



Environmental
Science &
Engineering, Inc.

May 8, 1991

Project No. 6-91-5184

Ms. Jo Ann Stewart
Good Chevrolet
1630 Park Street
Alameda, CA 94501

SUBJECT: Quarterly Ground-Water Monitoring and Sampling Results at Good Chevrolet, 1630 Park Street, Alameda, Alameda County, California

Dear Ms. Stewart:

Environmental Science & Engineering, Inc. (ESE) presents the following results of quarterly monitoring and sampling at the subject site. A copy of this report should be sent to the Alameda County Health Agency, Hazardous Materials Division, 80 Swan Way, Room 200, Oakland, CA 94621 and the San Francisco Bay Region Water Quality Control Board, 2101 Webster St., Room 500, Oakland, CA 94612.

APRIL 1991 QUARTERLY MONITORING AND SAMPLING RESULTS

Introduction

The site is an active car dealership. There are currently three ground-water monitoring wells on the site (Figure 1 - Site Plan). The wells were drilled by Groundwater Technology in 1987 to assess subsurface conditions near underground gasoline storage tanks. According to information available to ESE, the wells were last monitored and sampled in August 1989.

Ground-Water Elevations

Ground-water levels were measured with an electronic measuring tape by ESE on April 9, 1991. Figure 2 - Ground-Water Elevation Contour Map - 4/9/91, shows that ground-water depths ranged from 7.59 to 8.06 feet below grade, approximately 1 foot higher than in August 1989. The estimated ground-water flow direction is to the west, approximately 90 degrees from the northerly flow direction measured in 1989. No hydrocarbon sheen or floating product was noted in the wells.

Ground-Water Sampling and Analytical Results

For this quarterly sampling episode, each well was purged of 15 to 20 gallons of water (at least 3 well volumes) with a submersible electric pump before being sampled with pre-cleaned disposable bailers. The samples were stored on ice in 40 milliliter Volatile Organic vials for transport to Curtis & Tompkins, Ltd., a California Department of Health

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Services certified laboratory. The samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg) using EPA Method 5030/8015-modified, and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) using EPA Method 5030/8020. The approximately 50 gallons of ground water purged from the wells was stored on site in a labeled drum, pending disposal arrangements.

The analytical results are presented on Figure 3 - Ground-Water Sampling Analytical Results. These data show that the highest concentrations of hydrocarbons (9,400 ug/L (micrograms per liter) TPHg, BTEX concentrations ranging from 200 to 1,400 ug/L) were found in the ground-water from well MW3, the nearest downgradient well from the underground tanks. The ground-water sample from well MW2 contained 4,900 ug/L TPHg and BTEX concentrations ranging from 130 to 910 ug/L. Well MW1, located upgradient of the tanks, contained 850 ug/L TPHg and BTEX concentrations ranging from 10 to 260 ug/L.

> These concentrations are generally less than those noted in August 1989 (MW1: TPHg-1,200, Benzene-470, Toluene-49, Ethylbenzene-45, Xylenes-33 ug/L; MW2: TPHg-7,600, Benzene-2,700, Toluene-540, Ethylbenzene-250, Xylenes-320 ug/L; MW3: TPHg-7,800, Benzene-3,100, Toluene-900, Ethylbenzene-300, Xylenes-480 ug/L), however they are of the same order of magnitude.

Laboratory reports and chain of custody documents for the April 1991 sampling are attached as Appendix A.

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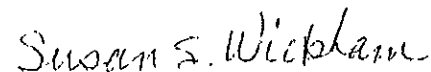
Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other hydrogeologists and engineers practicing in this field. No other warranty, express or implied, is made as to the professional advice in this report.

If you have any questions or comments concerning this report, please contact Mike Quillin or Paul Graff at 415/685-4053.

