

Gary Rogers, Ph.D.

2657 Bailey Ct. • Fremont, CA 94536 • 510-791-7157 • E-mail: rogersl@ix.netcom.com

December 8, 1995

REF: 1004-4Q.RPT

3682

Mr. Barney Chan
Environmental Health
Alameda County
1131 Harbor Bay Pkwy
Alameda, CA 94502-6577

95 DEC 20 PM 2:31
REGISTERED PROFESSIONAL

**SUBJECT: REPORT OF QUARTERLY SAMPLING AT 1234 40TH AVE.,
OAKLAND, CALIFORNIA.**

Dear Barney:

We have enclosed the quarterly monitoring report for the fourth quarter of 1995. The sampling was conducted at the Motor Partners site, 1234 40th Ave., Oakland, California.

If you have any questions or comments, please give us a call.

Sincerely,

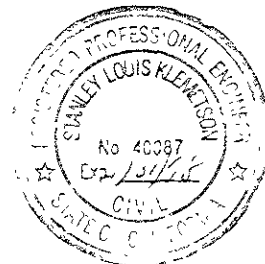


Gary Rogers, Ph.D.
Environmental Consultant



Stanley L. Klemetson, Ph.D., P.E.

cc: Bill Owens



REPORT OF QUARTERLY SAMPLING

Project Site:

**MOTOR PARTNERS
1234 40TH AVE.
OAKLAND, CALIFORNIA**

Prepared For:

Mr. Bill Owens
2221 Olympic Blvd.
Walnut Creek, CA 94595
510-935-3840

SUBMITTED TO:

Mr. Barney Chan
Environmental Health
Alameda County
1131 Harbor Bay Pkwy
Alameda, CA 94502-6577
510-567-6765

Prepared by:

GARY ROGERS, Ph.D.
2657 Bailey Ct.
Fremont, CA 94536
510-791-7157

PROJECT NO. 1004.4QR

December 8, 1995

95 DEC 20 PM 2:02
ENVIRONMENTAL
PROTECTION

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1.0 INTRODUCTION

1.1 PROJECT SITE

The project site is known as Motor Partners, 1234 40th Avenue, Oakland, California (Figure 1), located in a commercial/light industrial area. The elevation of the site is approximately 25 feet above mean sea level.

1.2 BACKGROUND

Motor Partners is located at 1234 40th Avenue near Nimitz Highway (880) in the Fruitvale District of Oakland, California (Figure 1). The BART rail tracks are about 500 ft. west of the site and San Leandro Bay is less than one mile to the southwest.

