California

13908 San Pablo Avenue
Suite 101
San Pablo, California 94806
(510) 232-8366 FAX (510) 232-5133

TMC
Environmental, Inc.

Oregon

370 West Sixth Avenue
Suite A
Eugene, Oregon 97401
(503) 342-6606 FAX (503) 342-1632

October 30, 1992

Alameda County Health Care Services Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, California 94621

Attn: Juliet Shin

Dear Ms. Shin,

Enclosed is a replacement copy of the August 1992 Quarterly Monitoring Report. This copy we previously sent you did not contain figures.

Please replace the copy on file with the new copy with plates.

I have finished the October report and will be sending you a copy under separate cover.

Thank You,

Mark T. Youngkin
Vice President

California

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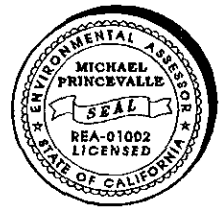
GROUNDWATER MONITORING REPORT

1700 Park Street
Alameda, California

MANAGEMENT AND CONSULTING



California Registered Environmental Assessors
California Certified Engineering Geologist
Oregon Registered Engineering Geologist
Oregon Registered UST Soil Cleanup Supervisors

"An Environmental Management Company"

GROUNDWATER MONITORING REPORT

Cavanaugh Motors Facility
1700 Park Street
Alameda, California

Project Number 109001
August 26, 1992

Prepared for

Mr. Dave Cavanaugh
Cavanaugh Motors
1700 Park Street
Alameda, California 94501

prepared by

TMC Environmental Inc.
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806

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GROUNDWATER MONITORING REPORT
1700 Park Street, Alameda California

1.0 GENERAL SITE INFORMATION

1.1 SITE LOCATION

The Cavanaugh Motors property, called the site in this workplan, is at the following address and description:

1700 Park Street, City of Alameda
Alameda County, California
Appraisers parcel number: APN 70-192-21-1 and 24
Lots 1, 2, 3, portion of 4, 7 Block E of Alameda
Station Homestead Tract (Book 17 page 60)

The site is at the northeast corner of the intersection of Park Street and Buena Vista Avenue. The corner lot is approximately 150 feet by 200 feet.

1.2 TANK OWNER

The current property owner is:

Lee & Dave Cavanaugh
1700 Park Street
Alameda, California 94501

Mr. Dave Cavanaugh is the owner contact. He can be reached at (510) 523-5246.

1.3 CONSULTANT OF RECORD

The consultant of record for this project is:

TMC Environmental Inc. (TMC)
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806

The contact for TMC is Mr. Tom Edwards, President or Mr. Mark Youngkin, Vice President. Mr. Edwards and Mr. Youngkin can be reached at 510-232-8366.

1.4 SITE CONDITION

The site is presently being used for an automobile dealership. The site is in a commercial and retail neighborhood. Current activities include: a new car showroom, sales offices, parts storage and distribution, outside car storage, and vehicle repair shop with hydraulic hoists. Foot and vehicle traffic is heavy in this neighborhood and site. The site contains a large building with paved parking areas and driveways.

Access to the dealership is from both Park Street that borders the property on the northwest and Buena Vista Avenue that borders the property on the southwest. A gasoline station and automobile dealers occur across Park Street to the north. A motor vehicle repair shop bounds the site on the east. Adjacent to the site on the south is a residential neighborhood. The topography of the lot slopes from south to north at 0.89 feet vertical to 100 feet horizontal with a 1.6 foot drop across the site.

1.5 GEOLOGY

The site is less than one half mile west of the Oakland Estuary and Inner Harbor Waterway. San Francisco Bay is about one mile west of the site. The Inner Harbor Waterway connects San Leandro Bay and San Francisco Bay. As suggested by U.S. Geological Survey geological publications, the site is on the Alameda Bay Plain that has an alluvial fan environment. The Merritt Sand Formation is the main stratigraphic unit in the upper aquifer. This unit usually has unconsolidated beach sand and near shore deposits. Borings on the site have encountered unconsolidated sands and clayey sands. Lenses of clayey sand occur in the sand. It appears that groundwater in the Merritt Sand Formation is unconfined. Ground water is about eight feet below surface grade (bsg) at the site.

1.6 LEAD IMPLEMENTING AGENCY

As stated in a letter to Mr. Dave Cavanaugh dated January 31, 1990 from the Alameda County Health Care Services Agency; the agency authorized by the Regional Water Quality Control Board (RWQCB) to oversee this site is:

Alameda County Health Care Services Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 200, Oakland, California 94621

The officer overseeing this case is: Ms. Juliet Shin. Ms. Shin at can be called at 510-271-4320.

TMC followed the guidelines by the enforcing agency and the Bay Area Regional Water Quality Control Board (RWQCB) in preparing this workplan. The investigation, reclamation, and reporting guidelines applicable to leaking underground fuel tanks, available through these agencies, apply to this discharge. These guidelines are available from the Alameda County Health Care Services Agency.

2.0 GROUNDWATER SAMPLING

TMC had the ground water from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 tested for the target fuel chemicals: total volatile hydrocarbons (TVH) as gasoline and benzene, toluene, ethylbenzene, and total xylene (BTEX). The groundwater from wells MW-3, MW-5, and MW-6 were tested for the chemicals of diesel, oil & grease and purgeable halocarbons. The following tables summarize the chemical compounds detected. The first table lists the gasoline results for groundwater samples:

TABLE 1. GASOLINE RESULTS FOR GROUNDWATER SAMPLES

Date Sampled	*Monitoring Well*	*TPH gas ug/L*	*Benzene ug/L*	*Toluene ug/L*	*Ethyl benzene ug/L*	*Xylenes ug/L*
6-08-90	MW-1	28,000.	6200.	7000.	630.	6100.
6-08-90	MW-2	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
6-08-90	MW-3	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
6-08-90	MW-4	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
12-17-90	MW-1	7,200.	620.	250.	1200.	1400.
12-17-90	MW-2	ND<50	1.1	ND<0.5	2.3	2.1
12-17-90	MW-3	140	ND<0.5	1.3	1.3	9.1
12-17-90	MW-4	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
7-29-91	MW-1	21,000.	890.	1900.	320.	1700.
7-30-91	MW-2	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
7-18-91	MW-3	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
7-30-91	MW-4	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
7-18-91	MW-5	ND<50	ND<0.5	ND<0.5	ND<0.5	0.9
7-18-91	MW-6	ND<50	1.3	ND<0.5	ND<0.5	1.6
12-4-91	MW-1	4,300.	3.2	1.3	88.	630.
12-4-91	MW-2	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
12-4-91	MW-3	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
12-4-91	MW-4	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
12-4-91	MW-5	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
12-4-91	MW-6	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
4-30-92	MW-1	16,000	910	2000	250	1400
4-29-92	MW-2	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
4-29-92	MW-3	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
4-29-92	MW-4	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
4-30-92	MW-5	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
4-30-92	MW-6	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
7-28-92	MW-1	12,000	1200	2300	340	1800
7-27-92	MW-2	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Date Sampled	*Monitoring Well*	*TPH gas ug/L*	*Benzene ug/L*	*Toluene ug/L*	*Ethyl benzene ug/L*	*Xylenes ug/L*
7-27-92	MW-3	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
7-27-92	MW-4	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
7-27-92	MW-5	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5
7-28-92	MW-6	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5

ND- Not detected below reporting limits

The only well onsite to have detectable levels of gasoline and BTEX is well MW1. This well is in the backfill of the former underground tank pit. Chart 1, MW1 Quarterly Sampling Results for Gasoline and Chart 2, MW1 Quarterly Sampling Results for BTEX, show the results of laboratory analysis for well MW1. These charts show a gradual decline in gasoline concentration with time. BTEX concentrations dropped after the initial sampling interval then stabilized with a slight increase in concentration during the last sampling intervals. Seasonal variations in gasoline concentration are apparent with the highest concentrations during periods of wet weather. We believe the gasoline concentrations result from the contact of water in the tank pit with residual soil contamination along the building foundation.

