	<0.0025	4.3
MW-2 <sup>1</sup>	5	01/19/90	<1.0	14	90	<0.0025	<0.0025	<0.0025	<0.0025	4.6
MW-2 <sup>2</sup>	9	01/19/90	<1.0	<1.0	23	<0.0025	<0.0025	<0.0025	<0.0025	5.3
MW-2 <sup>3</sup>	15	01/19/90	<1.0	3.1	<10	3.2	2.9	<0.0025	54	6.3
MW-2 <sup>4</sup>	20	01/19/90	<1.0	3.2	<10	8.4	21	<0.0025	16	7.9
MW-2 <sup>5</sup>	25	01/19/90	<1.0	8.2	19	23	34	3.6	23	8.0
MW-3	5	01/19/90	<1.0	<1.0	<1.0	<0.0025	5.9	<0.0025	<0.0025	6.2
MW-3	10	01/19/90	<1.0	<1.0	<1.0	<0.0025	11	<0.0025	<0.0025	5.8
MW-3	15	01/19/90	<1.0	2.4	<1.0	<0.0025	23	<0.0025	7.4	6.5
MW-5	5	01/22/90	<1.0	<1.0	<10	<0.0025	6.5	<0.0025	2.6	5.5
MW-5	9	01/22/90	<1.0	<1.0	<10	<0.0025	3.1	<0.0025	<0.0025	6.4
MW-5	15	01/22/90	<1.0	<1.0	<10	<0.0025	4.4	<0.0025	2.7	8.0
MW-5	20	01/22/90	<1.0	1.6	<10	3.0	11	<0.0025	6.1	35
MW-5	25	01/22/90	<1.0	<1.0	<10	<0.0025	6.0	<0.0025	4.9	3.9
MW-7	11	07/08/91	260	50	<10	1.3	5.6	5.3	13	NR

TABLE 3 (cont'd). RESULTS OF SOIL CHEMICAL ANALYSES - FORMER SHELL SITE (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	Oil and Grease	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
SB-1	5	01/18/90	<1.0	<1.0	<10		<0.0025	6.7	<0.0025	4.6	4.7
SB-1	9	01/18/90	<1.0	<1.0	<10		<0.0025	7.7	<0.0025	3.4	6.5
SB-1	10	01/18/90	<1.0	<1.0	<10		<0.0025	18	<0.0025	6.8	NR
SB-2-2A <sup>6</sup>	4.5	05/09/90	1.0	14	73		<0.0025	<0.0025	3.9	16	9.1
SB-2-3A <sup>7</sup>	6.5	05/09/90	<1	18	26		<0.0025	<0.0025	<0.0025	<0.0025	7.0
SB-4	6	07/08/91	<1	<1	<10		<0.0025	<0.0025	<0.0025	<0.0025	NR
SB-4	11	07/08/91	<1	<1	<10		<0.0025	<0.0025	<0.0025	<0.0025	NR
SB-4	15	07/08/91	<1	<1	<10		<0.0025	<0.0025	<0.0025	<0.0025	NR
SB-6	5	09/18/91	770	280	160	740	<0.0025	3,600	5,400	22,000	NR
SB-6	10	09/18/91	1.7	5.0	13	<50	110	32	2.8	33	NR
SB-7	5	09/18/91	NR	NR	NR	880	NR	NR	NR	NR	NR
SB-7	10	09/18/91	NR	NR	NR	160	NR	NR	NR	NR	NR
SB-8	5	09/18/91	NR	NR	NR	<50	NR	NR	NR	NR	NR
SB-8	10	09/18/91	NR	NR	NR	<50	NR	NR	NR	NR	NR
SB-9	5	09/18/91	1,800	380	470	1,800	<0.0025	<0.0025	<0.0025	30,000	NR
SB-9	10	09/18/91	240	190	190	460	<0.0025	<0.0025	<0.0025	3,700	NR

TABLE 3 (cont'd). RESULTS OF SOIL CHEMICAL ANALYSES - FORMER SHELL SITE (mg/kg)

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

Sample Number	Sample Depth (ft bgs)	Date Sampled	TPH-g	TPH-d	TPH-mo	Oil and Grease	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
A-1	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
A-2	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
B-1	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
B-2	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
C-1	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
C-2	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
SW-1	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
SW-2	8	08/22/91	<1.0	NA	NA	NA	<2.5	<2.5	<2.5	<2.5	NA
WO-1	7	08/22/91	7.8	<1.0	1,100	1,400	<2.5	<2.5	13	30	11
WO-2	4	08/22/91	<1.0	<1.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	NA
WO-3	7	08/22/91	<1.0	<1.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	NA
WO-4	6	08/22/91	<1.0	1.6	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	NA
WO-5	5.5	08/22/91	<1.0	<1.0	<1.0	<1.0	<2.5	<2.5	<2.5	<2.5	NA

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
- NA Not analyzed
- NR Not requested
- ft bgs Feet below ground surface
- mg/Kg Milligrams per kilograms

TABLE 4. RESULTS OF SOIL CHEMICAL ANALYSES - CASTRO VALLEY FLORIST (mg/kg)

Castro Valley Florist  
2728 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
OMW-6	5	07/08/91	<1.0	<1.0	15	<0.0025	<0.0025	<0.0025	<0.0025	NR
OMW-6	10	07/08/91	<1.0	<1.0	<10	<0.0025	<0.0025	<0.0025	<0.0025	NR
OMW-8	5	07/08/91	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NR
	10	07/08/91	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NR
	14.5	07/08/91	<1	1.8	<10	<0.0025	<0.0025	<0.0025	<0.0025	NR
SB-5	5	07/09/91	<1	<1	<10		<0.0025	<0.0025	<0.0025	NR
SB-5	10	07/09/91	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NR
SB-5	15	07/09/91	<1	<1	<10	<0.0025	<0.0025	<0.0025	<0.0025	NR

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
- NA Not analyzed
- 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 Number	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	01/18/90	4	16	6 to 16	4 to 6	0 to 4
MW-2	01/19/90	4	15	5 to 15	3 to 4	0 to 3
MW-3	01/19/90	4	25	5 to 25	3 to 4	0 to 3
MW-5	01/22/90	4	23	9 to 23	6 to 8	0 to 6
OMW-6	07/09/91	4	22	5 to 22	4 to 5	0 to 4
MW-7	07/08/91	2	20	5 to 20	4 to 5	0 to 4
OMW-8	07/09/91	4	21	5 to 21	4 to 5	0 to 4

NOTES:

ft bgs                      feet below ground surface

**TABLE 7. GROUNDWATER MONITORING INFORMATION**

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

<b>Well Number</b>	<b>Date Monitored</b>	<b>Depth to Water (ft bgs)</b>	<b>Water Table Elevation (ft)</b>	<b>Floating Product Thickness (inches)</b>	<b>Petroleum Odor in Water</b>
MW-1 El. 99.78'	02/08/90	8.39	91.39	None	None
	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
	07/16/91	7.58	92.20	None	None
	10/08/91	8.25	91.53	None	None
MW-2 El. 100.83'	02/08/90	7.33	93.50	None	None
	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
	07/16/91	9.01	91.82	None	Strong
	10/08/91	8.82	92.01	None	None
MW-3 El. 101.48'	02/08/90	8.91	92.57	None	None
	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
	07/16/91	9.40	92.08	None	None
	10/08/91	9.62	91.86	None	None
MW-5 El. 99.90'	02/08/90	8.80	91.10	None	None
	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
	07/16/91	9.12	90.78	None	None
	10/08/91	9.22	90.68	None	None