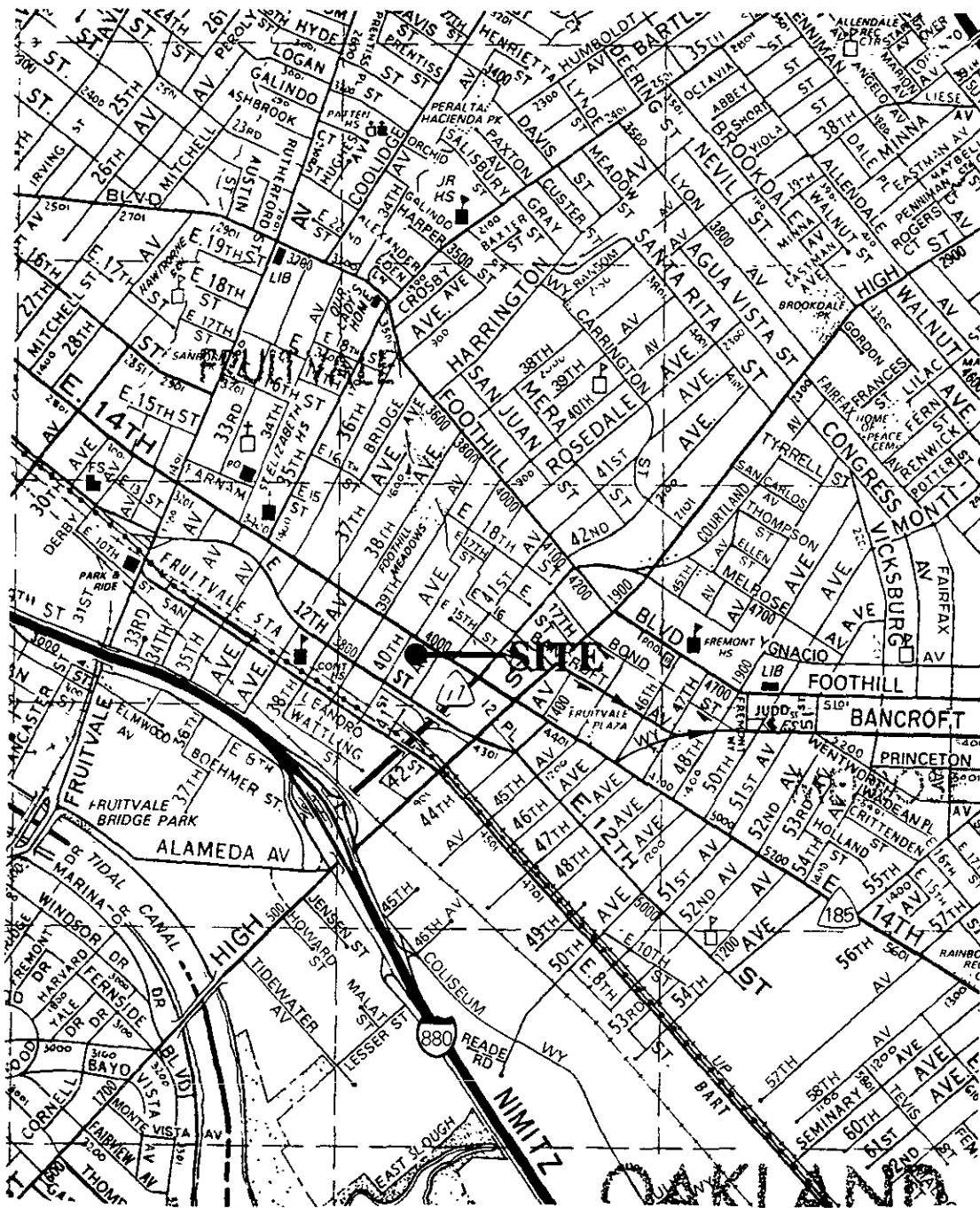
Motor Partners utilized the site for auto repair shops. Two underground storage tanks were maintained outside the 1234 40th Avenue building. A 1,000-gallon underground gasoline tank and a 500-gallon underground waste oil tank were located below the sidewalk (Figure 2). No reliable records exist to determine if inventory was lost.

Previous Subsurface Investigations

On Oct. 12, 1990, Semco, Inc. of Modesto, California removed both the 1,000-gallon gasoline tank and the 500-gallon waste oil tank. The concentration of total petroleum hydrocarbons in the gasoline range (TPH-G) below the 1,000-gallon tank was 1,600 mg/Kg. The TPH-G and TPH-D concentrations below the 500-gallon tank were 570 mg/Kg and 650 mg/Kg, respectively. There was no record of groundwater in the excavations. The excavations were backfilled to grade with original spoils.

In January, 1994, SEMCO re-excavated the area to remove contaminated soil, and dispose of the contaminated backfill. During the course of overexcavation, it was noted that contamination extended beneath the building and into the street. Utilities prevented further excavation. The over excavation was halted and samples taken from the sidewalls of each excavation. An extraction well casing was installed in each excavation. Clean imported soil was used to backfill the two areas and the sidewalk was resurfaced with Christy boxes housing the two extraction casings.