The following table presents the results of laboratory analyses for extractable petroleum hydrocarbons and purgeable halocarbons in water:

TABLE 2. DIESEL AND OIL RESULTS FOR WATER SAMPLES

Date Sampled	*Monitoring Well*	*Diesel ug/L*	*Kerosene ug/L*	*Oil & Grease mg/L*	*Chlorobenzene ug/L*
7-18-91	MW-3	NA	NA	ND<5	NA
7-18-91	MW-5	NA	NA	ND<5	NA
7-18-91	MW-6	NA	NA	ND<5	NA
12-4-91	MW-3	ND<50	ND<50	ND<5	ND<1.0
12-4-91	MW-5	ND<50	ND<50	ND<5	4.6
12-4-91	MW-6	1,400	ND<50	ND<5	33
4-29-92	MW-3	ND<50	ND<50	ND<5	ND<1.0
4-29-92	MW-5	ND<50	ND<50	ND<5	3.
4-29-92	MW-6	670	ND<50	ND<5	7.
7-28-92	MW-3	ND<50	ND<50	ND<5	ND<1.0
7-28-92	MW-5	ND<50	ND<50	ND<5	2.
7-28-92	MW-6	1,700	ND<50	ND<5	17

ND- NOT DETECTED BELOW REPORTING LIMITS
NA- NOT ANALYZED BY LABORATORY

Concentrations of diesel are reported from well MW-6. We believe the diesel results from contact of groundwater in the tank pit with residual soil contamination along the building foundation. Chlorobenzene was reported from wells MW-5 and MW-6. Chlorobenzene was reported in the original tank removal soil samples. The chlorobenzene concentrations also show decreasing concentrations with time.

3.0 GROUNDWATER MEASUREMENTS

The first water containing soil layer consists mostly of fine to medium grained sand. The sand contains a clayey sand lens from 5-7 feet below grade at the surface of the groundwater. The shallow water-bearing sand beneath the site appears unconfined. By measuring the water levels at three groundwater monitoring wells, we estimated the direction of groundwater flow.

The wells were all allowed to equilibrate with atmospheric pressure. The wells were measured in rotation until two successive measurements of the water elevation agreed within 0.01 of a foot. The following table summarizes the groundwater measurements recorded for selected monitoring wells.

TABLE 3. GROUNDWATER MEASUREMENTS FROM MONITORING WELLS

Date	*Well Number*	*Water Level*	*Casing Elevation*	*Water Elevation*
6-20-90	MW2	7.16	16.73	9.57
6-20-90	MW3	7.37	15.89	8.52
6-20-90	MW4	7.60	16.39	8.79
9-13-90	MW2	8.78	16.73	7.95
9-13-90	MW3	8.70	15.89	7.19
9-13-90	MW4	8.80	16.39	7.59
12-17-90	MW2	8.78	16.73	7.95
12-17-90	MW3	8.42	15.89	7.47
12-17-90	MW4	8.61	16.39	7.78
12-4-91	MW2	7.99	16.73	8.74
12-4-91	MW3	8.18	15.89	7.71
12-4-91	MW4	8.26	16.39	8.13
4-29-92	MW2	6.05	16.73	10.68
4-29-92	MW3	6.73	15.89	9.16
4-29-92	MW4	6.81	16.39	9.58
8-29-92	MW1	7.92	16.39	8.47
8-29-92	MW2	7.82	16.73	8.91
8-29-92	MW3	8.21	15.89	7.68
8-29-92	MW4	8.14	16.39	8.25
8-29-92	MW5	7.57	15.13	7.56
8-29-92	MW6	8.00	15.98	7.98

The following table summarizes the estimated groundwater flow direction and gradient. We used a three point solution to estimate the flow direction and gradient. We avoided using well MW1 in the estimate because it is in the back fill of the tank excavation.

TABLE 4. GROUNDWATER FLOW DIRECTIONS AND GRADIENTS

Date	*Direction of Flow*	*Horizontal Gradient*	*Average Water Level feet above msl*
June 20, 1990	North 26 degrees West	0.009 ft/ft	8.96
September 13, 1990	North 2 degrees West *	0.005 ft/ft *	7.91
December 17, 1990	North 19 degrees West *	0.003 ft/ft *	8.06
December 4, 1991	North 12 degrees West *	0.008 ft/ft *	8.52
April 29, 1992	North 20 degrees West	0.012 ft/ft	9.8
August 29, 1992	North 5 degrees West	0.009 ft/ft	8.14

* - QA\QC review required correction of previously reported data

The groundwater flow direction and the horizontal gradient vary between measurements. The changing groundwater flow direction may suggest the shallow water layer is sensitive to seasonal changes or incomplete stabilization of the wells was achieved in the past. The most recent data indicate a North 5 degrees West flow direction at an average horizontal gradient of 0.009 ft/ft. The horizontal gradient is similar to the topographic slope of the lot. Six groundwater measurements indicate a range of flow direction from N26W to N20E and a range of horizontal gradient from 0.008 to 0.012 ft/ft. Plate 4, Groundwater Gradient Map illustrates the horizontal gradient measured across the site.

4.0 SOIL AND WATER SAMPLE DATA QUALITY

The quality assurance and quality control (QA/AC) review of the new sample data for this report indicates that the data is acceptable for the purpose and objectives of this project. We did not review data summarized from previous reports. The U.S. Environmental Protection Agency (EPA) Test Methods for Evaluating Solid Waste (SW-846) and the California Department of Health Services (DOHS) Leaking Under-

ground Fuel Tank (LUFT) Manual were used to evaluate the sampling data since the SW-846 and LUFT methodologies were primarily used to analyze the samples. The samples were analyzed by Curtis & Tompkins, Ltd. of Berkeley, California. The certified laboratory reports and chain-of-custody forms are presented in Appendix A.

A. QUALITY OF GROUNDWATER SAMPLES

During sampling, all monitoring wells were purged of at least 4 bore volumes of water, in accordance with EPA protocol. At the end of purging, the well water was clear in all wells. The deionized water equipment blank for the sampling reported no detectable compounds.

Surveying of monitoring wells MW-5 and MW-6 revealed an error in previous survey data for well MW-3. The tables of groundwater data have been corrected for the error. The resulting data is considerably more consistent than previously reported.

B. CHAIN OF CUSTODY DOCUMENTATION

Complete chain-of-custody forms were maintained for all samples from the time of their collection until their submission to the laboratory. No errors in chain-of-custody protocol was noted.

C. PURGEABLE HALOCARBONS

Based on the QC data reviewed, the results of analyses for halogenated volatile organic hydrocarbons by EPA SW-846 Method 8010 appear reasonably representative. Groundwater samples were analyzed within the EPA-specified maximum holding time. Surrogate spike recoveries were judged acceptable based on professional judgement. Matrix spike/matrix spike duplicate percent recoveries and relative percent differences (RPD's) were either within EPA-specified limits or were within limits set by professional judgment where no EPA limits exist. The compound chlorobenzene was again detected in wells MW-5 and MW-6.

D. TOTAL VOLATILE HYDROCARBONS WITH BTEX

Based on the QC data reviewed, total volatile hydrocarbons (TVH) as gasoline analysis by LUFT methods and benzene, toluene, ethylbenzene, and total xylenes (BTEX) analyses by EPA SW-846 Methods modified 5030/8020 appear reasonably representative. Samples were analyzed within the Regional Water Quality Control Board specified 7 day maximum holding time for water samples. Matrix spike/matrix spike duplicate percent recoveries and relative percent differences (RPD's) were either within EPA-specified limits or were within limits set by professional judgment where no EPA limits exist.

E. EXTRACTABLE PETROLEUM HYDROCARBONS

Based on the QC data review, extractable petroleum hydrocarbons (TEH) analysis by LUFT methods appear reasonably representative. Samples were analyzed within the Regional Water Quality Control Board specified 14 day maximum holding time for water samples. Matrix spike/matrix spike duplicate percent recoveries and relative percent differences (RPD's) were either within EPA-specified limits or were within limits set by professional judgment where no EPA limits exist.