Sincerely,
ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

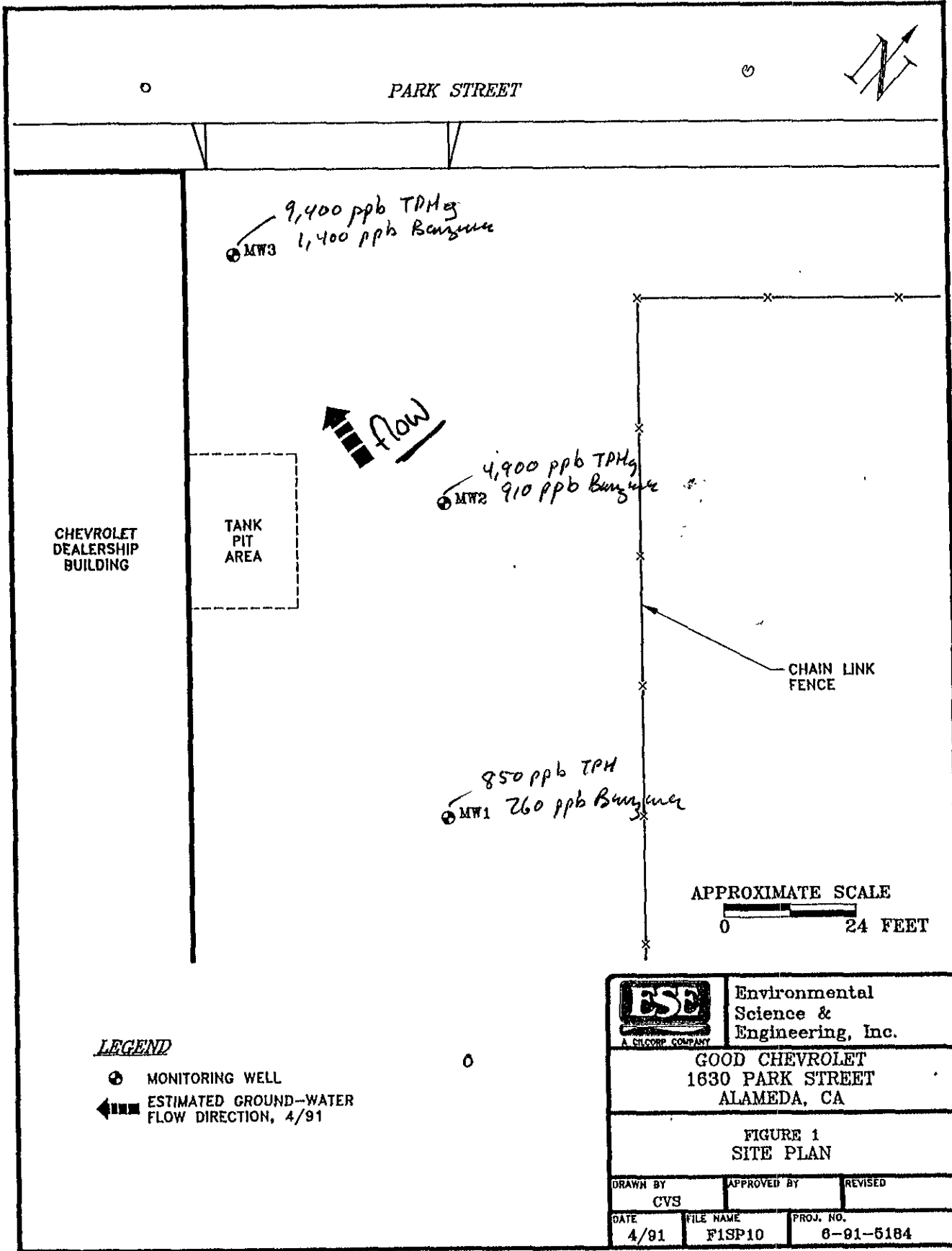


Paul K. Graff
Senior Associate Geologist

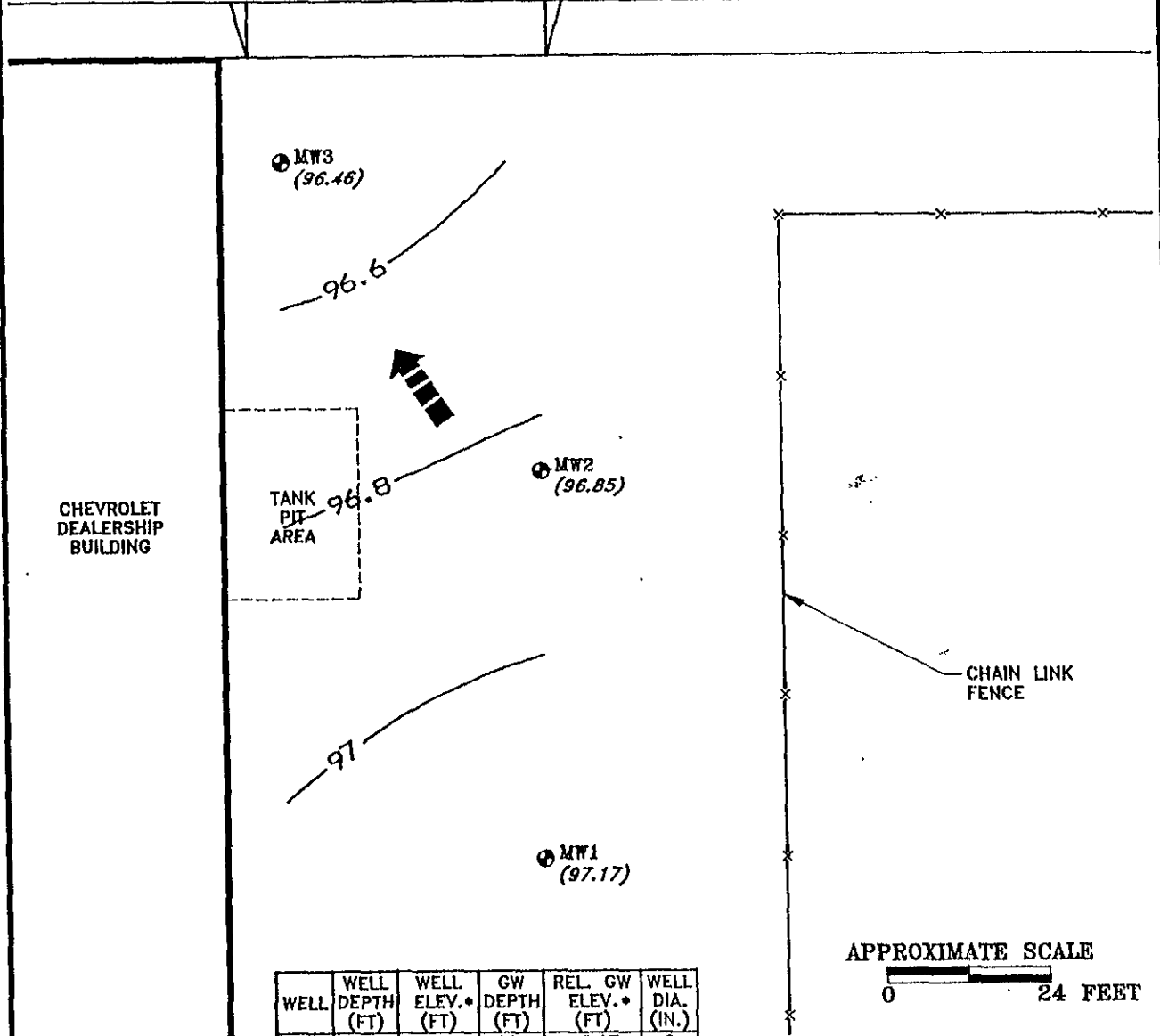


Susan S. Wickham, RG
Director of Geosciences

Attachments: Figures 1, 2, and 3
Appendix A



PARK STREET



CHEVROLET DEALERSHIP BUILDING

TANK PIT AREA

CHAIN LINK FENCE

MW3 (96.46)

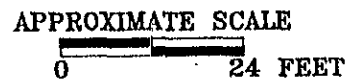
MW2 (96.85)

MW1 (97.17)