TABLE 7 (cont'd). GROUNDWATER MONITORING INFORMATION

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

Well Number	Date Monitored	Depth to Water (ft bgs)	Water Table Elevation (ft)	Floating Product Thickness (inches)	Petroleum Odor in Water
OMW-6	07/16/91	8.60	92.88	None	None
El. 101.48	10/08/91	8.82	92.66	None	None
MW-7	07/16/91	8.70	90.84	None	None
El. 99.54	10/08/91	8.74	90.80	None	None
OMW-8	07/16/91	8.40	91.78	None	None
El. 100.18	10/08/91	8.74	91.44	None	None

NOTES:

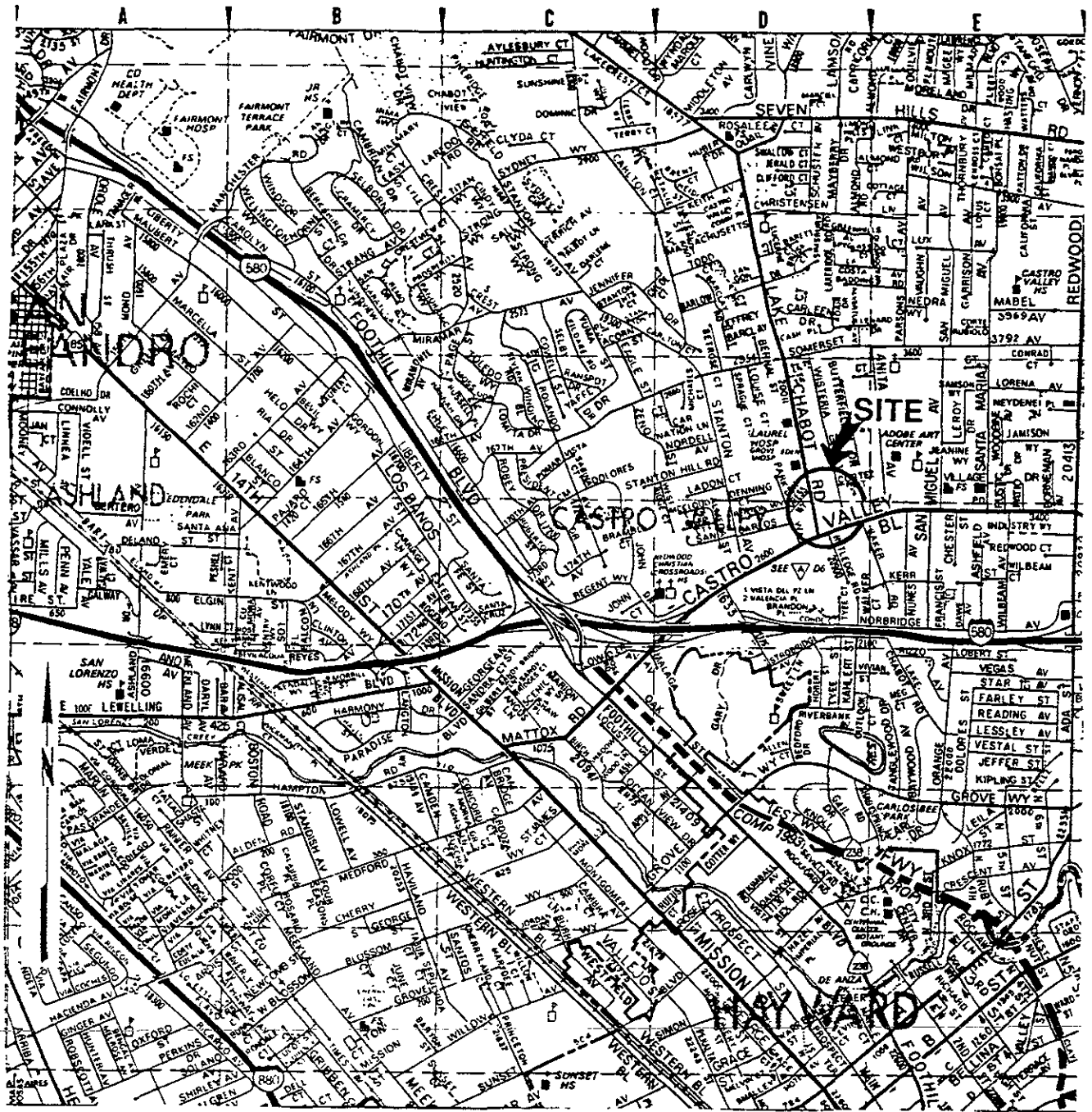
ft bgs      feet below ground surface  
 all elevations are tied into a temporary benchmark elevation of 100.00 feet  
**Boldface items indicate the results of measurements conducted during this quarter**

**TABLE 8. RESULTS OF GROUNDWATER CHEMICAL ANALYSIS -  
FORMER SHELL SITE (mg/L)**

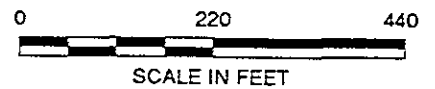
**Former Shell Oil Company Site  
2724 Castro Valley Boulevard  
Castro Valley, California**

<b>Well Number</b>	<b>Date Sampled</b>	<b>TPH-g</b>	<b>TPH-d</b>	<b>TPH-mo</b>	<b>Benzene</b>	<b>Toluene</b>	<b>Ethyl-Benzene</b>	<b>Xylenes</b>
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	01/15/91	0.06	<0.05		<0.0005	<0.0005	<0.0005	<0.0005
MW-1	01/15/91	<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-1	04/19/91	<0.05	<0.05		0.0074	<0.0005	<0.0005	<0.0005
MW-1	07/16/91	<0.05	<0.05	<0.5	<0.0005	<0.0005	<0.0005	<0.0005
<b>MW-1</b>	<b>10/08/91</b>	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<b>&lt;0.5</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
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	01/15/91	5.7	0.68		0.320	0.029	0.120	0.530
MW-2	04/19/91	3.9	0.36		0.10	0.077	0.100	0.093
MW-2	07/16/91	1.8	0.43	<0.5	0.100	0.0058	0.041	0.031
MW-2*	07/16/91	2.7	0.54	<0.5	0.130	0.0076	0.062	0.045
<b>MW-2</b>	<b>10/08/91</b>	<b>1.0</b>	<b>0.11</b>	<b>&lt;0.5</b>	<b>0.017</b>	<b>&lt;0.0005</b>	<b>0.025</b>	<b>0.025</b>
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-3	07/16/91	<0.05	<0.05	1.4	<0.0005	<0.0005	<0.0005	<0.0005
<b>MW-3</b>	<b>10/08/91</b>	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<b>&lt;0.5</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>
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
MW-5	07/16/91	<0.05	<0.05	<0.5	<0.0005	<0.0005	<0.0005	<0.0005
<b>MW-5</b>	<b>10/08/91</b>	<b>&lt;0.05</b>	<b>&lt;0.05</b>	<b>&lt;0.5</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>	<b>&lt;0.0005</b>

**DRAWINGS**



SOURCE: Thomas Brothers Maps, 1989.