F. HYDROCARBON OIL & GREASE

Based on the QC data reviewed, the results of analyses for hydrocarbon oil & grease by gravimetric analysis, method SMWW 17:5520BF appear reasonably representative. Groundwater samples were analyzed within the EPA-specified maximum holding time. Surrogate spike recoveries were judged acceptable based on professional judgement. Matrix spike/matrix spike duplicate percent recoveries and relative percent differences (RPD's) were either within EPA-specified limits or were within limits set by professional judgment where no EPA limits exist. No hydrocarbon oil & grease was detected in the method blanks.

5.0 SCHEDULE OF ACTIVITIES

The following activities are scheduled to be performed during the next quarter:

- Quarterly groundwater sampling and analysis with quarterly measurement of groundwater gradient and flow direction
- Construction and operation of the soil venting system at the tank pit for the former underground gasoline tank
- Treatment and disposal of on site stock pile

6.0 LIMITATIONS

The procedures and opinions in this report agree with professional practice as provided in the guidelines of the California Regional Water Quality Control Board for addressing fuel leaks from underground tanks. This report is only part of the ongoing work required by the lead implementing agency at this site. The lab test results rely on limited data collected at the sampling location only. Budget constraints restrict the amount of testing allowed. The lab test results do not apply to the general site as a whole. Therefore. TMC Environmental Inc. cannot have complete knowledge of the underlying conditions.

We provide the information in the resulting report to our client so he may make a more informed decision about site conditions. The professional opinion and judgement in the reports is subject to revisions in light of new information. We do not state or imply any guarantees or warranties that the subject property is or is not free of environmental impairment. Monitoring wells and soil venting wells are temporary sampling and remediation wells that eventually must be permitted and destroyed by a licensed driller at the clients expense.

7.0 CERTIFICATION

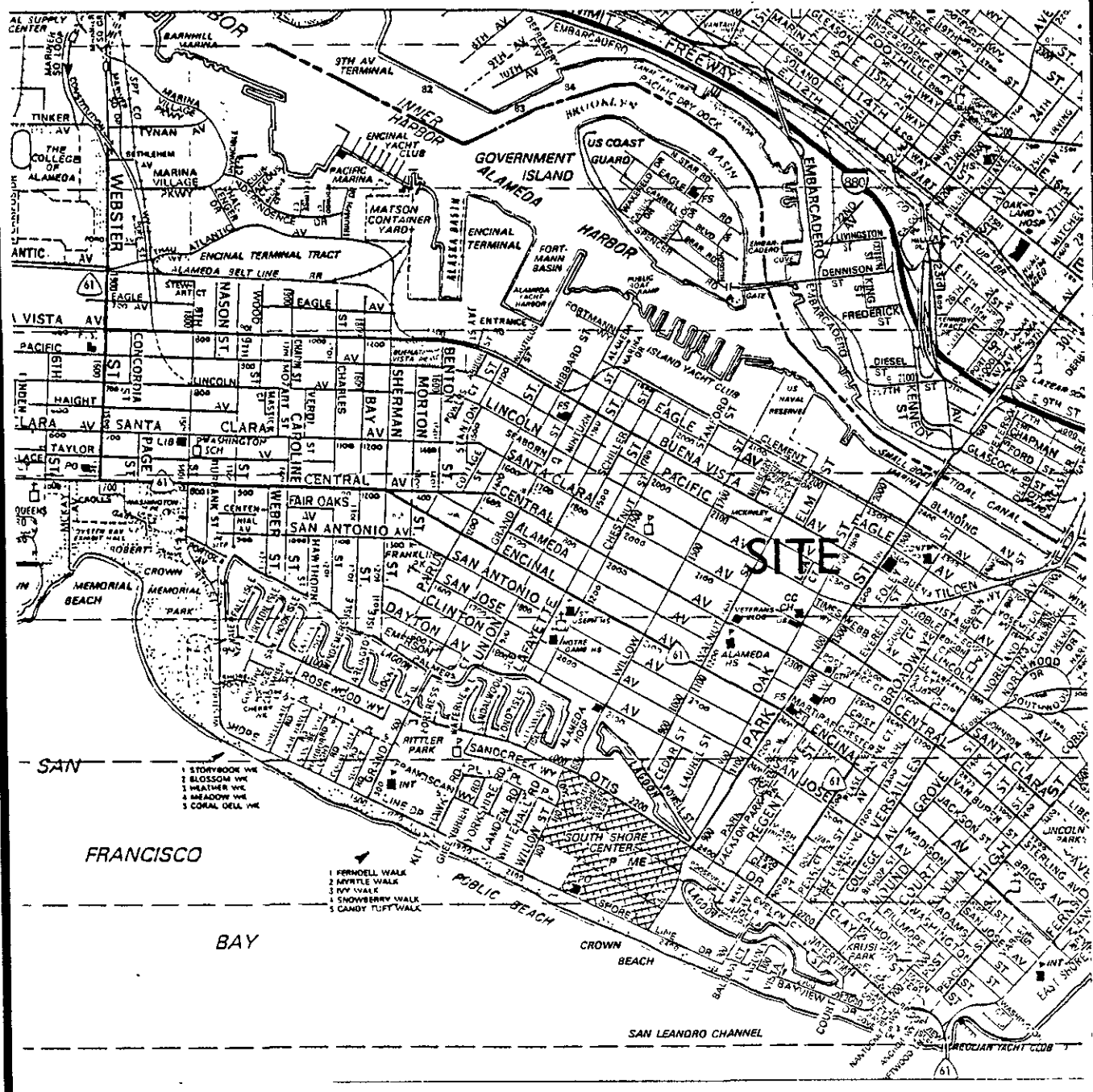
I supervised the preparation of the Groundwater Monitoring Report dated August 26, 1992 for the Cavanaugh Motors facility in the City of Alameda, Alameda County, California. The investigation used techniques and standards of care common to the consulting geologic profession in California. My certification as an engineering geologist by the State of California, Board of Registration for Geologists and Geophysicists, license number EG-1380, expires on June 30, 1994. This license is active and currently in good standing with the Board of Registration.

Certifying Professional:

TMC Environmental, Inc.
Vice President

Mark T. Youngkin
Certified Engineering Geologist No. EG-1380

Dated _____, 1992



Base Map from Thomas Bros. Maps, Alameda County California 1990 Scale 1" = 2200 feet

TMC
Environmental, Inc.