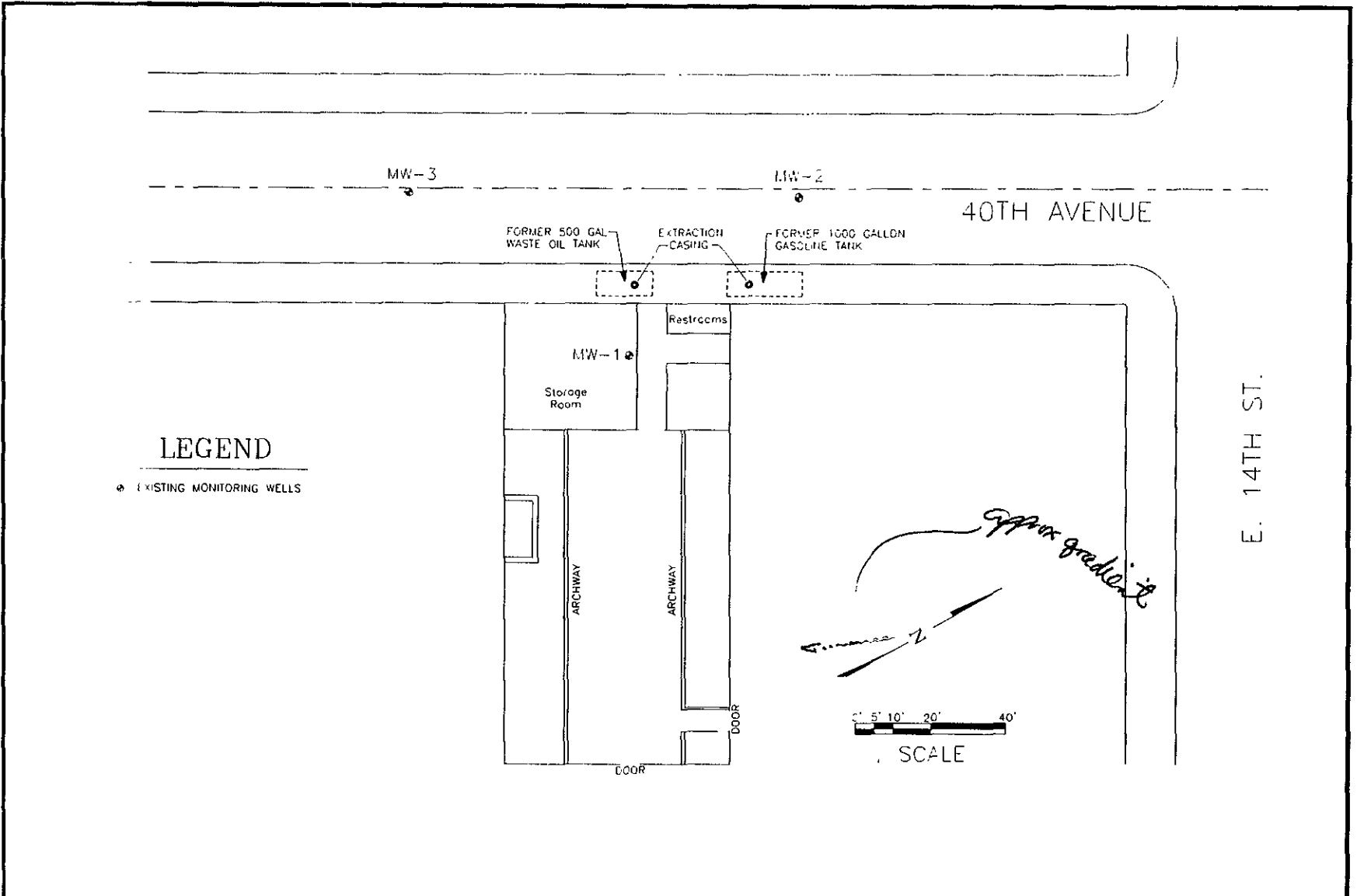
Sampling conducted on January 11, 1994 indicated levels of TPH-gasoline for the former waste oil tank area between 100 and 700 ppm. Levels of TPH-gasoline for the former gasoline tank area ranged from 150 to 1,200 ppm.



GARY ROGERS, PH.D. ENVIRONMENTAL CONSULTANT 2557 BAILEY CT. FREMONT, CA 94536 (510) 791-7157	DESCRIPTION Site Location	FIGURE 1
	PROJECT LOCATION Motor Partners 1234 40th Ave., Oakland, CA	
DRAWN BY SLK	DRAWING DATE 12/5/95	PROJECT NUMBER 1004
	FILE NAME 1004-4Q DWG	PROJECT MANAGER GLR

Motor Partners, 1234 40th Ave., Oakland, CA
 Quarterly Monitoring Report

December 5 1995
 File 1004-4Q DWG



GARY ROGERS, PH.D. ENVIRONMENTAL CONSULTANT 2657 BAILEY CT. FREMONT, CA 94536 (510) 791-7157	DRAWN BY GLR	PROJECT NUMBER 1004	DESCRIPTION Site Layout	SHEET 2	
	DRAWING DATE 12/5/95	FILE NAME 1004-PH2 DWG			
	REVISION BY	PROJECT MANAGER GLR	PROJECT LOCATION Motor Partners 1234 40th Ave., Oakland		
	REVISION BY	CHECKED BY			

Table 1
Monitoring Well Construction Data for Motor Partners
1234 40th Ave., Oakland, California

	MW-1	MW-2	MW-3
Date Drilled	6/15/94	6/14/94	6/14/94
Total Depth	19.0 ft.	22.0 ft.	23.0 ft.
Bore Diameter	10 inches	10 inches	10 inches
Casing Diameter	2 inch	2 inch	2 inch
Well Seal Type	Bentonite Pellets	Bentonite Pellets	Bentonite Pellets
Well Seal Interval	5.0 - 6.0 bgs	8.0 - 9.0 bgs	5.0 - 6.0 bgs
Filter Pack Material	2/14 Lonestar Sand	2/14 Lonestar Sand	2/14 Lonestar Sand
Filter Pack Interval	6.0 - 19.0 bgs	9.0 - 20.0 bgs	6.0 - 20.0 bgs
Screen Slot Size	0.020 in.	0.020 in.	0.020 in.
Screened Interval	7.0 - 17.0 bgs	10.0 - 20.0 bgs	7.0 - 20.0 bgs
Well Elevation ¹	28.43 ft.	28.03 ft.	27.41 ft.

¹Top of Casing Elevation surveyed on 11/17/95 to a City of Oakland benchmark, at northwest corner of block, using an elevation of 29.07 feet above mean sea level.

1.3 GEOLOGY AND HYDROGEOLOGY

Regional Geology.

The site is located on the East Bay Plain about 1.0 mile west of the Oakland Hills, about 1.0 mile east of the San Francisco Bay, and about 0.5 miles north of San Leandro Bay. The property is bounded on the northeast by 14th Street.

The site rests on Quaternary Deposits of various physical and compositional properties. The predominant formation is the Temescal Formation consisting of contemporaneous alluvial units of different origin, lithology, and physical properties. The material ranges from irregularly bedded clay, silt, sand and gravel to lenses of clay, silt, sand, and gravel with Claremont Chert.

The Hayward Fault is approximately 1.5 miles East of the site and is an active historic Fault. The Hayward Fault is the only active fault in the Oakland East Quadrangle.

Regional Hydrogeology.

The site is located within the East Bay Plain which makes up the ground water reservoir in the area. The water bearing capacity varies within the area due to the juxtaposed positions of the various types of soils and strata encountered underneath the East Bay Plain.

In General the water bearing capacities of the Younger Alluvium range from moderately permeable to low permeable soils. Below the Younger Alluvium at a depth of approximately 70 feet lies the Older Alluvium, which yields large to small quantities of well water.

Site Geology. The site soils were characterized using the United Soil Classification System (USCS). During on-site subsurface drilling, CEC (GROWTH) encountered up to two feet of baserock (fill) followed by a 4 to 5 foot layer of dark sandy clay (CL). Below the dark clay to a depth between 7 and 15 feet, a grey sandy gravel was found. Below the sandy gravel the soil varied between a clayey sand to a sandy silty clay (SC). The gravels are poorly sorted, angular to rounded clasts ranging in size from 0.2 cm to 3.0 cm.

Site Hydrogeology. The depth of first water ranged from 8 to 10 feet below the ground surface (bgs) in the borings. Groundwater was encountered within the grey clayey sandy gravel layers.

2.0 GROUNDWATER MONITORING

2.1 GROUNDWATER ELEVATION MEASUREMENTS

Static water levels were measured in monitoring wells, MW-1, MW-2, and MW-3. Static water levels were recorded to the nearest 0.01 foot using an electronic water level sounder. The results were recorded on Sample Event Data Sheets presented in Appendix A.

2.2 MONITORING WELL SAMPLING

Wells were purged by withdrawing a minimum of three casing volumes from the well. The purging continued until the turbidity was less than 100 NTU and the temperature, electric conductivity, and pH were relatively stable. Samples were collected when the water levels recovered to at least 80% of the original static level.

Samples were collected with disposable Teflon bailers and placed in two 40-ml VOA's and one one-liter amber bottle. The samples were labeled and stored on ice until delivered under a chain of custody to the state certified laboratory. Samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D), using EPA methods modified 8015; as gasoline (TPH-G) using EPA methods 8015/5030; and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA methods 8020.

3.0 RESULTS

3.1 GROUNDWATER HYDRAULIC CONDITIONS

Groundwater Elevation. The groundwater elevation data for the monitoring wells is presented in Table 2. Based on groundwater level measurements collected on November 29, 1995, the depth to groundwater in the wells ranged from 9.31 to 10.13 feet below the top of the casings.

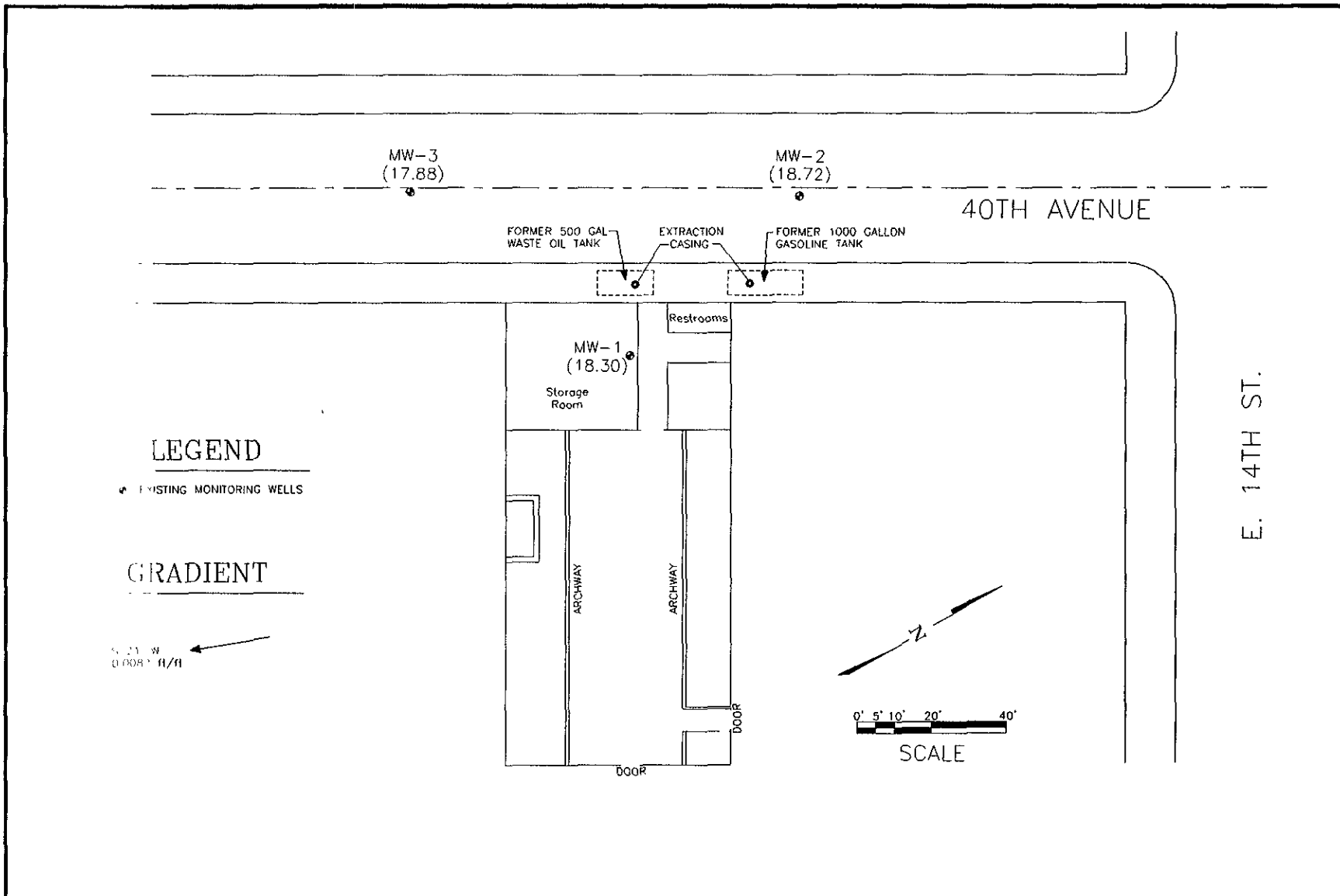
Groundwater Flow Direction and Gradient. Groundwater flow direction was calculated and reported in Table 2. Groundwater flow direction trended to the southwest (S 21° W) at a gradient of 0.0082 ft/ft. The flow direction and gradient are shown in Figure 3.

3.2 ANALYTICAL RESULTS

Table 3 presents a summary of analytical results of the monitoring well sampling. Overall, the results are higher than the initial sampling when the wells were installed, but some constituents are lower than found last year.

The samples from MW-1 contained 53,000 $\mu\text{g/L}$ of TPH-D, 67,000 $\mu\text{g/L}$ of TPH-G, and 860 $\mu\text{g/L}$ of Benzene. MW-2 contained 200 $\mu\text{g/L}$ of TPH-D, 400 $\mu\text{g/L}$ of TPH-G, and Benzene was non detect. MW-3 contained 14,000 $\mu\text{g/L}$ of TPH-D, 9,000 $\mu\text{g/L}$ of TPH-G, and 300 $\mu\text{g/L}$ of Benzene.

Motor Partners 1234 40th Ave. Oakland, CA
 Quarterly Monitoring Report



E. 14TH ST.

December 5, 1995
 File 1004-24 RPT

GARY ROGERS, PH.D. ENVIRONMENTAL CONSULTANT 2657 BAILEY CT. FREMONT, CA 94536 (510) 791-7157	DRAWN BY GLR	PROJECT NUMBER 1004	DESCRIPTION Groundwater Gradient	FIGURE 3	
	DRAWING DATE 12/5/95	FILE NAME 1004-PH2 DWG			
	REVISION BY	PROJECT MANAGER GLR	PROJECT LOCATION Motor Partners 1234 40th Ave., Oakland		
	REVISION BY	CHECKED BY			

Table 2
Groundwater Elevation Results at Motor Partners
1234 40th Ave., Oakland, California

	DATE	MW-1	MW-2	MW-3	GRADIENT
TOC		28.43 ft	28.03 ft	27.41 ft.	
SWL	11/29/95	10.13	9.31	9.53	S 21° W ✓
GSE		18.30	18.72	17.88	0.0082 ft/ft

TOC - Top of Casing Elevation surveyed on 11/17/95 to City of Oakland benchmark at northwest corner of block, using an elevation of 29.07 feet above mean sea level.

SWL - Static Water Level (ft)

GSE - Groundwater Surface Elevation (feet relative to mean sea level)

Table 3
Quarterly Groundwater Sampling Results at Motor Partners
1234 40th Ave., Oakland, California

Sample I.D. Number	Date Collected	TPH-D ($\mu\text{g/L}$)	TPH-G ($\mu\text{g/L}$)	Benzene ($\mu\text{g/L}$)	Toluene ($\mu\text{g/L}$)	Ethyl Benzene ($\mu\text{g/L}$)	Total Xylenes ($\mu\text{g/L}$)
MW-1	6/17/94	2,400	17,000	1,200	220	1,000	2,600
	11/29/95	53,000	67,000	860	180	1,300	3,100
MW-2	6/17/94	370	990	ND	1.3	2.3	4.4
	12/07/94	ND	170	2.1	0.70	0.60	1.7
	11/29/95	200	400	ND	ND	ND	3
MW-3	6/17/95	2,200	9,500	330	40	100	74
	12/07/94	1,700	7,500	380	42	130	72
	11/29/95	14,000	9,000	300	49	300	16
California Drinking Water MCL		None Listed	None Listed	1.0	1000	680	1750
Reporting Limit		50	50	0.5	0.5	0.5	1.0

Notes: All results in $\mu\text{g/l}$ (ppb)
 ND = Not Detected
 NA = Not Analyzed

4.0 SCHEDULE OF ACTIVITIES FOR NEXT QUARTER

The following activities are presented as a continuation of existing scheduled work. Since this year of sampling has been completed, future activities at this site will depend upon regulatory agency review and approval.

4.1 GROUNDWATER ELEVATIONS

Static water levels will be measured using an electronic water level sounder and recorded on a Sampling Event Data Sheet. Groundwater gradients and direction will be calculated.

4.2 GROUNDWATER SAMPLING

The next sampling event is scheduled for the week of February 26, 1996. Samples will be analyzed for total petroleum hydrocarbons as diesel (TPH-D), using EPA methods modified 8015; as gasoline (TPH-G) using EPA methods 8015/5030; and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA methods 8020. The next quarterly report will be submitted to Alameda County Department of Environmental Health.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

On the basis of the groundwater laboratory data and previous site work, the following conclusions have been prepared.

- TPH-D, TPH-G, and Benzene exists on the property.
- Contaminant levels are higher than a year ago.
- Groundwater flow direction is in a south westerly direction.

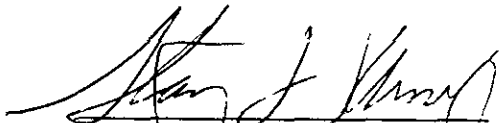
5.2 Recommendations

- Continuation of quarterly groundwater sampling is recommended.

6.0 LIMITATIONS

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied is made as to the professional advice presented herein. The analysis, conclusions, and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document or its findings, conclusion or recommendations presented herein is a the sole risk of the said user.


Stanley L. Klemetson Ph.D., P.E.



7.0 REFERENCES

1. Marshack, J.B., 1991. A Compilation of Water Quality Goals, Staff Report of the California Regional Water Quality Control Board, Central Valley Region, 15 p.

APPENDIX A

Quarterly Monitoring Data Sheets

Quarterly Monitoring Data Sheet

Date: <u>11/29/95</u>	Well Diameter: <u>2 Inches</u> Well ID: <u>MW-1</u>
Project Location: <u>Motor Partners</u> <u>1234 40th Ave, Oakland</u>	Well Type: <u>Monitoring Well</u>
Sampler: <u>G. Rogers</u>	Total Depth as Built: <u>19 ft</u>
	Screened Interval: <u>7 ft to 17 ft</u>

Water Level Data	Purge Calculation (Min 3 Casing Volumes)
Time Depth Sounded: <u>1:50 PM</u>	gal/ft X ft = gal X 3 = gal
Measured Depth to Water: <u>10.13 ft</u>	
Measured Total Depth: <u>18.26 ft</u>	<u>0.163</u> X <u>8.13</u> = <u>1.33</u> X 3 = <u>3.98</u>

Purge Data							
Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)	
1:55		0					
2:00		1	68.1	9.58	7.48	92	
2:04		2	68.1	18.49	7.11	120	
2:08		3	67.7	230	7.05	69	
2:12		4	67.7	305	7.19	46	
2:16		5	67.8	353	7.23	31	

Observations/Comments:

Inside Building
Water - Light grey color

Laboratory Analysis:

Sampled at 2:57 PM
Water depth - 10.13 ft
Analyze for TPH-D, TPH-~~D~~₉ and BTEX

Data for Volume Calculation:

1 cu ft. = 7.48 gal = 62.4 lbs (approx)	1 gal = 0.134 cu. ft. = 8.34 lbs (approx)
2" well = 0.163 gal/linear ft	3" well = 0.367 gal/linear ft
4" well = 0.653 gal/linear ft	6" well = 1.469 gal/linear ft.

Quarterly Monitoring Data Sheet

Date: <u>11/29/95</u>	Well Diameter: <u>2 Inches</u> Well ID: <u>MW-2</u>
Project Location: <u>Motor Partners</u> <u>1234 40th Ave, Oakland</u>	Well Type: <u>Monitoring Well</u>
Sampler: <u>G. Rogers</u>	Total Depth as Built: <u>22 ft</u>
	Screened Interval: <u>10 ft to 20 ft</u>

Water Level Data	Purge Calculation (Min 3 Casing Volumes)
-------------------------	---

Time Depth Sounded: <u>12:25 PM</u>	gal/ft X ft = gal X 3 = gal
Measured Depth to Water: <u>9.31 ft</u>	
Measured Total Depth: <u>19.34 ft</u>	<u>0.163</u> X <u>10.03</u> = <u>1.63</u> X 3 = <u>4.90</u>

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)
12:30		0				
12:34		1	73.1	0.85	7.87	>200
12:37		2	72.2	0.84	7.69	>200
12:45		4	72.9	0.85	7.39	195
12:52		6	73.0	0.86	7.28	188
1:00		8	73.1	0.86	7.31	185

Observations/Comments:

Clear and sunny conditions, Smog in the air
Water fairly turbid - brown color

Laboratory Analysis:

Sampled at 2:35 PM
Water depth - 9.32 ft
Analyze for TPH-D, TPH-D_a and BTEX

Data for Volume Calculation:

1 cu. ft = 7.48 gal = 62.4 lbs (approx)	1 gal = 0.134 cu. ft. = 8.34 lbs (approx)
2" well = 0.163 gal/linear ft	3" well = 0.367 gal/linear ft.
4" well = 0.653 gal/linear ft.	6" well = 1.469 gal/linear ft

Quarterly Monitoring Data Sheet

Date: <u>11/29/95</u>	Well Diameter: <u>2 Inches</u> Well ID: <u>MW-3</u>
Project Location: <u>Motor Partners</u> <u>1234 40th Ave, Oakland</u>	Well Type: <u>Monitoring Well</u>
Sampler: <u>G. Rogers</u>	Total Depth as Built: <u>23 ft</u>
	Screened Interval: <u>7 ft to 20 ft</u>

Water Level Data

Time Depth Sounded: 1:10 PM
 Measured Depth to Water: 9.53 ft
 Measured Total Depth: 21.95 ft

Purge Calculation (Min 3 Casing Volumes)

gal/ft X ft = gal X 3 = gal
 0.163 X 12.42 = 2.02 X 3 = 6.07

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)	
1:15		0					
1:18		1	73.1	3.24	7.40	>200	
1:22		3	73.0	5.81	7.48	189	
1:27		4	73.0	5.83	7.27	136	
1:31		6	73.2	10.90	7.46	109	
1:34		7	73.3	12.01	7.12	120	

Observations/Comments:

Clear and sunny conditions
 Smog in the air
 Water - grey green color

Laboratory Analysis:

Sampled at 2:48 PM
 Water depth - 9.50 ft
 Analyze for TPH-D, TPH-E and BTEX

Data for Volume Calculation:

1 cu. ft = 7.48 gal = 62.4 lbs (approx)	1 gal = 0.134 cu. ft. = 8.34 lbs (approx)
2" well = 0.163 gal/linear ft	3" well = 0.367 gal/linear ft.
4" well = 0.653 gal/linear ft.	6" well = 1.469 gal/linear ft

APPENDIX B

Analytical Results



North State Environmental Analytical Laboratory

95-623

Chain of Custody/Request for Analysis

(415) 588-9652

Client: Gary Rogers		Phone: 510-791-7157		Report to: Gary Rogers				Turnaround Time					
Mailing Address: 2657 Bailey Ct Fremont, CA 94536				Billing to: Bill Owens Owens Financial 2721 Olympic Blvd Walnut Creek, CA 94595				8 Hr <input type="checkbox"/>	24 Hr <input type="checkbox"/>				
Site Address: 1234 404th Ave, Oakland				PO# / Billing Reference:				40 Hr <input type="checkbox"/>	5 Days <input type="checkbox"/>				
Sampler: G. Rogers		Date: 11-29-95						Other <input type="checkbox"/>					
Sample ID	Sample Description	Container # / type	Sampling Time/Date	ANALYSIS REQUESTED								Remarks	
				TPH-D	TPH-G	BTEX	O+G						
MW-2	water	200A's + 1 Lit	2:35 11:29:95	X	X	X							
MW-3	↓	200A's + 1 Lit	2:48 11:29:95	X	X	X							
MW-1	↓	200A's + 1 Lit	2:57 11:29:95	X	X	X							
Relinquished by: Gary Rogers		Date: 11-30-95 Time: 3:40		Received by: Jeffery Xi		11-30-95				Yes	No		
Relinquished by:		Date: Time:		Received by:		2:40 P		Were samples Preserved ?					
Relinquished by:		Date: Time:		Received in lab by:				In good condition ?					