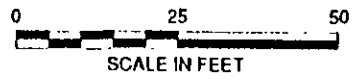
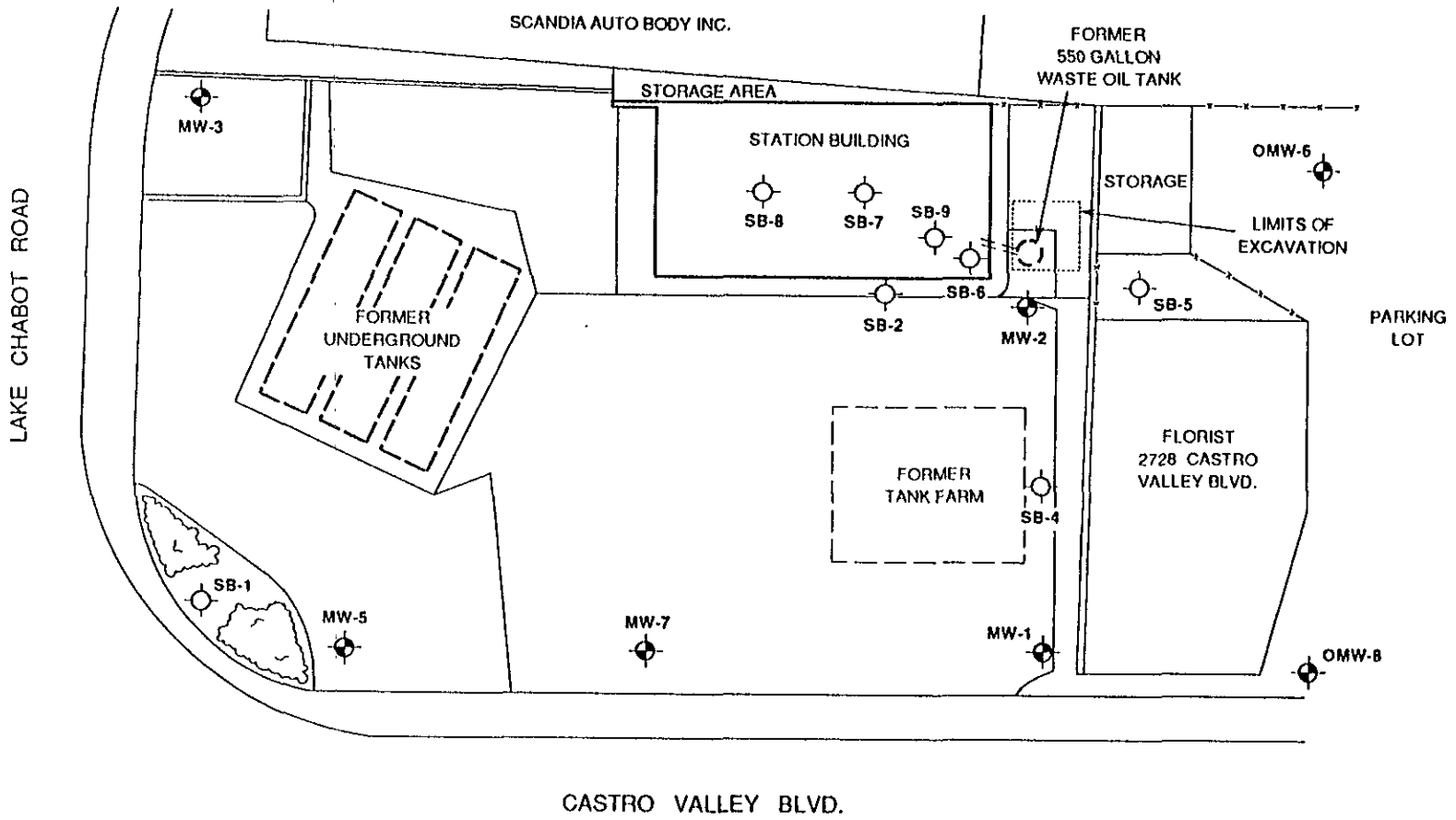
### SITE LOCATION MAP

SHELL OIL COMPANY  
2724 Castro Valley Boulevard  
Castro Valley, California

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



**Converse Environmental West**



- LEGEND**
- SB-1 SOIL BORING (locations approximate)
  - MW-1 GROUNDWATER MONITORING WELL
  - OMW-9 PROPOSED OFFSITE GROUNDWATER MONITORING WELL

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

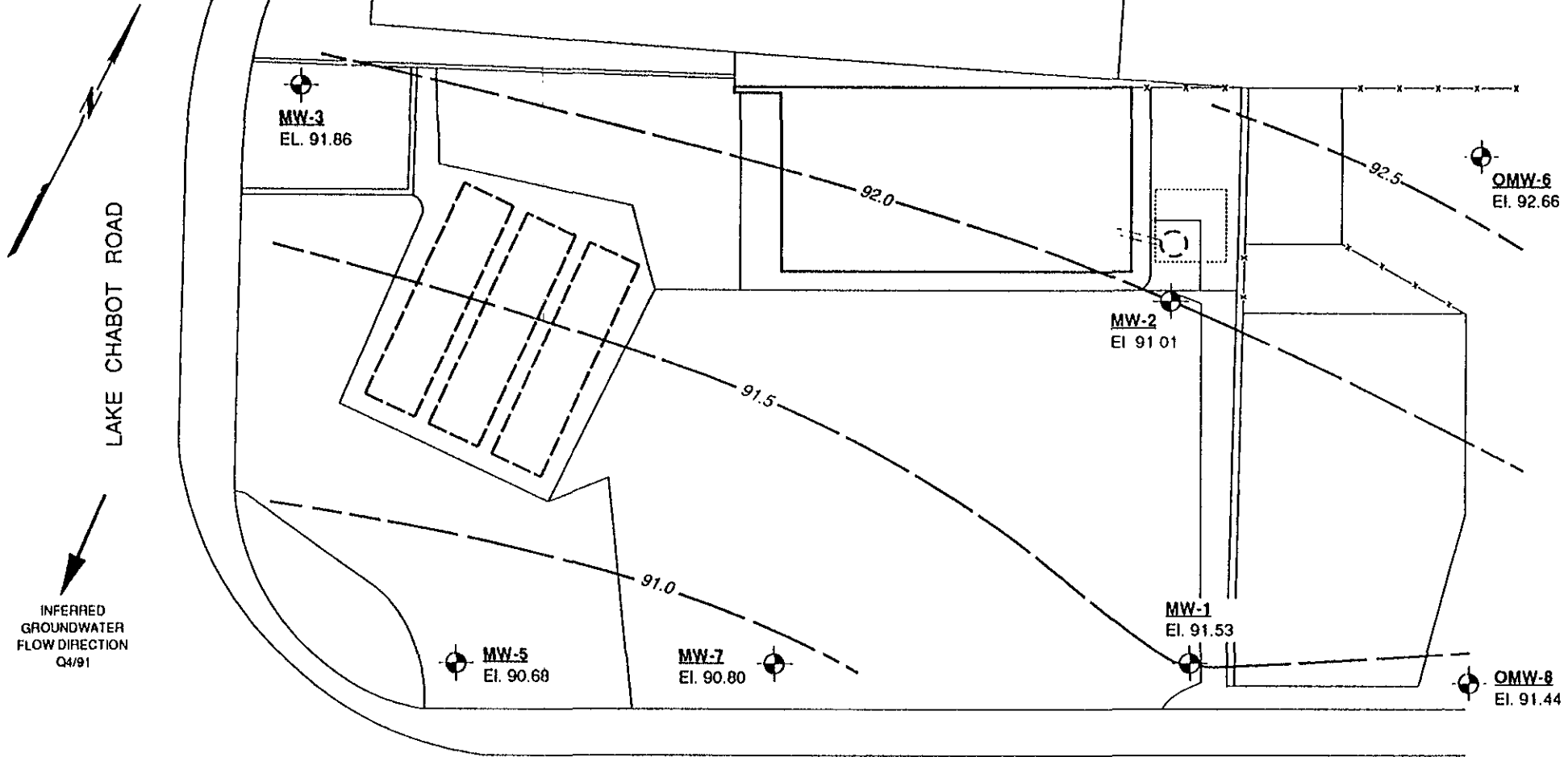
**PLOT PLAN**

SHELL OIL COMPANY  
2724 Castro Valley Boulevard  
Castro Valley, California

Scale	AS SHOWN	Project No.	88-44-380-20
Prepared by	LQL	Date	10/24/91
Checked by	DS	Drawing No.	2
W/C Number	204-1381 0407		



**Converse Environmental West**

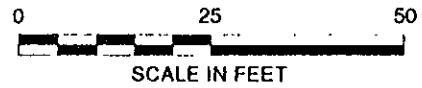


**LEGEND**

- GROUNDWATER CONTOUR (long dash where approximate, short dash where inferred)
- GROUNDWATER MONITORING WELL SHOWING GROUNDWATER ELEVATION

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

CASTRO VALLEY BLVD.