SITE VICINITY MAP

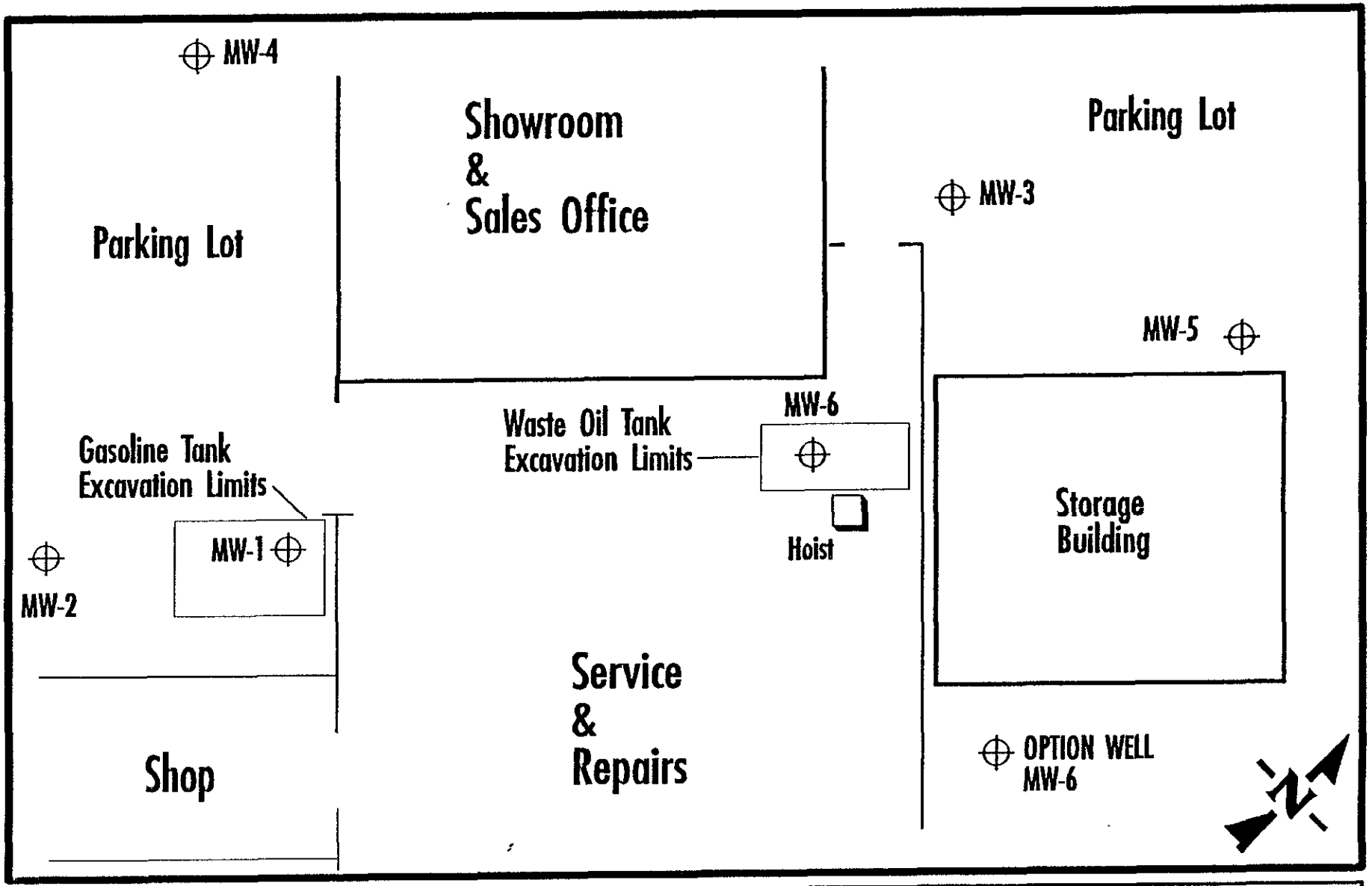
Cavanaugh Motors

1700 Park Street
Alameda, California

Project No. 109001 May 1992

PLATE

1



LEGEND

MW-0 ⊕ Monitoring Well

Project No. 109001
August, 1992
Scale 1 inch = 20 feet

SITE PLAN

Cavanaugh Motors

1700 Park Street, Alameda California

TMC ENVIRONMENTAL INC. SAN PABLO, CALIFORNIA

PLATE 2

CHART 1

MW1 QUARTERLY SAMPLING RESULTS FOR GASOLINE

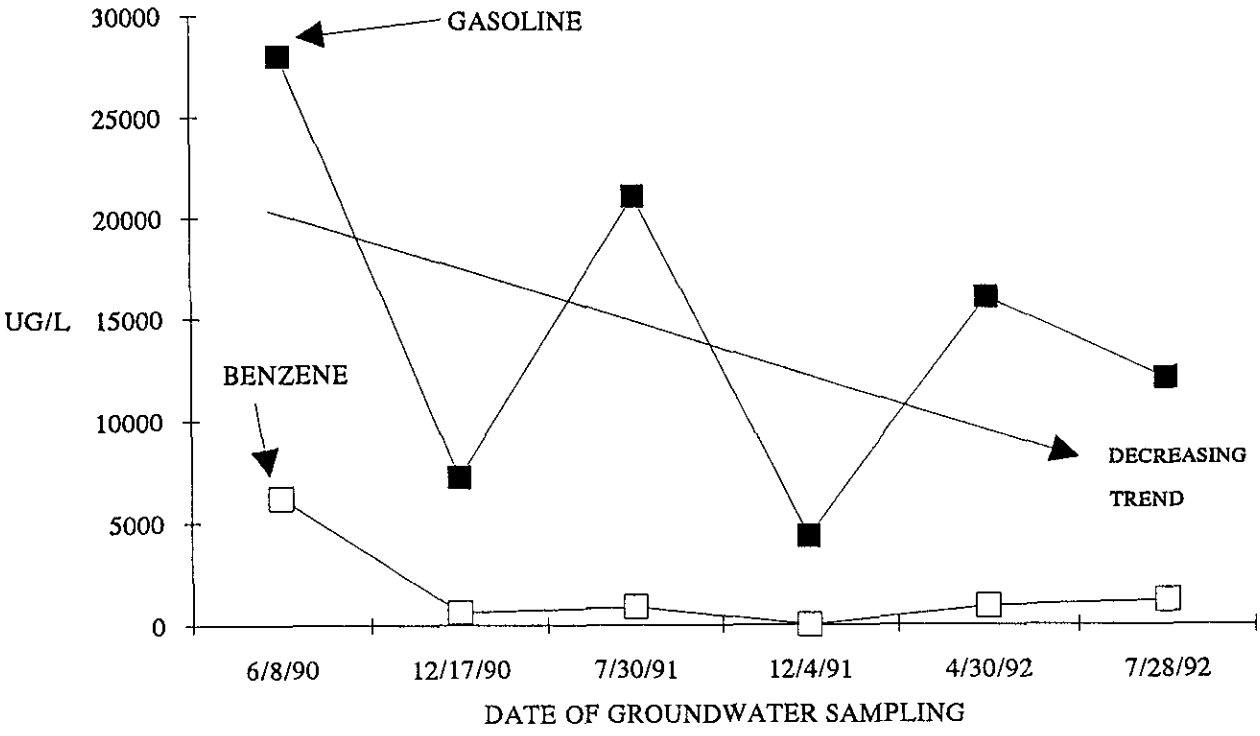
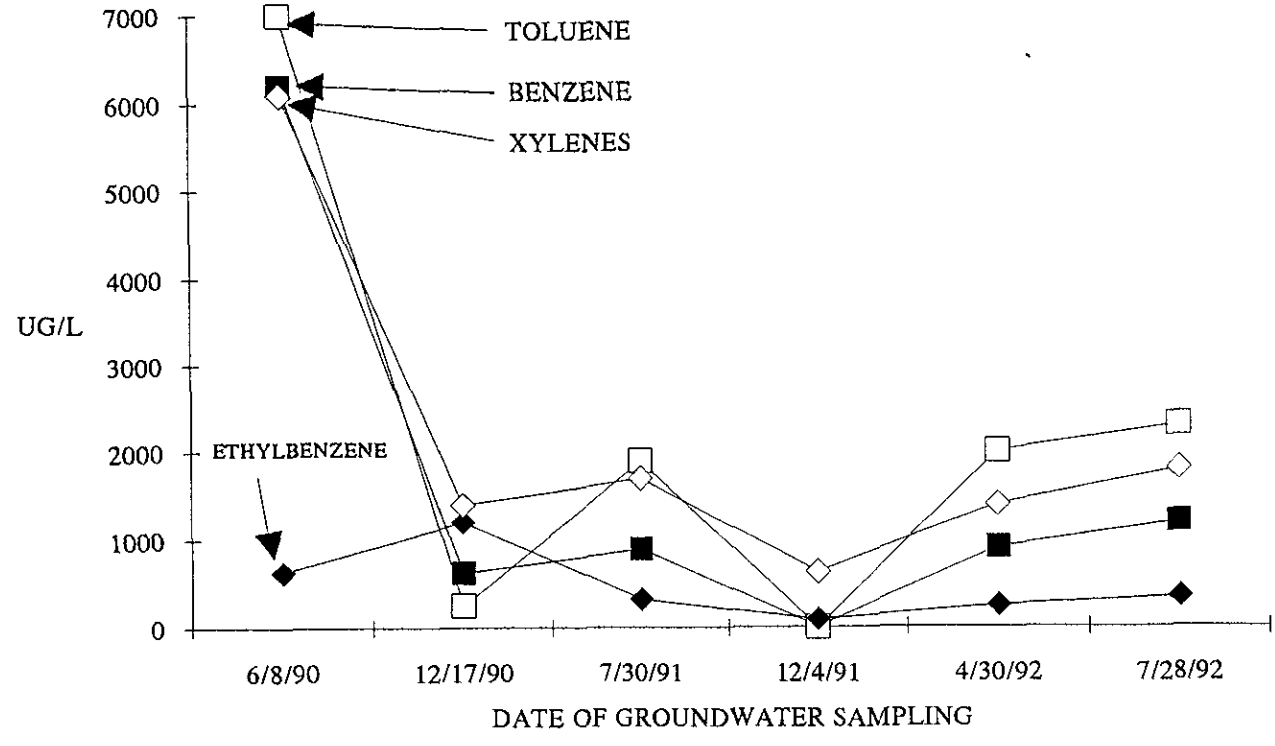
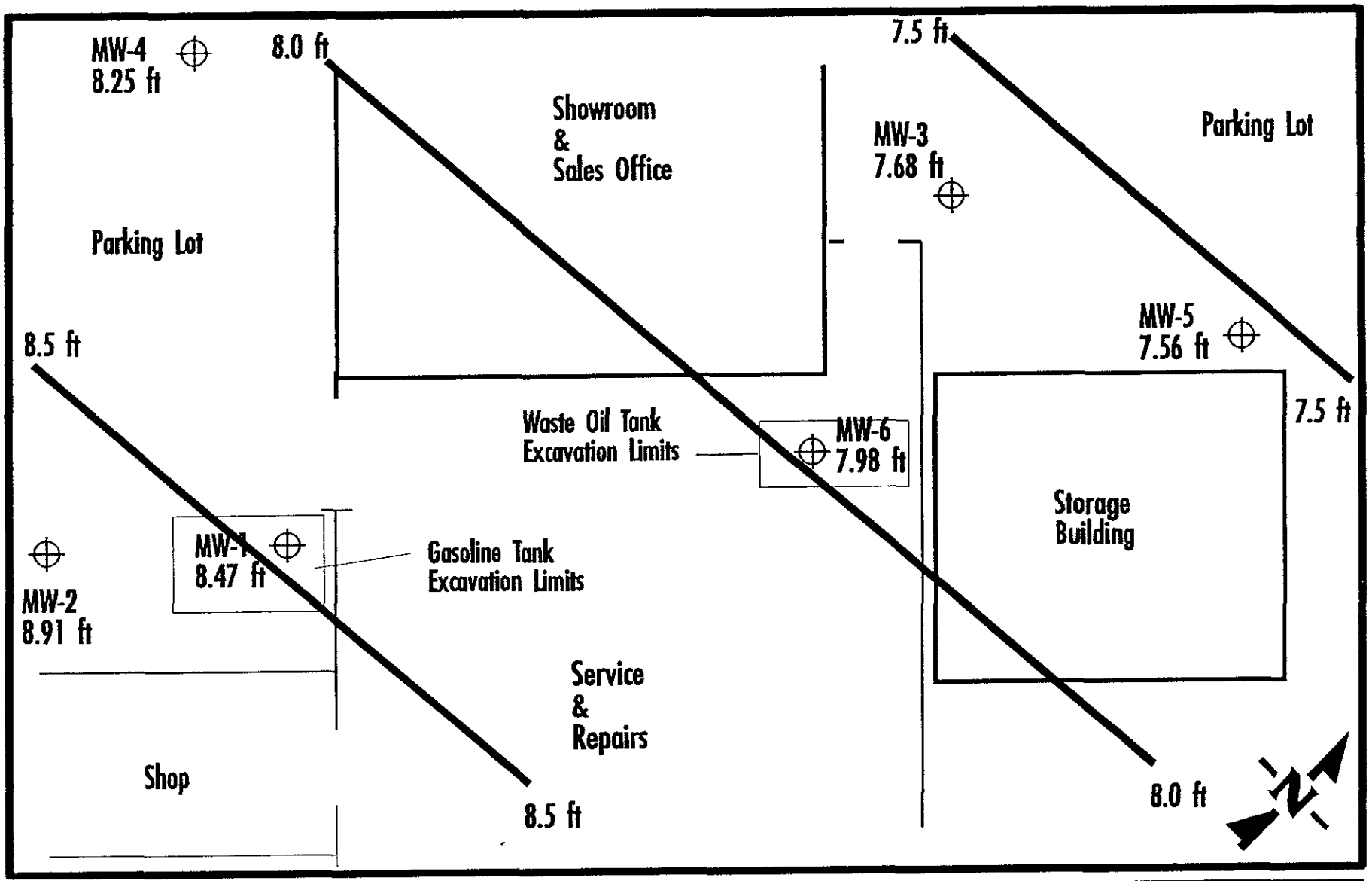