96.6

96.8

97




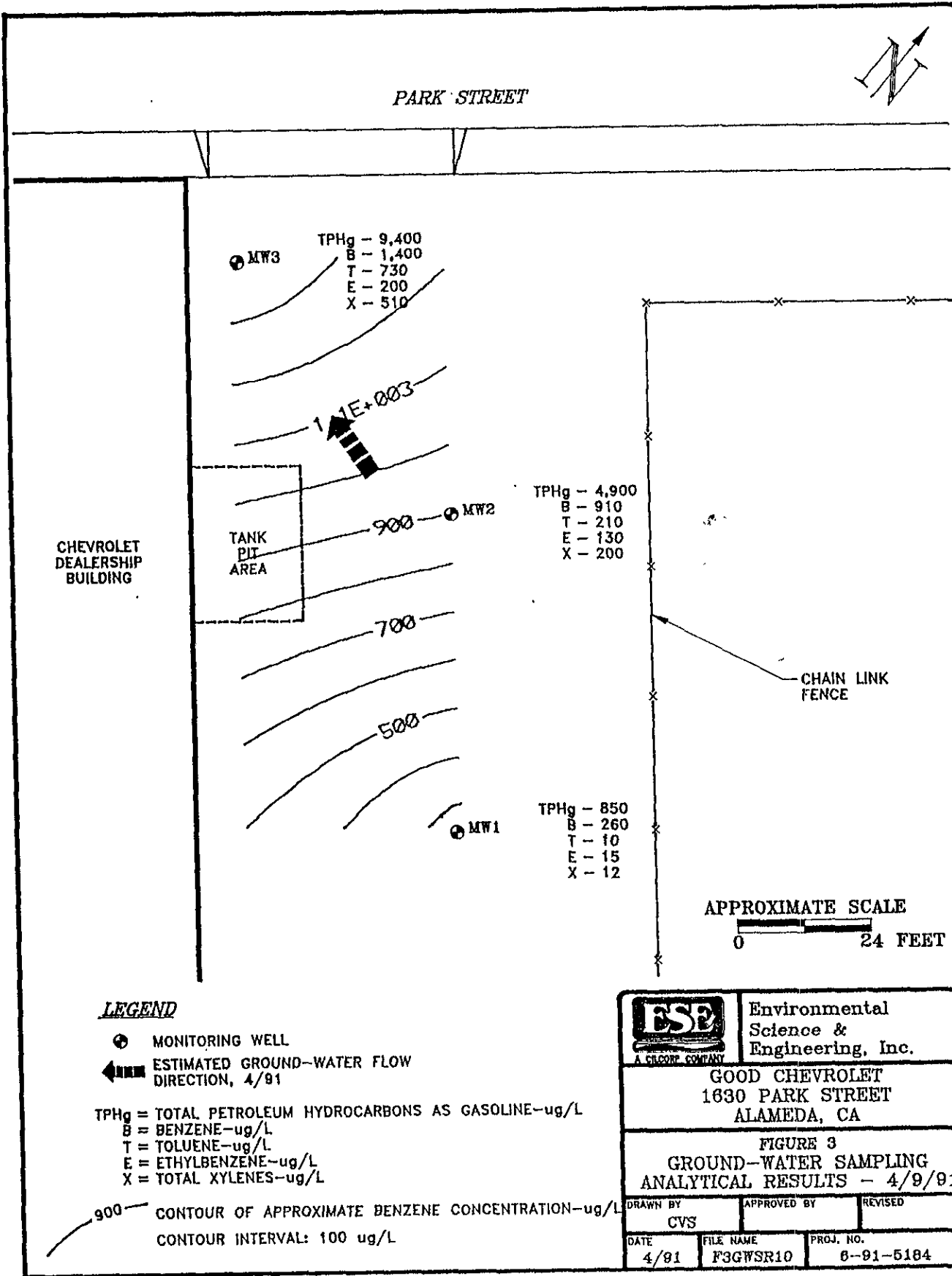
WELL	WELL DEPTH (FT)	WELL ELEV.* (FT)	GW DEPTH (FT)	REL. GW ELEV.* (FT)	WELL DIA. (IN.)
MW1	9.22	104.76	7.59	97.17	2
MW2	18.76	104.86	8.01	96.85	2
MW3	9.02	104.52	8.06	96.46	2

* WELL ELEVATIONS ARE SURVEYED RELATIVE TO AN ARBITRARY DATUM.