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

**GROUNDWATER CONTOUR MAP Q4/91**

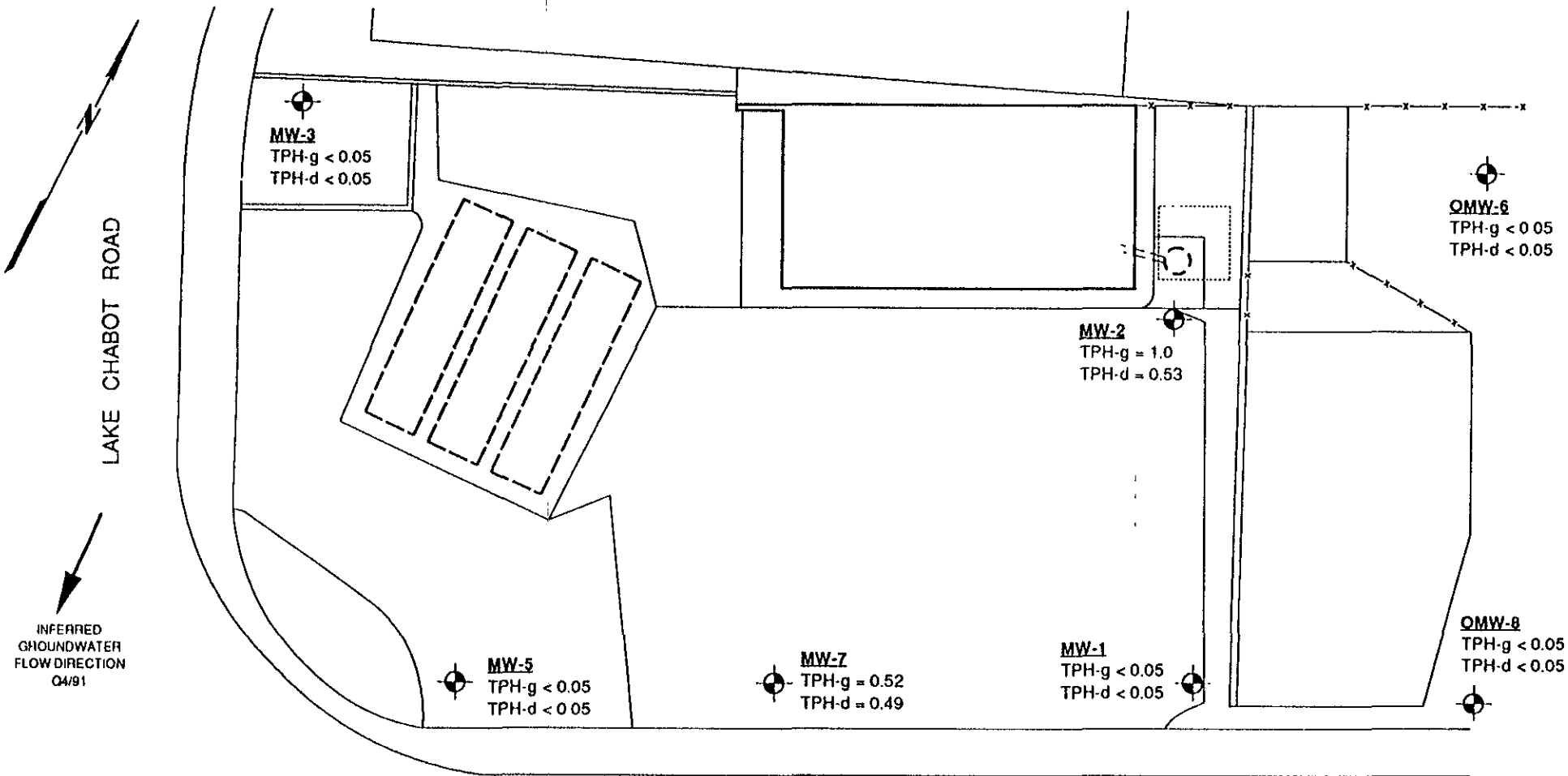
SHELL OIL COMPANY  
2724 Castro Valley Boulevard  
Castro Valley, California

Scale	AS SHOWN	Project No.	88-44-380-20
Prepared by	LQL	Date	12/2/91
Checked by	DS	Drawing No.	3
WIC Number	204-1381-0407		



**Converse Environmental West**



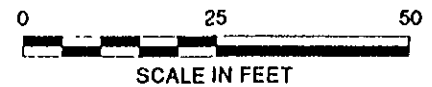


**LEGEND**

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.