CHART 2

MW1 QUARTERLY SAMPLING RESULTS FOR BTEX





LEGEND

MW-0
1.00 ft
⊕ Monitoring Well with elevation of groundwater in feet

Project No. 109001
August, 1992
Scale 1 inch = 20 feet

GROUNDWATER GRADIENT MAP

Cavanaugh Motors

1700 Park Street, Alameda California

TMC ENVIRONMENTAL INC. SAN PABLO, CALIFORNIA

PLATE 4

APPENDIX A

CERTIFIED ANALYTICAL REPORTS,

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST FORMS,

WELL SAMPLING FORMS

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108077
CLIENT: TMC ENVIRONMENTAL, INC.
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS

DATE SAMPLED: 7/27/92
DATE RECEIVED: 7/28/92
DATE ANALYZED: 7/28/92
DATE REPORTED: 8/03/92

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)
108077-002	MW-2	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
108077-003	MW-4	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
108077-004	MW-5	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)
108077-005	MW-3	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	96

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108077
CLIENT: TMC ENVIRONMENTAL
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS

DATE SAMPLED: 7/27/92
DATE RECEIVED: 7/28/92
DATE EXTRACTED: 7/30/92
DATE ANALYZED: 7/31/92
DATE REPORTED: 8/04/92

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
108077-004	MW-5	ND	ND	50
108077-005	MW-3	ND	ND	50

ND = Not detected at or above reporting limit.

*Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	4
RECOVERY, %	136

Curtis & Tompkins, Ltd.

Client: TMC Environmental, Inc.

Laboratory Login Number: 108077

Project Name: Cavanaugh Motors
Project Number: 109001

Report Date: 04 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD: SMWW 17:5520BF**

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
108077-004	MW-5	Water	27-JUL-92	28-JUL-92	30-JUL-92	ND	mg/L	5	TR	6086
108077-005	MW-3	Water	27-JUL-92	28-JUL-92	30-JUL-92	ND	mg/L	5	TR	6086

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 108077-004
CLIENT: TMC ENVIRONMENTAL, INC.
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS
SAMPLE ID: MW-5

DATE SAMPLED: 7/27/92
DATE RECEIVED: 7/28/92
DATE ANALYZED: 7/31/92
DATE REPORTED: 8/04/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	2	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	101

Curtis & Tompkins, Ltd. Ltd.

ORATORY NUMBER: 108077-005
ENT: TMC ENVIRONMENTAL, INC.
JECT ID: 109001
ATION: CAVANAUGH MOTORS
PLE ID: MW-3

DATE SAMPLED: 7/27/92
DATE RECEIVED: 7/28/92
DATE ANALYZED: 7/31/92
DATE REPORTED: 8/04/92

EPA 8010
Purgeable Halocarbons in Water

pound	Result ug/L	Reporting Limit ug/L
oromethane	ND	.2
omethane	ND	2
yl chloride	ND	2
oroethane	ND	2
hylene chloride	ND	20
chlorofluoromethane	ND	1
-Dichloroethene	ND	1
Dichloroethane	ND	1
s-1,2-Dichloroethene	ND	1
ans-1,2-Dichloroethene	ND	1
loroform	ND	1
eon 113	ND	1
2-Dichloroethane	ND	1
l-Trichloroethane	ND	1
rbon tetrachloride	ND	1
omodichloromethane	ND	1
2-Dichloropropane	ND	1
s-1,3-Dichloropropene	ND	1
ichloroethene	ND	1
2-Trichloroethane	ND	1
ans-1,3-Dichloropropene	ND	1
bromochloromethane	ND	1
Chloroethylvinyl ether	ND	2
omoform	ND	2
trachloroethene	ND	1
2,2-Tetrachloroethane	ND	1
lorobenzene	ND	1
3-Dichlorobenzene	ND	1
4-Dichlorobenzene	ND	1
2-Dichlorobenzene	ND	1

D = Not detected at or above reporting limit.