LEGEND

- ⊕ MONITORING WELL
- ← ESTIMATED GROUND-WATER FLOW DIRECTION, 4/91
- 96.8— GROUND-WATER ELEVATION CONTOUR IN FEET

		Environmental Science & Engineering, Inc.
GOOD CHEVROLET 1630 PARK STREET ALAMEDA, CA		
FIGURE 2 GROUND-WATER ELEVATION CONTOUR MAP - 4/9/91		
DRAWN BY CVS	APPROVED BY	REVISED
DATE 4/91	FILE NAME F2GWE10	PROJ. NO. 6-91-5184




LEGEND

- ⊕ MONITORING WELL
- ← ESTIMATED GROUND-WATER FLOW DIRECTION, 4/91

TPHg = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE-ug/L
 B = BENZENE-ug/L
 T = TOLUENE-ug/L
 E = ETHYLBENZENE-ug/L
 X = TOTAL XYLENES-ug/L

900 CONTOUR OF APPROXIMATE BENZENE CONCENTRATION-ug/L
 CONTOUR INTERVAL: 100 ug/L

 <small>A SCLCOP COMPANY</small>	Environmental Science & Engineering, Inc.
GOOD CHEVROLET 1630 PARK STREET ALAMEDA, CA	
FIGURE 3 GROUND-WATER SAMPLING ANALYTICAL RESULTS - 4/9/91	
DRAWN BY	APPROVED BY
CVS	REVISD
DATE	FILE NAME
4/91	F3GWSR10
PROJ. NO.	REVISED
6-91-5184	REVISED

APPENDIX A
LABORATORY REPORTS AND CHAIN OF CUSTODY DOCUMENTS



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 04/10/91

DATE REPORTED: 04/15/91

LAB NUMBER: 103505


CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

REPORT ON: THREE WATER SAMPLES

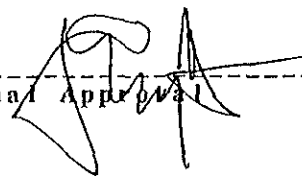
PROJECT ID: 6-91-5184

LOCATION: GOOD CHEVROLET

RESULTS: SEE ATTACHED



QA/QC Approval



Final Approval

Berkeley

Wilmington

Los Angeles

LABORATORY NUMBER: 103505 DATE RECEIVED: 04/10/91
 CLIENT: ENVIRONMENTAL SCIENCE & ENGINEERING DATE ANALYZED: 04/11-12/91
 PROJECT ID: 6-91-5184 DATE REPORTED: 04/15/91
 LOCATION: GOOD CHEVROLET

Total Volatile Hydrocarbons with BTXE in Aqueous Solutions
 TVH by California DOHS Method/LUFT Manual October 1989
 BTXE by EPA 5030/8020

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)
103505-1	MW-1	850	260	10	15	12
103505-2	MW-2	4,900	910	210	130	200
103505-3	MW-3	9,400	1,400	730	200	510

QA/QC SUMMARY

RPD, % 1
 RECOVERY, % 102


103505

CHAIN OF CUSTODY RECORD

DATE 4/9/91 PAGE 1 OF 1
PROJECT NAME Coral Circle
ADDRESS park ST

PROJECT NO. 6-91-5184
SAMPLED BY Paul Marsden
LAB NAME CURTIS TAMPKINS

ANALYSES TO BE PERFORMED										MATRIX	NUMBER OF CONTAINERS
										MATRIX	



Environmental Science & Engineering, Inc.
 4090 Nelson Avenue Suite 1
 Concord, CA 94520
 (415) 685-4053
 Fax (415) 685-5323

REMARKS (CONTAINER, SIZE, ETC.)

SAMPLE #	DATE	TIME	LOCATION
MW-1	4/9	12:14	Millard
MW-2	1	12:23	1
MW-3	1	12:30	1

RELINQUISHED BY: (signature) 1. <u>M. Quill</u>	RECEIVED BY: (signature) <u>[Signature]</u>	date <u>4/10/91</u>	time <u>4:40</u>	9	TOTAL NUMBER OF CONTAINERS	
2.					REPORT RESULTS TO: <u>Mike Q.</u>	SPECIAL SHIPMENT REQUIREMENTS
3.					SAMPLE RECEIPT	
4.					CHAIN OF CUSTODY SEALS	
5.					REC'D GOOD COND'TN/COLD	

INSTRUCTIONS TO LABORATORY (handling, analyses, storage, etc.):

CONFORMS TO RECORD