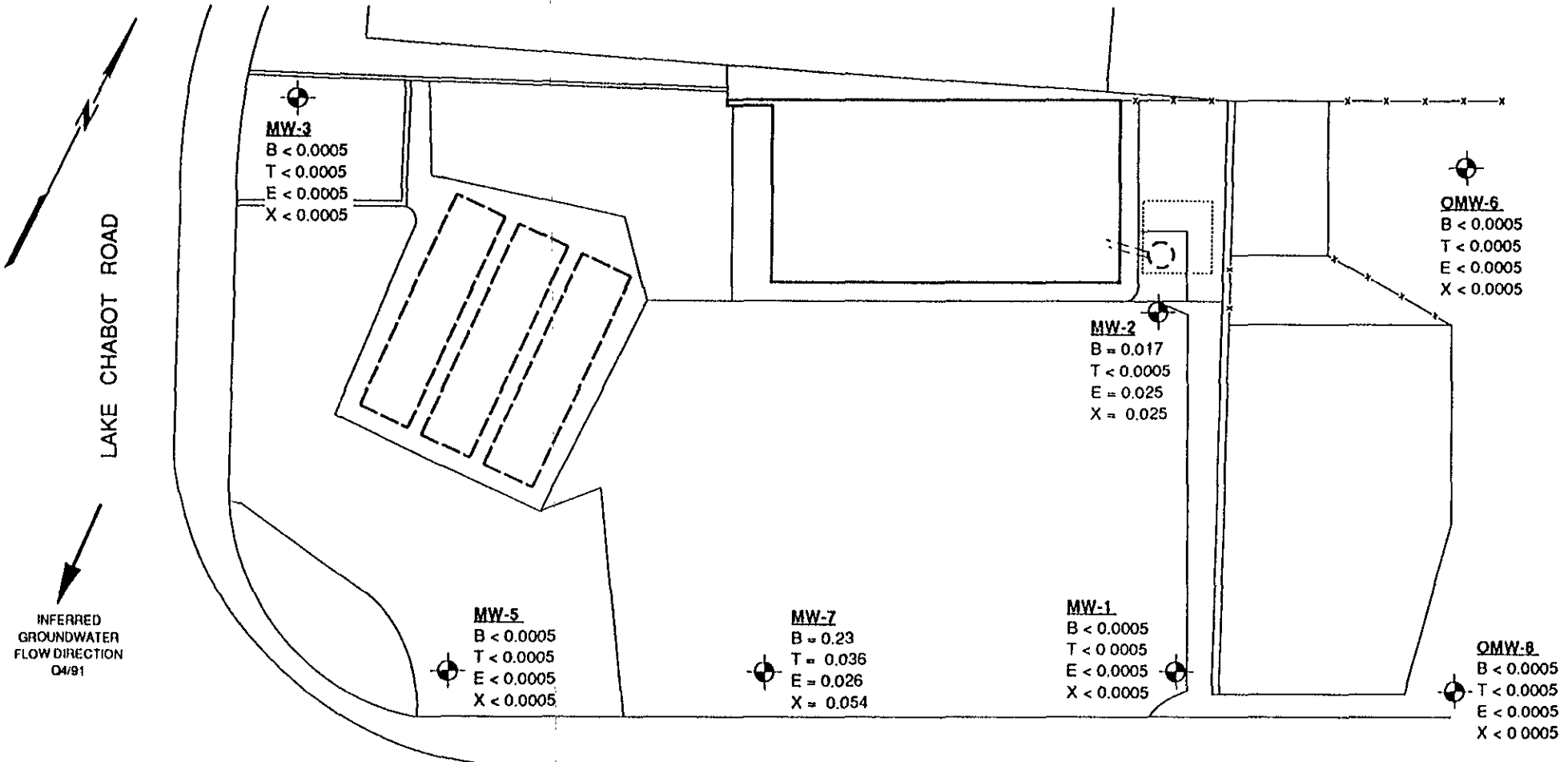
**PLAN: GROUNDWATER TPH-g AND TPH-d 04/91**

SHELL OIL COMPANY  
2724 Castro Valley Boulevard  
Castro Valley, California

Scale	AS SHOWN	Project No.	88-44-380-20
Prepared by	LQL	Date	12/2/91
Checked by	DS	Drawing No.	4
WIC Number	204 1381 0407		



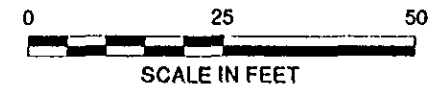
**Converse Environmental West**



**LEGEND**

MW-1 GROUNDWATER MONITORING WELL

- B = BENZENE (In milligrams per liter)
- T = TOLUENE (In milligrams per liter)
- E = ETHYLBENZENE (In milligrams per liter)
- X = XYLENES (In milligrams per liter)



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

**PLAN: GROUNDWATER BTEX 04/91**

SHELL OIL COMPANY  
2724 Castro Valley Boulevard  
Castro Valley, California

Scale	AS SHOWN	Project No	88-44-380-20
Prepared by	LQL	Date	12/2/91
Checked by	DS	Drawing No	5
WIC Number	204-1381 0407		



**Converse Environmental West**

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 (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.

<u>Date</u>	<u>Description of Activity</u>
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 (Converse) 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	Converse sent an "Interim Sampling Report and Recommendations" to the Alameda County Health Care Services Agency (ACHCSA).
07/27/89	Converse 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 (continued)

<u>Date</u>	<u>Description of Activity</u>
10/31/89	Converse sent a report titled "Soil Sampling Report" to the ACHCSA.
11/30/89	Converse sent a Draft Work Plan to the ACHCSA.
01/11/90	Converse 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.
03/12/90	Converse requested permission from ACHA to backfill the existing excavation onsite.
03/16/90	Converse obtained site assessment information on uses of nearby properties, and reported fuel leaks from nearby underground tanks.
04/02/90	Converse conducted E.D.M. survey of adjacent streets, extending 200 to 300 feet from the site.
04/20/90	Converse 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.
04/23/90	Converse arranged to have one segment of chain-link fence moved, to protect MW-3.
04/26/90	Converse, Shell, ACHCSA and Rhighetti meet at site to discuss backfilling of the existing excavation.
05/02/90	Shell received permission from ACHCSA to backfill the existing excavation.
05/09/90	Converse bored and sampled SB-2 near station building.
05/31/90	Converse issues site restoration plan and schedule for future work.
06/27/90	Converse personnel visit the site to assess current conditions.
06/29/90	Converse issues Q2/90 report.
07/30/90	Converse samples and analyzes groundwater from MW-1, MW-2, MW-3 and MW-5.
09/28/90	Converse issues Quarter 3, 1990 report.

## CHRONOLOGICAL SUMMARY (continued)

<u>Date</u>	<u>Description of Activity</u>
10/25/90	Converse samples and analyzes groundwater from MW-1, MW-2, MW-3, and MW-5.
12/31/90	Converse issues Quarter 4, 1990 report.
01/15/91	Converse samples and analyzes groundwater from MW-1, MW-2, MW-3, and MW-5.
03/19/91	ACHCSA approves Site Restoration Plan.
03/28/91	Converse issues Quarter 1, 1991 report.
04/19/91	Converse samples and analyzes groundwater from MW-1, MW-2, MW-3 and MW-5.
06/28/91	Converse issues Quarter 2, 1991 report.
07/08-09/91	Converse bored and sampled SB-4, SB-5, OMW-6, MW-7 and OMW-8 and installed wells OMW-6, MW-7 and OMW-8.
07/11-12/91	Converse surveyed and developed OMW-6, MW-7 and OMW-8.
07/16/91	Converse sampled groundwater from MW-1, MW-2, MW-3, MW-5, OMW-6, MW-7 and OMW-8.
08/22/91	Fuel tanks and waste oil tank removed. Converse collects soil samples from bottoms and sidewalls of excavations.
09/18/91	Converse bored and sampled SB-6, SB-7, SB-8, and SB-9.
09/31/91	Converse issues Quarter 3, 1991 report.
10/08/91	Converse sampled groundwater from MW-1, MW-2, MW-3, MW-5, OMW-6, MW-7, and OMW-8.
10/17/91	Converse issues Underground Storage Tank Removal Report.
10/31/91	Converse issues Report on Exploratory Soil Borings.
12/31/91	Converse issues Quarter 4, 1991 report.

### NOTE:

**Bold**            Boldface indicates work completed this quarter

**APPENDIX B**

**Analytical Laboratory Reports  
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

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

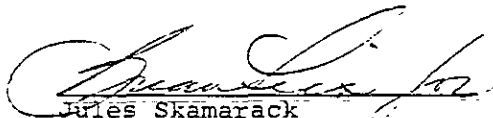
Date: 10-17-91  
NET Client Acct No: 18.02  
NET Pacific Log No: 1312  
Received: 10-09-91 0800

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: 1312

Date: 10-17-91

Page: 2

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

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	OMW-8	OMW-6	Units
			10-08-91 0850	10-08-91 0920	
			100098	100099	
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
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			10-10-91	10-10-91	
DATE ANALYZED			10-14-91	10-14-91	
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  
Client Name: Converse Consultants  
NET Log No: 1312

Date: 10-17-91

Page: 3

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

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	Field Blank	MW-1	Units
			10-08-91 0910	10-08-91 1015	
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
Benzene		0.5	ND	ND	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	0.9	ND	ug/L
Xylenes, total		0.5	0.6	ND	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			10-10-91	10-10-91	
DATE ANALYZED			10-14-91	10-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	ND	ND	mg/L
as Motor Oil		0.5	ND	ND	mg/L

**NET**

NET Pacific, Inc

Client No: 18.02  
Client Name: Converse Consultants  
NET Log No: 1312

Date: 10-17-91

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

## Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-2	911008	Units
			10-08-91 1210	10-08-91	
			100102	100103	
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	1.0	1.2	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
Benzene		0.5	17	20	ug/L
Ethylbenzene		0.5	25	30	ug/L
Toluene		0.5	ND	1.5	ug/L
Xylenes, total		0.5	25	30	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			10-10-91	10-10-91	
DATE ANALYZED			10-14-91	10-14-91	
METHOD GC FID/3510			--	--	
as Diesel		0.05	0.11**	0.07**	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 appears to be a lighter hydrocarbon than Diesel.



NET Pacific, Inc

Client No: 18.02  
Client Name: Converse Consultants  
NET Log No: 1312

Date: 10-17-91

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Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	Trip Blank	MW-7	Units
			100104	100105	
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	0.52	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
Benzene		0.5	ND	230	ug/L
Ethylbenzene		0.5	ND	26	ug/L
Toluene		0.5	ND	36	ug/L
Xylenes, total		0.5	ND	54	ug/L
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			10-10-91	10-10-91	
DATE ANALYZED			10-14-91	10-14-91	
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  
Client Name: Converse Consultants  
NET Log No: 1312

Date: 10-17-91

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

Descriptor, Lab No. and Results

Parameter	Method	Reporting Limit	MW-5	MW-3	Units
			10-08-91 1350	10-08-91 1440	
			100106	100107	
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			10-10-91	10-10-91	
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			10-10-91	10-10-91	
DATE ANALYZED			10-14-91	10-14-91	
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 Acct: 18.02  
Client Name: Converse Consultants  
NET Log No: 1312

Date: 10-17-91  
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QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	74	ND	94	86	8.9
Motor Oil	0.5	mg/L	74	ND	N/A	N/A	N/A
Gasoline	0.05	mg/L	104	ND	102	85	18
Benzene	0.5	ug/L	99	ND	108	85	23
Toluene	0.5	ug/L	100	ND	103	86	17

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,  $100 \text{ [Value 1 - Value 2] / mean value}$ .
- 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.



CONVERSE ENVIRONMENTAL

CHAIN OF CUSTODY RECORD

1312

Pg. 1 of 2

WIC# 204-1381-0407

P.M. D.S.

PROJECT NO: 88-44-380-20				PROJECT NAME / CROSS STREET: 2724 CASTRO VALLEY BLVD @ LAKE CHARLOT RD. CASTRO VALLEY, CA.				ANALYSES				REMARKS				
SAMPLERS: (Signature) H. Kulady				NUMBER OF CONTAINERS	TPH-G	BTEX	TPH-D									
STATION NO.	DATE	TIME	COMP.								GRAB		STATION LOCATION			
OMW-8	10/8/91	0850		X	40 ML VOA	4	XX				STANDARD T.A.T DETECTION LIMITS TPH-G 0.05 BTEX 0.0005 TPH-D 0.05  CUSTODY SEALED 10/8/91 @ 20:00 J.W. seal intact.					
OMW-8		0850		X	1 LITRE AMBER	3		X								
OMW-6		0920		X	40ML VOA	3	XX									
OMW-6		0920		X	1 LITRE AMBER	2		X								
FIELD BLANK		0910		X	40 ML VOA	1	XX									
FIELD BLANK		0910		X	1 LITRE AMBER	1		X								
MW-1		1015		X	40 ML VOA	3	XX									
MW-1		1015		X	1 LITRE AMBER	2		X								
MW-2		1210		X	40 ML VOA	3	XX									
MW-2		1210		X	1 LITRE AMBER	2		X								
911008		-		X	40 ML VOA	3	XX									
911008		-		X	1 LITRE AMBER	2		X								
TRIP BLANK		-		X	40 ML VOA	1	XX									
RELINQUISHED BY: (Signature) H. Kulady				DATE: 10/8/91	RECEIVED BY: (Signature) Jeff Smith				DATE: 10/8/91	RECEIVED BY: (Signature)						
RELINQUISHED BY: (Signature)				TIME: 18:00	RECEIVED BY: (Signature)				TIME: 20:00	RECEIVED BY: (Signature)						
RELINQUISHED BY: (Signature)				DATE:	RECEIVED BY: (Signature)				DATE:	RECEIVED BY: (Signature)						
RELINQUISHED BY: (Signature)				TIME:	RECEIVED BY: (Signature)				TIME:	RECEIVED BY: (Signature)						
RELINQUISHED BY COURIER: (Sign.)				DATE:	RECEIVED BY MOBILE LAB: (Sign.)				DATE:	RECEIVED BY COURIER: (Signature)						
RELINQUISHED BY COURIER: (Sign.)				TIME:	RECEIVED BY MOBILE LAB: (Signature)				TIME:	RECEIVED BY COURIER: (Signature)						
METHOD OF SHIPMENT NCS				SHIPPED BY: (Signature)				RECEIVED FOR LAB: (Signature) Kjimpler				DATE: 10/8/91	COURIER FROM AIRPORT: (Signature)			
METHOD OF SHIPMENT				SHIPPED BY: (Signature)				RECEIVED FOR LAB: (Signature)				TIME: 0800	COURIER FROM AIRPORT: (Signature)			





CHAIN OF CUSTODY RECORD

20FZ

WIC# 204-1381-0407

PM. D.S.

PROJECT NO.:				PROJECT NAME / CROSS STREET:				ANALYSES				REMARKS	
SAMPLERS: (Signature)				STATION LOCATION				NUMBER OF CONTAINERS	TPH-G	BTEX	TPH-D		
STATION NO.	DATE	TIME	COMP.	GRAB									
88-44-380-20	2724 CASTRO VALLEY @ LAKE CHARBRO. CASTRO VALLEY, CA.												
MW-7	10-8-91	1335		X	40 ML VOA	3	X	X				STANDARD T.A.T. DETECTION LIMITS TPH-G 0.05 BTEX 0.0005 TPH-D 0.05	
MW-7		1335		X	1 LITRE AMBER	2			X				
MW-5		1350		X	40 ML VOA	3	X	X					
MW-5		1350		X	1 LITRE AMBER	2			X				
TRIP BLANK		-		X	1 LITRE AMBER	1			X				
MW-3		1440		X	40 ML VOA	3	X	X					
MW-3	✓	1440		X	1 LITRE AMBER	2			X		✓		
RELINQUISHED BY: (Signature)				DATE: 10/8/91	RECEIVED BY: (Signature)				RELINQUISHED BY: (Signature)	DATE: 10/8	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)				TIME: 18:00	RECEIVED BY: (Signature)				RELINQUISHED BY: (Signature)	TIME: 20:00	RECEIVED BY: (Signature)		
RELINQUISHED BY COURIER: (Sign.)				DATE:	RECEIVED BY MOBILE LAB: (Sign.)				RELINQ. BY MOBILE LAB: (Signature)	DATE:	RECEIVED BY COURIER: (Signature)		
METHOD OF SHIPMENT				TIME:	SHIPPED BY: (Signature)				RECEIVED FOR LAB: (Signature)	DATE: 10/9/91	COURIER FROM AIRPORT: (Signature)		
NCS										TIME: 0800			

APPENDIX C  
Field Data Forms

CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 88-114-380-20 Site 2724 CASTLE VALLEY Sampling Team PR  
Date 10-8-91 Well #/Source 11W-1 Lab Sample I.D.# \_\_\_\_\_

Field conditions SUNNY, WAVY

Describe Equipment D-Con Before Sampling This Well REFER TO OMW-8

Describe All Meter/Equipment Calibration REFER TO OMW-8

Total Depth of Well 15.30 Time 0652 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 8.25 Product Present YES/NO (Circle) Thickness \_\_\_\_\_

Height of Water Column (ft) 7.05  $\begin{matrix} 2'' & 3'' & 4'' & 6'' \\ .16 & .37 & (.65) & 1.47 \end{matrix}$  = 4.58 Volume \* Purge Multiple = 13.74 (Gal)

Depth Purging From NEAR BOTTOM

Time Purging Begins 0946 Notes on Initial Discharge CLEAR

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

Time	Volume Purged	pH	Conductivity	I	Notes	Time	Volume Purged	pH	Conductivity	I	Notes
0946	PP	7.15	1400	21.8	CLEAR						
0949	5	7.17	1450	21.4	FLOATING ORGANIC CLEAR						
0951	8	7.22	1400	21.3	" "						
0954	11	7.20	1375	21.1	MURKY						
0957	14	7.18	1350	21.3	" "						

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 1015 Total Volume Purged 14 gals

Depth to Water for 80% Recharge 9.06 Depth to Water After Total Purge 13.20 @ 0959

DTW = 11.92 at 1000 DTW = 9.98 at 1011  
DTW = 10.92 at 1003 DTW = \_\_\_\_\_ at \_\_\_\_\_  
DTW = 10.18 at 1008 DTW = \_\_\_\_\_ at \_\_\_\_\_

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm  
Comments: \_\_\_\_\_

CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 88-44-350-20 Site 2724 CASTRO VALLEY Sampling Team RR  
Date 10-8-91 Well #/Source MMZ Lab Sample I.D.# 911008

Field conditions SUNNY, WARM

Describe Equipment D-Con Before Sampling This Well REFER TO OMW-8

Describe All Meter/Equipment Calibration REFER TO OMW-8

Total Depth of Well 14.9 Time 0655 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 8.82 Product Present YES/NO (Circle) Thickness \_\_\_\_\_

Height of Water Column (ft) 6.08  $\frac{2''}{.16} \frac{3''}{.37} \frac{4''}{.65} \frac{6''}{1.47} = \frac{\text{Volume}}{3.95} * \frac{\text{Purge Multiple}}{3} = \frac{\text{Volume to Purge}}{11.85 \text{ Gal}}$

Depth Purging From NEAR BOTTOM

Time Purging Begins 1031

Notes on Initial Discharge CLEAR

Pre-Purge Sample (Check) Sheen \_\_\_\_\_ Petro Odor \_\_\_\_\_

Clear  Other (Describe under comments)

14  
19  
22  
24  
26  
27  
-3

Time	Volume Purged	pH	Conductivity	I	Notes	Time	Volume Purged	pH	Conductivity	I	Notes
1031	PP	6.9	1150	21.2	CLEAR						
1037	5	7.15	1250	20.8	"						
1039	8	7.1	1300	19.7	" Dry						
1126	10	7.00	1350	21.5	"						
1130	12	7.10	310	21.0	"						

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 1210 Total Volume Purged \_\_\_\_\_

Depth to Water for 80% Recharge 10.0' Depth to Water After Total Purge 13.0' @ 1131

DTW = 13.98 at 1042 DTW = 10.78 at 1121 PUMP 1135  
DTW = 13.08 at 1050 DTW = 10.80 at \_\_\_\_\_  
DTW = 12.62 at 1056 DTW = \_\_\_\_\_ at \_\_\_\_\_

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm

Comments: DRY AT 10 GALS

Dup.

CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 88-44-280-20 Site 7241 OSTVO VALLEY Sampling Team RL  
 Date 10-8-91 Well #/Source MW-3 Lab Sample ID.# \_\_\_\_\_

Field conditions SUNNY, WARM

Describe Equipment D-Con Before Sampling This Well REFER TO OMW-8

Describe All Meter/Equipment Calibration REFER TO OMW-8

Total Depth of Well 24.35 Time 0705 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 9.62 Product Present YES/NO (Circle) \_\_\_\_\_ Thickness \_\_\_\_\_

Height of Water Column (ft) 14.73 <sup>2'</sup> <sup>3'</sup> <sup>4'</sup> <sup>5'</sup> .16 .37 (.55) 1.47 = Volume 9.57 Purge Multiple 3 = Volume to Purge 28.71 (Gal)

Depth Purging From NEAR BOTTOM

Time Purging Begins 1248

Notes on Initial Discharge CLEAR

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

Time	Volume Purged	pH	Conductivity	I	Notes	Time	Volume Purged	pH	Conductivity	I	Notes
<u>1248</u>	<u>20</u>	<u>7.08</u>	<u>1390</u>	<u>23.1</u>	<u>CLEAR</u>	<u>1415</u>	<u>29</u>	<u>7.33</u>	<u>2000</u>	<u>22.6</u>	<u>CLEAR</u>
<u>1254</u>	<u>10</u>	<u>7.02</u>	<u>3100</u>	<u>22.1</u>	<u>  </u>	_____	_____	_____	_____	_____	_____
<u>1257</u>	<u>15</u>	<u>7.09</u>	<u>3190</u>	<u>21.5</u>	<u>H</u>	_____	_____	_____	_____	_____	_____
<u>1259</u>	<u>20</u>	<u>7.12</u>	<u>3100</u>	<u>21.3</u>	<u>   DRY</u>	_____	_____	_____	_____	_____	_____
<u>1411</u>	<u>25</u>	<u>7.26</u>	<u>1900</u>	<u>23.6</u>	<u>  </u>	_____	_____	_____	_____	_____	_____

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 1440 Total Volume Purged \_\_\_\_\_

Depth to Water for 80% Recharge 12.57 Depth to Water After Total Purge @

DTW = 21.20 at 1303 DTW = 19.08 at 1417  
 DTW = 20.20 at 1308 DTW = \_\_\_\_\_ at \_\_\_\_\_  
 DTW = 19.34 at 1404 DTW = \_\_\_\_\_ at \_\_\_\_\_

Dissolved oxygen measured? YES/NO (circle) \_\_\_\_\_ Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
 Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm

Comments: STRONG ODOR  
TRV AT 20 GALS  
PUMP ON 1405

CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 88-44-380-20 Site 2724 CASTRO VALLEY Sampling Team RR  
Date 10-8-91 Well #/Source MW-5 Lab Sample I.D.# \_\_\_\_\_

Field conditions SUNNY, WAVY

Describe Equipment D-Con Before Sampling This Well REFER TO OMW-8

Describe All Meter/Equipment Calibration REFER TO OMW-8

Total Depth of Well 22.8 Time 0700 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 9.22 Product Present YES/NO (Circle) \_\_\_\_\_ Thickness \_\_\_\_\_

Height of Water Column (ft) 13.58  $.16 \ .37 \ (65) \ 1.47 =$  8.83 Volume \* Purge Multiple 3 = 26.49 (Gal) Volume to Purge

Depth Purging From NEAR BOTTOM

Time Purging Begins 1145 Notes on Initial Discharge CLEAR

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

Time	Volume Purged	pH	Conductivity	I	Notes	Time	Volume Purged	pH	Conductivity	I	Notes
1143	7P	7.07	1875	22.5	CLEAR		27				
1149	10	7.07	1900	21.3	"						
1152	15	7.15	1800	20.8	"						
1313	20	7.41	1890	21.5	"						
1320	23	7.42	1890	21.3	" * DRY						

35  
35  
40  
45  
48  
52

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 1350 Total Volume Purged 23

Depth to Water for 80% Recharge \_\_\_\_\_ Depth to Water After Total Purge 21.94 @ 1321

DTW = 22.16 at 1156 DTW = 19.20 at 1235  
DTW = 21.30 at 1201 DTW = 17.69 at 1312  
DTW = 20.92 at 1205 DTW = 20.9 at 1340

Dissolved oxygen measured? YES/NO (circle) \_\_\_\_\_ Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm

Comments: DRY AT 14 GALS. WILL LET RECHARGE  
\* WILL LET RECHARGE AWAY STATION

CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 08-44-380-26 Site 2724 CASTLE VALLEY Sampling Team RR  
 Date 10-8-91 Well #/Source OMW-6 Lab Sample ID.# \_\_\_\_\_

Field conditions SUNNY, COOL

Describe Equipment D-Con Before Sampling This Well REFER TO OMW-8

Describe All Meter/Equipment Calibration REFER TO OMW-8

Total Depth of Well 21.8 Time 0045 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 8.82 Product Present YES/NO (Circle) \_\_\_\_\_ Thickness \_\_\_\_\_

Height of Water Column (ft) 12.98  $\cdot .16 \cdot .37 \cdot (.55) \cdot 1.47 =$  8.44 Volume Purge Multiple 3 = 25.32 (Gal)

Depth Purging From NEAR BOTTOM

Time Purging Begins 0808 Notes on Initial Discharge CLEAR

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

Time	Volume Purged	pH	Conductivity	I	Notes
<u>0808</u>	<u>PP</u>	<u>7.25</u>	<u>2600</u>	<u>20.4</u>	<u>CLEAR</u>
<u>0812</u>	<u>10</u>	<u>7.26</u>	<u>2600</u>	<u>20.3</u>	<u>"</u>
<u>0814</u>	<u>15</u>	<u>7.21</u>	<u>2600</u>	<u>20.2</u>	<u>"</u>
<u>0815</u>	<u>20</u>	<u>7.26</u>	<u>2790</u>	<u>19.8</u>	<u>"</u>
<u>0816</u>	<u>26</u>	<u>7.31</u>	<u>2750</u>	<u>19.7</u>	<u>"</u>

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 0920 Total Volume Purged 26

Depth to Water for 80% Recharge 11.42 Depth to Water After Total Purge 19.22 @ 0918

DTW = 20.65 at 0818 DTW = 18.10 at 0904  
 DTW = 20.02 at 0821 DTW = 17.92 at \_\_\_\_\_  
 DTW = 19.02 at 0833 DTW = \_\_\_\_\_ at \_\_\_\_\_

Dissolved oxygen measured? YES/NO (circle) \_\_\_\_\_ Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
 Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm

Comments: AFTER 43 CAL. W/ST. DEV.  
FIELD DRAW @ 0910

10.78

CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 88-114-380-20 Site 272 YASTO VALLEY Sampling Team RR  
Date \_\_\_\_\_ Well #/Source NW-7 Lab Sample I.D.# \_\_\_\_\_

Field conditions SUNNY, WARM

Describe Equipment D-Con Before Sampling This Well REFER TO MW-8

Describe All Meter/Equipment Calibration REFER TO OMW-8

Total Depth of Well 19.96 Time 0658 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 8.74 Product Present YES/NO (Circle) \_\_\_\_\_ Thickness \_\_\_\_\_

Height of Water Column (ft) 11.22  $\begin{matrix} 2'' & 3'' & 4'' & 6'' \\ .16 & .37 & .65 & 1.47 \end{matrix} = \frac{\text{Volume}}{1.80} * \frac{\text{Purge Multiple}}{3} = \frac{\text{Volume to Purge}}{5.4} \text{ (Gal)}$

Depth Purging From HAND BAILED

Time Purging Begins \_\_\_\_\_

Notes on Initial Discharge CLEAR

Pre-Purge Sample (Check) Sheen \_\_\_\_\_ Petro Odor \_\_\_\_\_

Clear  Other (Describe under comments) \_\_\_\_\_

Time	Volume Purged	pH	Conductivity	I	Notes
1105	PP	6.87	1600	20.5	CLEAR
1109	2	6.92	1690	20.2	"
1112	4	6.93	1700	19.8	MURKY
1115	6	7.00	1690	19.6	"

Time	Volume Purged	pH	Conductivity	I	Notes

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 1335 Total Volume Purged 6 gals

Depth to Water for 80% Recharge 10.98 Depth to Water After Total Purge 15.10 @ 1117

DTW = 14.78 at 1120 DTW = \_\_\_\_\_ at \_\_\_\_\_  
DTW = 12.80 at 1202 DTW = \_\_\_\_\_ at \_\_\_\_\_  
DTW = 11.30 at 1330 DTW = \_\_\_\_\_ at \_\_\_\_\_

Dissolved oxygen measured? YES/NO (circle) \_\_\_\_\_ Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



CONVERSE ENVIRONMENTAL WEST  
Water Sampling Form

Job # 88-44-388-20 Site 2724 CASTROVILLE Sampling Team RR  
Date 10-8-91 Well #/Source OMN-8 Lab Sample I.D.# \_\_\_\_\_

Field conditions CLEAR, COOL

Describe Equipment D-Con Before Sampling This Well ALCONOX / H<sub>2</sub>O / D.T.

Describe All Meter/Equipment Calibration pH & CONDUCTIVITY CALIBRATED TO STANDARDS

Total Depth of Well 19.74 Time 0640 OVM Reading High \_\_\_\_\_ Average \_\_\_\_\_

Depth to Water Before Pumping 8.74 Product Present YES/NO (Circle) Thickness \_\_\_\_\_

Height of Water Column (ft) 11 2' .16 3' .37 4' .55 5' 1.47 = Volume 7.15 \* Purge Multiple 3 = Volume to Purge 21.45 (Gal)

Depth Purging From NEAR BOTTOM

Time Purging Begins 0729

Notes on Initial Discharge CLEAR

Pre-Purge Sample (Check) Sheen \_\_\_\_\_ Petro Odor \_\_\_\_\_

Clear  - Other (Describe under comments)

Time	Volume Purged	pH	Conductivity	I	Notes
0729	PP	7.04	890	21.0	CLEAR
0739	10	7.22	925	21.4	"
0743	15	7.38	950	20.7	NOISY
0744	19	7.45	1125	20.0	"
0746	22	7.47	1150	20.1	"

Time	Volume Purged	pH	Conductivity	I	Notes
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Time Sample Collection Begins \_\_\_\_\_ Time Sample Collection Ends 0850 Total Volume Purged \_\_\_\_\_

Depth to Water for 80% Recharge 10.94 Depth to Water After Total Purge 19.46 @ 0747

DTW = 19.04 at 0752 DTW = \_\_\_\_\_ at \_\_\_\_\_  
DTW = 18.08 at 0820 DTW = \_\_\_\_\_ at \_\_\_\_\_  
DTW = 17.44 at 0845 DTW = \_\_\_\_\_ at \_\_\_\_\_

Dissolved oxygen measured? YES/NO (circle) Barometric Pressure \_\_\_\_\_ Ambient D.O. ppm \_\_\_\_\_  
Sample Temp \_\_\_\_\_ Sample D.O. \_\_\_\_\_ ppm

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8.8