A/QC SUMMARY

urrogate Recovery, %	104

Curtis & Tompkins, Ltd.

LABORATORY CONTROL SAMPLE SUMMARY SHEET FOR EPA 8010/8020

Operator:	MBP	Spike file:	213W/X002
Analysis date:	7/31/92	Instrument:	GC12 (QUANT COLUMN)
Sample type:	WATER	Sequence name:	JUL31

LCS SPIKE DATA (spiked at 20 ppb)

	READING	RECOVERY	STATUS	LIMITS
8010 COMPOUNDS				
1,1-Dichloroethene	19.68	98 %	OK	78 - 132
Trichloroethene	21.53	108 %	OK	85 - 124
Chlorobenzene	19.21	96 %	OK	70 - 128
SURROGATES				
Bromobenzene	108.87	109 %	OK	93 - 121

	READING	RECOVERY	STATUS	LIMITS
8020 COMPOUNDS				
Benzene	18.48	92 %	OK	86 - 119
Toluene	19.01	95 %	OK	85 - 120
Chlorobenzene	18.90	95 %	OK	87 - 128
SURROGATES				
Bromobenzene	100.01	100 %	OK	93 - 109

SPIKE AND SURROGATE RECOVERY LIMITS
FROM LCS WATER CONTROL CHARTS (APR. 92).

Curtis & Tompkins, Ltd.

MS/MSD SUMMARY SHEET FOR EPA 8010/8020

INSTRUMENT: HP-5890 COLUMN: RESTEK 502.2 DETECTORS: HALL/PID

Operator:	MBP	Spike file:	216W/X007
Analysis date:	7/31/92	Spike dup file:	216W/X008
Sample type:	WATER	Instrument:	GC12
Sample ID:	108077-005	Sequence name:	JUL31

8010 MS/MSD DATA (spiked at 20 ppb) Ave Rec= 104 %

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	19.98	100 %	OK	61 - 145
Trichloroethene	22.60	113 %	OK	71 - 120
Chlorobenzene	20.43	102 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	19.51	98 %	OK	61 - 145
Trichloroethene	22.46	112 %	OK	71 - 120
Chlorobenzene	20.40	102 %	OK	75 - 130
SURROGATES				
BROMOBENZENE (MS)	104.59	105 %	OK	75 - 115
BROMOBENZENE (MSD)	103.67	104 %	OK	75 - 115

8020 MS/MSD DATA (spiked at 20 ppb) Ave Rec= 97 %

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	19.03	95 %	OK	76 - 127
Toluene	19.54	98 %	OK	76 - 125
Chlorobenzene	19.53	98 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
Benzene	19.20	96 %	OK	76 - 127
Toluene	19.78	99 %	OK	76 - 125
Chlorobenzene	19.64	98 %	OK	75 - 130
SURROGATES				
BROMOBENZENE (MS)	99.92	100 %	OK	75 - 120
BROMOBENZENE (MSD)	100.07	100 %	OK	75 - 120

RPD DATA 8010 RPD= 1.0 % 8020 RPD= 0.9 %

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	19.98	19.51	2 %	OK	< 14
Trichloroethene	22.60	22.46	1 %	OK	< 14
Chlorobenzene	20.43	20.40	0 %	OK	< 13
8020 COMPOUNDS					
Benzene	19.03	19.20	1 %	OK	< 11
Toluene	19.54	19.78	1 %	OK	< 13
Chlorobenzene	19.53	19.64	1 %	OK	< 11

SPIKE RECOVERY LIMITS FROM SW-846 METHODS 8010/8020 TABLE 3;
SURROGATE RECOVERY LIMITS FROM LCS CONTROL CHARTS (NOV. 91);
RPD LIMITS FROM CLP SOW 2/88 VOLATILES.

TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806
(415) 232-8366 / FAX 232-5133

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM

Project No. [illegible] | Project Name: Yarmouth Plaza | Project Contact: Mark Yonigkan | Page 1 of 1

Project Address: 1700 Park St. Alameda Ca | Turnaround Time: 5 days

Sampler: Mara Edwards | Laboratory Name: Curtis & Tompkins | Lab No: 157

LAB ID NO.	DATE	TIME	SOIL	WATER	SAMPLE LABEL	TPH-GAS BTEX	TPH-DIESEL	ORGANIC LEAD	OIL & GREASE	EPA # 8010		REMARKS ADDITIONAL ANALYSIS
10 8077-1	7-27-92	1130		X	EQB-2	X						HOLD
-2	7-27-92	1230		X	MW-2	X						
-3	7-27-92	1330		X	MW-4	X						
-4	7-27-92	1510		X	MW-5	X	X		X	X		
-5	7-27-92	1545		X	MW-3	X	X		X	X		

Relinquished By: (Signature)	Date: 7-28-92 Time: 1245	Received By: (Signature)	Date: Time:
Relinquished By: (Signature)	Date: Time:	Received By: (Signature)	Date: Time:
Relinquished By: (Signature)	Date: Time:	Received By: (Signature)	Date: 7/28/92 Time: 1245

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

DATE RECEIVED: 07/28/92
DATE REPORTED: 08/12/92

LABORATORY NUMBER: 108084

CLIENT: TMC ENVIRONMENTAL, INC.

PROJECT ID: 109001

LOCATION: CAVANAUGH MOTORS

RESULTS: SEE ATTACHED

Reviewed By

Reviewed By

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 108084
CLIENT: TMC ENVIRONMENTAL, INC.
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS

DATE SAMPLED: 07/28/92
DATE RECEIVED: 07/28/92
DATE ANALYZED: 07/29/92
DATE REPORTED: 08/12/92

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)
108084-1	MW-6	ND(50)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	109

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108084
CLIENT: TMC ENVIRONMENTAL, INC.
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS

DATE SAMPLED: 07/28/92
DATE RECEIVED: 07/28/92
DATE ANALYZED: 07/29/92
DATE REPORTED: 08/12/92

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)
108084-2	MW-1	12,000	1,200	2,300	340	1,800

ND = Not detected at or above reporting limit; Reporting limit indicated in parentheses.

QA/QC SUMMARY

RPD, %	<1
RECOVERY, %	91

Curtis & Tompkins, Ltd

Client: TMC Environmental, Inc.

Laboratory Login Number: 108084

Project Name: Cavanaugh Motors
Project Number: 109001

Report Date: 12 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
108084-001	MW-6	Water	28-JUL-92	28-JUL-92	30-JUL-92	ND	mg/L	5	TR	6086

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

ient: TMC Environmental, Inc.
roject Name: Cavanaugh Motors
roject Number: 109001

Laboratory Login Number: 108084
Report Date: 12 August 92

NALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 6086**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	30-JUL-92

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	87%	SMWW 17:5520BF	30-JUL-92
BSD	90%	SMWW 17:5520BF	30-JUL-92

		Control Limits
Average Spike Recovery	88%	80% - 120%
Relative Percent Difference	2.9%	< 20%

Curtis & Tompkins, Ltd

LABORATORY NUMBER: 108084-1
CLIENT: TMC ENVIRONMENTAL, INC.
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS
SAMPLE ID: MW-6

DATE SAMPLED: 07/28/92
DATE RECEIVED: 07/08/92
DATE ANALYZED: 08/01/92
DATE REPORTED: 08/12/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	17	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	103

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108084
CLIENT: TMC ENVIRONMENTAL, INC.
PROJECT ID: 109001
LOCATION: CAVANAUGH MOTORS
SAMPLE ID: METHOD BLANK

DATE ANALYZED: 08/01/92
DATE REPORTED: 08/12/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	103

MS/MSD SUMMARY SHEET FOR EPA 8010/8020

INSTRUMENT: HP-5890 COLUMN: RESTEK 502.2 DETECTORS: HALL/PID

Operator:	MBP	Spike file:	216W/X007
Analysis date:	7/31/92	Spike dup file:	216W/X008
Sample type:	WATER	Instrument:	GC12
Sample ID:	108077-005	Sequence name:	JUL31

8010 MS/MSD DATA (spiked at 20 ppb) Ave Rec= 104 %

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	19.98	100 %	OK	61 - 145
Trichloroethene	22.60	113 %	OK	71 - 120
Chlorobenzene	20.43	102 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	19.51	98 %	OK	61 - 145
Trichloroethene	22.46	112 %	OK	71 - 120
Chlorobenzene	20.40	102 %	OK	75 - 130
SURROGATES				
BROMOBENZENE (MS)	104.59	105 %	OK	75 - 115
BROMOBENZENE (MSD)	103.67	104 %	OK	75 - 115

8020 MS/MSD DATA (spiked at 20 ppb) Ave Rec= 97 %

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	19.03	95 %	OK	76 - 127
Toluene	19.54	98 %	OK	76 - 125
Chlorobenzene	19.53	98 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
Benzene	19.20	96 %	OK	76 - 127
Toluene	19.78	99 %	OK	76 - 125
Chlorobenzene	19.64	98 %	OK	75 - 130
SURROGATES				
BROMOBENZENE (MS)	99.92	100 %	OK	75 - 120
BROMOBENZENE (MSD)	100.07	100 %	OK	75 - 120

RPD DATA 8010 RPD= 1.0 % 8020 RPD= 0.9 %

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	19.98	19.51	2 %	OK	< 14
Trichloroethene	22.60	22.46	1 %	OK	< 14
Chlorobenzene	20.43	20.40	0 %	OK	< 13
8020 COMPOUNDS					
Benzene	19.03	19.20	1 %	OK	< 11
Toluene	19.54	19.78	1 %	OK	< 13
Chlorobenzene	19.53	19.64	1 %	OK	< 13

SPIKE RECOVERY LIMITS FROM SW-846 METHODS 8010/8020 TABLE 3;
SURROGATE RECOVERY LIMITS FROM LCS CONTROL CHARTS (NOV. 91);
RPD LIMITS FROM CLP SOW 2/88 VOLATILES.

LABORATORY CONTROL SAMPLE SUMMARY SHEET FOR EPA 8010/8020

Operator:	MBP	Spike file:	213W/X002
Analysis date:	7/31/92	Instrument:	GC12 (QUANT COLUMN)
Sample type:	WATER	Sequence name:	JUL31

LCS SPIKE DATA (spiked at 20 ppb)

8010 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	19.68	98 %	OK	78 - 132
Trichloroethene	21.53	108 %	OK	85 - 124
Chlorobenzene	19.21	96 %	OK	70 - 128
SURROGATES				
Bromobenzene	108.87	109 %	OK	93 - 121

8020 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
Benzene	18.48	92 %	OK	86 - 119
Toluene	19.01	95 %	OK	85 - 120
Chlorobenzene	18.90	95 %	OK	87 - 128
SURROGATES				
Bromobenzene	100.01	100 %	OK	93 - 109

SPIKE AND SURROGATE RECOVERY LIMITS
FROM LCS WATER CONTROL CHARTS (APR. 92).

TMC ENVIRONMENTAL, INC.
13908 San Pablo Avenue, Suite 101
San Pablo, California 94806
(415) 232-8366 / FAX 232-5133

CHAIN OF CUSTODY RECORD
ANALYSIS REQUEST FORM

Project No. 101090	Project Name: Cavanaugh Motors	Project Contact: Mark Youngken	Page 1 of 1
Project Address: 1700 Park St. Alameda Ca			Turnaround Time: 5 days
Sampler: Mike Edwards	Laboratory Name: Curtis & Tompkins		Lab No: 159

LAB ID NO.	DATE	TIME	SOIL	WATER	SAMPLE LABEL	TPH-GAS BTEX	TPH-DIESEL	ORGANIC LEAD	Oil & Grease	EPA # BOIC		REMARKS ADDITIONAL ANALYSIS
108084-1	7-28-92	1500		X	MW-6	X	X		X	X		
-2	7-28-92	1525		X	MW-1	X						

Relinquished By: (Signature) Thomas Murphy	Date: 7/28/92 Time: 1553	Received By: (Signature)	Date: Time:		
Relinquished By: (Signature)	Date: Time:	Received By: (Signature)	Date: Time:		
Relinquished By: (Signature)	Date: Time:	Received By: (Signature) Tenak Morrison	Date: 7/28/92 Time: 1550		

RECORD OF WATER SAMPLE COLLECTION

Well Label: MW-1 Date Collected: 07-28-92 Job Number: 101090

Job Name: CAVANAUGH MOTORS Location: 1700 PARK STREET, ALAMEDA, CA 94501

Samplers Name: MARK EDWARDS Well Condition: DRY, LOCKED

WATER LEVEL MEASUREMENTS

Time well allowed to sabilize: 20 minutes

TIME MEASURED	1325	1345					
DEPTH IN FEET	7.71	7.71					

WELL PURGING RECORD

Total depth of well: 14. 42 Depth to water: 7.71 Diameter: 4 inches

Purge volume = total depth - water depth x volume factor x volumes = 17.526 gallons
Volume factor = 0.17 for 2" casing; 0.65 for 4" casing; 1.47 for 6" casing

Purge method: HONDA PUMP

Vapor reading, ppm:

Describe sheen: WATER SPECKELED WITH BLACK PETROLEUM PRODUCT, STRONG ODOR

WELL PURGING PARAMETERS

Gallons Removed	Time	Temperature-F	Conductivity	Turbidity	pH
0	14:00	82.7	6.72	CLR W/BLK SPECS	6.84
2	14:04	77.7	6.34	CLR W/BLK SPECS	6.82
4	14:08	75.6	6.35	CLR W/BLK SPECS	6.84
6	14:13	75.2	5.67	CLR W/BLK SPECS	6.76
8	14:17	74.9	5.38	CLR W/BLK SPECS	6.77
10	14:21	74.3	5.06	CLR W/BLK SPECS	6.78
12	14:25	74.3	4.90	CLR W/BLK SPECS	6.84
14	14:30	74.1	4.83	CLR W/BLK SPECS	6.80
16	14:36	74.2	4.79	CLR W/BLK SPECS	6.80
18	14:43	74.2	4.78	CLR W/BLK SPECS	6.79

Comments:

Actual volume purged from well: 18 gallons Number of barrels:

RECORD OF WELL SAMPLING

Sample ID Number: MW-1 Time Collected: 1525

Sampling Method: DISPOSABLE BAILER

Recovery Time:

RECORD OF WATER SAMPLE COLLECTION

Well Label: MW-2 Date Collected: 07-27-92 Job Number: 101090

Job Name: CAVANAUGH MOTORS Location: 1700 PARK STREET, ALAMEDA, CA 94501

Samplers Name: MARK EDWARDS Well Condition: WET, LOCKED

WATER LEVEL MEASUREMENTS

Time well allowed to sabilize: 20 minutes

TIME MEASURED	1130	1145					
DEPTH IN FEET	7.70	7.70					

WELL PURGING RECORD

Total depth of well: 14.6 Depth to water: 7.70 Diameter: 4 inches

Purge volume = total depth - water depth x volume factor x volumes = 17.94 gallons
Volume factor = 0.17 for 2" casing; 0.65 for 4" casing; 1.47 for 6" casing

Purge method: HONDA PUMP

Vapor reading, ppm:

Describe sheen: NONE

WELL PURGING PARAMETERS

Gallons Removed	Time	Temperature-F	Conductivity	Turbidity	pH
0	11:50	78.1	3.28	CLEAR	7.59
2	11:52	78.4	2.99	CLEAR	7.61
4	11:54	76.1	2.99	CLEAR	7.43
6	11:55	76.1	3.05	CLEAR	7.33
8	11:57	76.0	2.75	CLEAR	7.32
10	11:58	75.5	2.77	CLEAR	7.27
12	11:59	75.5	2.64	CLEAR	7.28
14	12:00	75.5	2.67	CLEAR	7.24
16	12:01	75.4	2.50	CLEAR	7.22
18	12:03	75.4	2.62	CLEAR	7.22

Comments:

Actual volume purged from well: 18 gallons Number of barrels:

RECORD OF WELL SAMPLING

Sample ID Number: MW-2 Time Collected: 1230

Sampling Method: DISPOSABLE BAILER

Recovery Time:

RECORD OF WATER SAMPLE COLLECTION

Well Label: MW-3 Date Collected: 07-27-92 Job Number: 101090

Job Name: CAVANAUGH MOTORS Location: 1700 PARK STREET, ALAMEDA, CA 94501

Samplers Name: MARK EDWARDS Well Condition: DRY, LOCKED

WATER LEVEL MEASUREMENTS

Time well allowed to sabilize: 85 minutes

TIME MEASURED	1320	1340	1420	1445			
DEPTH IN FEET	8.02	8.02	8.02	8.02			

WELL PURGING RECORD

Total depth of well: 14.54 Depth to water: 8.02 Diameter: 4 inches

Purge volume = total depth - water depth x volume factor x volumes = 16.95 gallons
Volume factor = 0.17 for 2" casing; 0.65 for 4" casing; 1.47 for 6" casing

Purge method: HONDA PUMP

Vapor reading, ppm:

Describe sheen: NONE

WELL PURGING PARAMETERS

Gallons Removed	Time	Temperature-F	Conductivity	Turbidity	pH
0	14:45	75.9	3.50	CLEAR	6.90
2	14:50	78.1	3.60	CLEAR	6.77
4	14:54	76.2	3.40	CLEAR/CLOUDY	6.48
6	14:59	73.2	3.36	CLEAR/CLOUDY	6.45
8	15:02	71.9	3.33	CLEAR	6.65
10	15:07	71.0	3.28	CLEAR	6.48
12	15:11	70.4	3.14	CLEAR	6.57
14	15:16	71.3	3.26	CLEAR	6.54
16	15:21	72.9	3.22	CLEAR	6.50
17	15:25	71.9	3.19	CLEAR	6.49

Comments:

Actual volume purged from well: 17 gallons Number of barrels:

RECORD OF WELL SAMPLING

Sample ID Number: MW-3 Time Collected: 1545

Sampling Method: DISPOSABLE BAILER

Recovery Time:

RECORD OF WATER SAMPLE COLLECTION

Well Label: MW-4 Date Collected: 07-27-92 Job Number: 101090

Job Name: CAVANAUGH MOTORS Location: 1700 PARK STREET, ALAMEDA, CA 94501

Samplers Name: MARK EDWARDS Well Condition: DRY, LOCKED

WATER LEVEL MEASUREMENTS

Time well allowed to sabilize: 20 minutes

TIME MEASURED	1220	1230	1240				
DEPTH IN FEET	8.00	8.00	8.00				

WELL PURGING RECORD

Total depth of well: 14.44 Depth to water: 8.00 Diameter: 4 inches

Purge volume = total depth - water depth x volume factor x volumes = 12.05 gallons
Volume factor = 0.17 for 2" casing; 0.65 for 4" casing; 1.47 for 6" casing

Purge method: HONDA PUMP

Vapor reading, ppm:

Describe sheen: NONE

WELL PURGING PARAMETERS

Gallons Removed	Time	Temperature-F	Conductivity	Turbidity	pH
0	12:45	80.6	6.43	CLEAR	6.99
2	12:46	79.1	4.17	CLEAR	6.87
4	12:48	76.5	4.35	CLEAR	6.83
6	12:50	75.2	4.16	CLEAR	6.80
8	12:51	74.8	4.17	CLEAR	6.79
10	12:53	75.2	4.38	CLEAR	6.74
12	12:55	74.8	4.49	CLEAR	6.70
14	12:56	74.3	4.26	CLEAR	6.75
16	12:58	73.2	3.58	CLEAR	6.79
18	12:59	74.3	3.60	CLEAR	6.82

Comments:

Actual volume purged from well: 18 gallons Number of barrels:

RECORD OF WELL SAMPLING

Sample ID Number: MW-4 Time Collected: 1330

Sampling Method: DISPOSABLE BAILER

Recovery Time:

RECORD OF WATER SAMPLE COLLECTION

Well Label: MW-5 Date Collected: 07-27-92 Job Number: 101090

Job Name: CAVANAUGH MOTORS Location: 1700 PARK STREET, ALAMEDA, CA 94501

Samplers Name: MARK EDWARDS Well Condition: DRY, LOCKED

WATER LEVEL MEASUREMENTS

Time well allowed to sabilize: 28 minutes

TIME MEASURED	1340	1358					
DEPTH IN FEET	7.28	7.30					

WELL PURGING RECORD

Total depth of well: 18.52 Depth to water: 7.30 Diameter: 2 inches

Purge volume = total depth - water depth x volume factor x volumes = 7.62 gallons
Volume factor = 0.17 for 2" casing; 0.65 for 4" casing; 1.47 for 6" casing

Purge method: ~~HONDA PUMP~~ DISPOSABLE BAILERS

Vapor reading, ppm:

Describe sheen: NONE

WELL PURGING PARAMETERS

Gallons Removed	Time	Temperature-F	Conductivity	Turbidity	pH
0	1401	88.4	2.47	CLEAR	6.65
1	1404	81.5	1.02	CLEAR	6.53
2	1407	79.1	0.57	CLEAR	6.48
3	1413	78.1	4.40	CLEAR	6.45
4	1419	77.5	4.38	CLEAR/CLOUDY	6.45
5	1422	77.5	4.38	CLEAR/CLOUDY	6.45
6	1430	77.5	4.50	CLEAR/CLOUDY	6.42
7	1434	77.5	4.35	CLEAR	6.45
8	1439	77.5	4.32	CLEAR	6.46

Comments:

Actual volume purged from well: 8 gallons Number of barrels:

RECORD OF WELL SAMPLING

Sample ID Number: MW-5 Time Collected: 1510

Sampling Method: DISPOSABLE BAILER

Recovery Time:

RECORD OF WATER SAMPLE COLLECTION

Well Label: MW-6 Date Collected: 07-28-92 Job Number: 101090

Job Name: CAVANAUGH MOTORS Location: 1700 PARK STREET, ALAMEDA, CA 94501

Samplers Name: MARK EDWARDS Well Condition: DRY, LOCKED

WATER LEVEL MEASUREMENTS

Time well allowed to sabilize: 20 minutes

TIME MEASURED	1400	1410	1420				
DEPTH IN FEET	7.80	7.82	7.80				

WELL PURGING RECORD

Total depth of well: 18.74 Depth to water: 7.80 Diameter: 2 inches

Purge volume = total depth - water depth x volume factor x volumes = 7.438 gallons
Volume factor = 0.17 for 2" casing; 0.65 for 4" casing; 1.47 for 6" casing

Purge method: ~~HONDA PUMP~~ DISPOSABLE BAILER

Vapor reading, ppm:

Describe sheen: NONE

WELL PURGING PARAMETERS

Gallons Removed	Time	Temperature-F	Conductivity	Turbidity	pH
0	1422	72.9	3.15	CLEAR	5.98
1	1424	71.5	3.36	CLEAR/CLOUDY	5.94
2	1426	71.0	3.85	CLOUDY	5.93
3	1428	70.7	3.72	CLOUDY	5.95
4	1430	70.8	3.70	CLOUDY	5.93
5	1432	70.8	3.65	CLOUDY	5.93
6	1434	70.8	3.90	CLOUDY	5.93
7	1436	70.8	3.92	CLOUDY	5.93
8	1438	70.8	3.92	CLEAR/CLOUDY	5.92

Comments:

Actual volume purged from well: 8 gallons Number of barrels:

RECORD OF WELL SAMPLING

Sample ID Number: MW-6 Time Collected: 1560

Sampling Method: DISPOSABLE BAILER

Recovery Time: