

QUARTERLY MONITORING REPORT
3rd Quarter, 1997

ENVIRONMENTAL
PROTECTION
97 SEP 19 PM 11:22

PROJECT SITE:

MOTOR PARTNERS
1234 40TH AVE., OAKLAND, CALIFORNIA
StID #3682

PREPARED FOR:

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Walnut Creek, CA 94595
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SUBMITTED TO:

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PROJECT NO. 1004.95

September 12, 1997

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INTRODUCTION

PROJECT DESCRIPTION

This report discusses the results of quarterly sampling for the third quarter in 1997 at the Motor Partners site, 1234 40th Ave., Oakland, California.

SITE LOCATION AND DESCRIPTION

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.

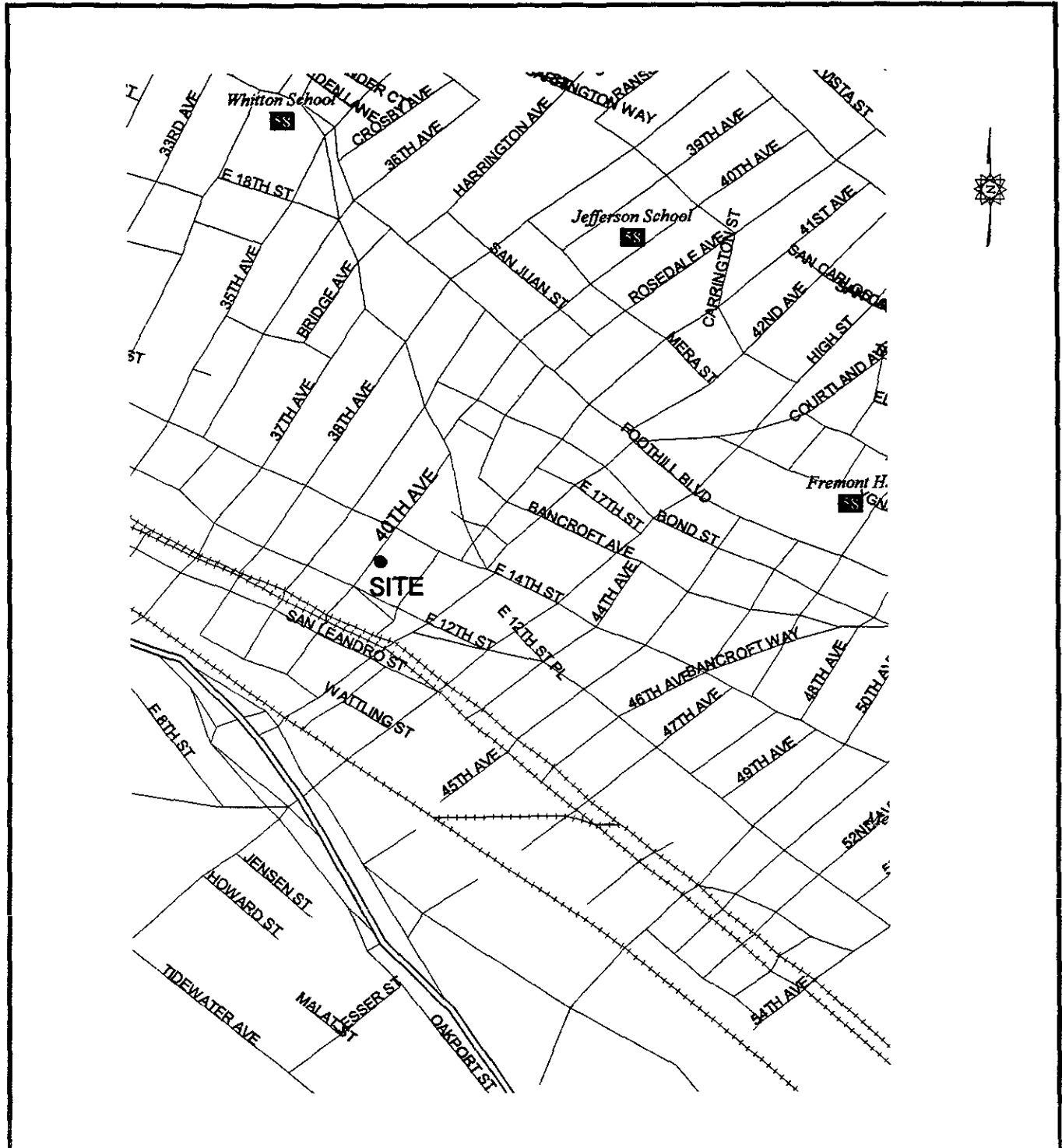
Motor Partners is located at 1234 40th Avenue near Nimitz Highway (880) in the Fruitvale District of Oakland, California (Figure 1). The BART rail tracks are about 500 feet west of the site and San Leandro Bay is less than one mile to the southwest.

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.

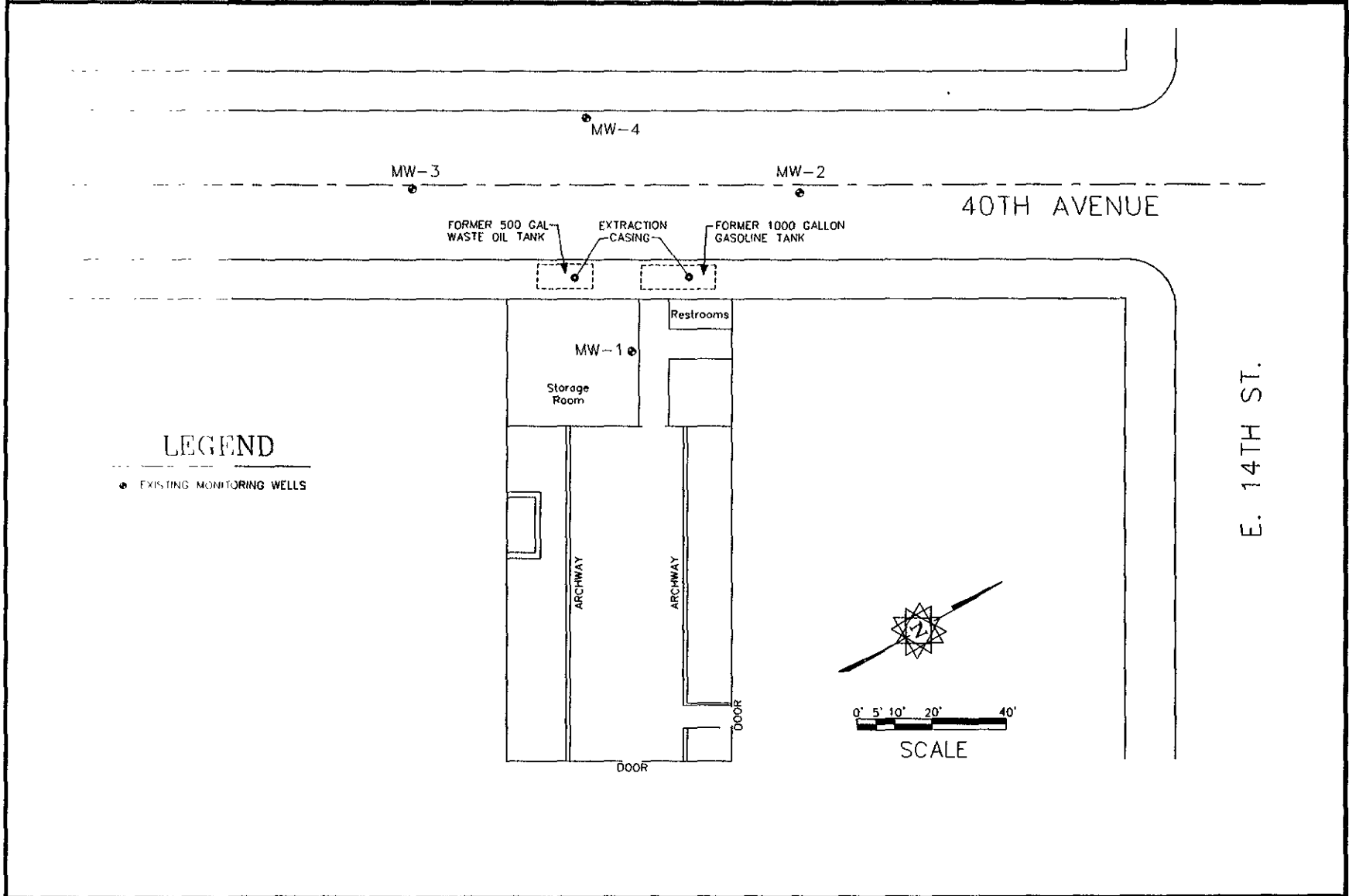
Previous Subsurface Investigations

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 over excavation, 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.



GARY ROGERS, Ph.D. ENVIRONMENTAL CONSULTANT 38053 DAVY CT. FREMONT, CA 94536 (510) 791-7157	DESCRIPTION Site Location	FIGURE 1
	PROJECT LOCATION Motor Partners 1234 40th Ave. Oakland, CA	
DRAWN BY GLR	DRAWING DATE 9 10 '97	PROJECT NUMBER 1004
		FILE NAME 1004-397 DWG
		PROJECT MANAGER GLR



GARY ROGERS, PH.D. ENVIRONMENTAL CONSULTANT 38053 DAVY CT. FREMONT, CA 94536 (510) 791-7157	DRAWN BY GLR	PROJECT NUMBER 1004	DESCRIPTION Site Layout	FIGURE 2	
	DRAWING DATE 9/10/97	FILE NAME 1004-397.DWG			
	REVISION BY	PROJECT MANAGER GLR	PROJECT/LOCATION Motor Partners 1234 40th Ave., Oakland		
	REVISION BY	CHECKED BY			

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.

GROWTH Environmental completed soil borings at the property between May and June of 1994. Eleven borings were drilled and three monitoring wells were installed. Both soil and groundwater samples were collected from the borings. Soil and groundwater contamination was found in nearly every boring. Levels of TPH-D up to 2,700 ppm were observed on the west side of the building. A sample from inside the building had a TPH-D level of 520 ppm.

Groundwater samples had highest concentrations near the former tank excavations. The highest level of TPH-G was 64,000 ppb. BTEX compounds were found in groundwater samples from all the borings.

The monitoring wells were sampled on June 17, 1994 and December 7, 1994. Contamination was reported in all three wells. Levels of TPH-G were up to 17,000 ppb and Benzene levels were up to 1,200 ppb in MW-1.

A quarterly monitoring sampling event was completed on November 29, 1995. All of the wells showed increased TPH-G and BTEX levels when compared to the previous sampling event. TPH-G levels were up to 67,000 ppb in MW-1. The groundwater gradient was calculated to be in a southwesterly direction.

Additional geoprobe borings were completed along 40th Avenue between November, 1995 and February, 1996 to determine the extent of contamination.

On February 1, 1996, Bay Area Exploration drilled a soil boring across the street from the former underground storage tank excavations at the Motor Partners site (location shown in Figure 3). A two-inch groundwater monitoring well (MW-4) was installed in the boring. The monitoring well was installed according to State of California Water Resource Control Board standards to a depth of 25 feet below grade surface (bgs) and screened from 5 to 25 feet bgs.

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.

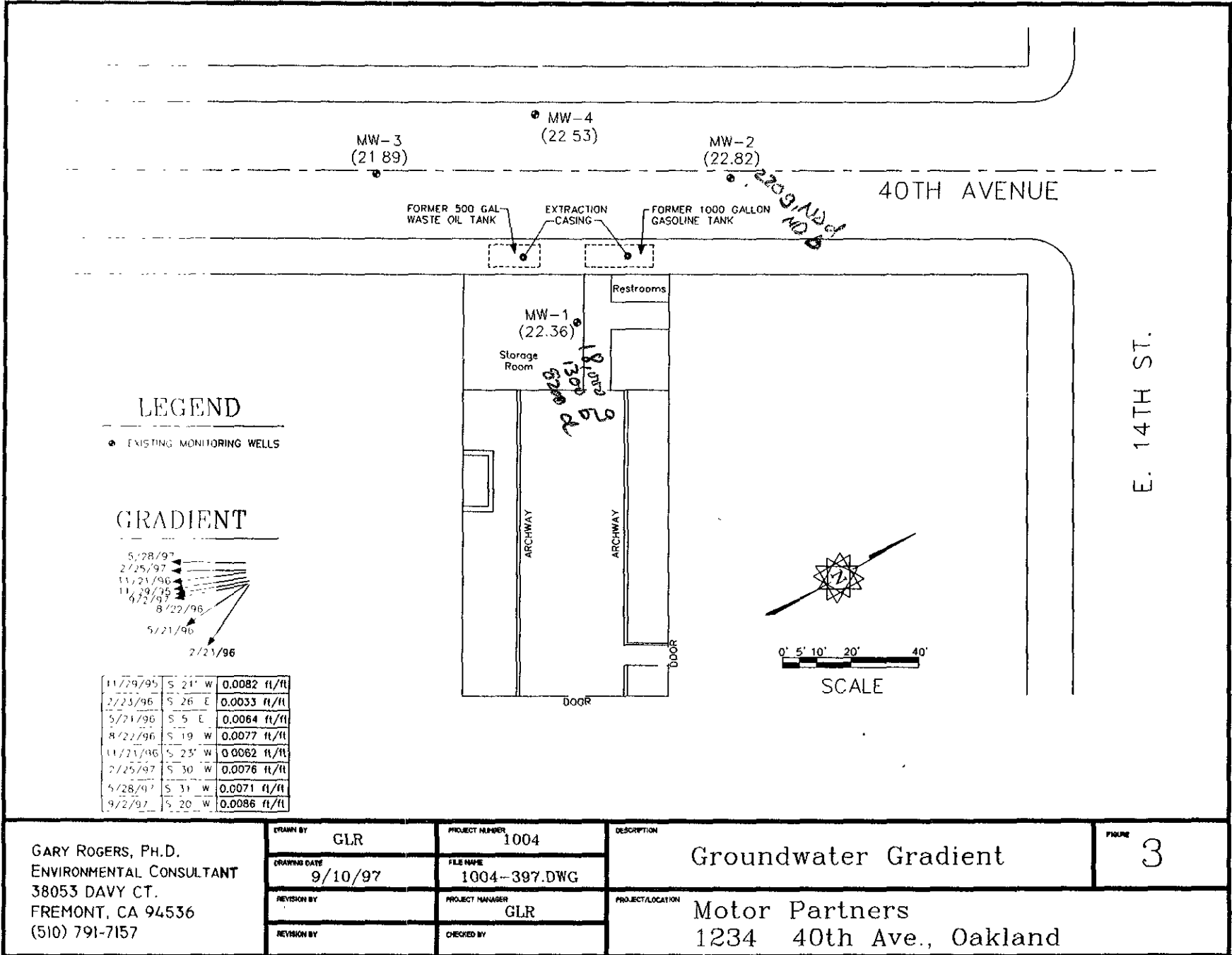
Regional Hydrogeology.

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.



GARY ROGERS, PH.D. ENVIRONMENTAL CONSULTANT 38053 DAVY CT. FREMONT, CA 94536 (510) 791-7157	DRAWN BY GLR	PROJECT NUMBER 1004	DESCRIPTION Groundwater Gradient	FIGURE 3	
	DRAWING DATE 9/10/97	FILE NAME 1004-397.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 Site
1234 40th Ave., Oakland, California

	MW-1	MW-2	MW-3	MW-4
Date Drilled	6/15/94	6/14/94	6/14/94	2/1/96
Total Depth	22.5 ft.	22.0 ft.	23.0 ft.	23.0 ft.
Bore Diameter	10 inches	10 inches	10 inches	10 inches
Casing Diameter	2 inch	2 inch	2 inch	2 inch
Well Seal Type	Bentonite Pellets	Bentonite Pellets	Bentonite Pellets	Bentonite Pellets
Well Seal Interval	5.0 - 6.0 bgs	5.0 - 6.0 bgs	5.0 - 6.0 bgs	3.0 - 4.0 bgs
Filter Pack Material	2/14 Lonestar Sand	2/14 Lonestar Sand	2/14 Lonestar Sand	2/14 Lonestar Sand
Filter Pack Interval	6.0 - 17.0 bgs	9.0 - 20.0 bgs	6.5 - 20.0 bgs	4.0 - 25.0 bgs
Screen Slot Size	0.020 in.	0.020 in.	0.020 in.	0.010 in.
Screened Interval	7.0 - 17.0 bgs	10.0 - 20.0 bgs	7.0 - 20.0 bgs	5.0 - 25.0 bgs
Well Elevation ¹	31.44 ft.	31.06 ft.	31.43 ft.	31.37 ft.

¹TOC -Top of Casing Elevations for MW-1, MW-2, MW-3, and MW-4 were surveyed on 8/22/96 by Kier & Wright Civil Engineers & Surveyors, Inc.

GROUNDWATER MONITORING

GROUNDWATER ELEVATION MEASUREMENTS

The static water level was measured in all four monitoring wells (MW-1, MW-2, MW-3, and MW-4) on September 2, 1997 and the depths were recorded to the nearest 0.01 foot using an electronic water level sounder. All of the results were recorded on Quarterly Monitoring Data Sheets presented in Appendix B.

MONITORING WELL SAMPLING

The monitoring wells were purged by withdrawing a minimum of three casing volumes from each well using a 2" submersible pump. 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.

A groundwater sample was collected with a disposable Teflon bailer 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 from all four wells (MW-1, MW-2, MW-3, and MW-4) 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.

ANALYTICAL RESULTS

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 September 2, 1997, the depth to groundwater in the wells ranged from 7.8 to 9.3 feet below the top of the casing. The groundwater elevations for the wells were as follows; MW-1 was 22.36 feet above mean sea level (msl), MW-2 was 22.82 feet above msl, MW-3 was 21.17 feet above msl, and MW-4 was 22.53 feet above msl.

Groundwater Flow Direction and Gradient. Groundwater flow direction was calculated using three wells (MW-1, MW-2, and MW-3). Groundwater flow direction trended to the southwest (S 20°W) at a gradient of 0.0086 ft/ft. The flow direction and gradient are shown in Figure 3.

LABORATORY DATA

A summary of the analytical results for the monitoring well sampling is presented in Table 3. Copies of all the analytical data sheets from ChromaLab, Inc. are presented in Appendix A.

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

	DATE	MW-1	MW-2	MW-3	MW-4	GRADIENT
TOC		31.44 ft	31.06 ft	30.43 ft.	30.37	
SWL	11/29/95	10.13	9.31	9.53		S 21° W
GSE		21.31	21.75	20.90		0.0082 ft/ft
SWL	2/23/96	4.59	3.77	3.56	3.17	S 26° E
GSE		26.85	27.29	26.87	27.20	0.0033 ft/ft
SWL	5/21/96	6.04	5.24	5.29	4.68	S 5° E
GSE		25.40	25.82	25.14	25.69	0.0064 ft/ft
SWL	8/22/96	8.46	7.66	7.88	7.10	S 19° W
GSE		22.98	23.40	22.55	23.27	0.0077 ft/ft
SWL	11/21/96	8.44	7.73	7.76	7.31	S 23° W
GSE		23.00	23.33	22.67	23.06	0.0062 ft/ft
SWL	2/25/97	6.53	5.78	5.97	5.06	S 30° W
GSE		24.91	25.28	24.46	25.31	0.0076 ft/ft
SWL	5/28/97	8.08	7.38	7.53	6.94	S 31° W
GSE		23.36	23.68	22.90	23.43	0.0071 ft/ft
SWL	9/2/97	9.08	8.24	9.26	7.84	S 20° W
GSE		22.36	22.82	21.17	22.53	0.0086 ft/ft

TOC - Top of Casing Elevations for MW-1, MW-2, MW-3, and MW-4 were surveyed on 8/22/96 by Kier & Wright Civil Engineers & Surveyors, Inc.

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
	2/23/96	25,000	16,000	360	ND	370	740
	5/21/96	650	11,000	290	37	600	1,300
	8/22/96	ND	13,000	270	51	540	1,400
	11/21/96	5,500	15,000	810	79	680	1,700
	2/25/97	3,900	15,000	430	36	760	1,200
	5/28/97	3,700	7,600	110	15	370	870
	9/2/97	8,200	18,000	1,300	81	1,300	2,800
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
	2/23/96	ND	500	ND	ND	ND	ND
	5/21/96	ND	62	ND	ND	ND	1
	8/22/96	ND	120	0.58	0.62	ND	0.62
	11/21/96	89	89	0.60	0.78	ND	ND
	2/25/97	ND	250	1.2	1.0	ND	ND
	5/28/97	ND	ND	ND	ND	ND	ND
	9/2/97	ND	220	ND	1.2	0.80	1.7
California Drinking Water MCL		None Listed	None Listed	1.0	1,000	680	1,750
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

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

Sample LD. 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-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
	2/23/96	14,000	13,000	270	83	260	67
	5/21/96	350	6,600	220	48	160	66
	8/22/96	ND	4,800	120	34	44	44
	11/21/96	3,300	8,700	220	51	150	68
	2/25/97	ND	8,200	260	57	200	72
	5/28/97	1,800	7,000	140	22	44	31
	9/2/97	ND	8,100	240	50	170	72
MW-4	2/23/96	3,000	6,000	58	36	6	28
	5/21/96	78	1,200	18	2.5	6.2	12
	8/22/96	ND	400	8.6	3.4	1.8	2.6
	11/21/96	87	170	3.6	1.1	1.7	2.3
	2/25/97	ND	120	5.4	0.64	0.93	0.80
	5/28/97	55	150	5.6	0.64	4.4	8.8
	9/2/97	ND	100	3.2	ND	ND	0.7
California Drinking Water MCL		None Listed	None Listed	1.0	1,000	680	1,750
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

SUMMARY AND RECOMMENDATIONS

The four monitoring wells at the Motor Partners site were sampled for the third quarter, 1997. The results of the sampling indicate that hydrocarbon contamination is present in groundwater samples from three of the wells (MW-1, MW-3, and MW-4). Concentrations of hydrocarbons in the samples are higher than the previous monitoring period.

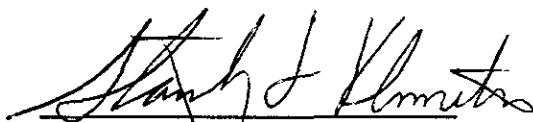
TPH-Gasoline and Benzene contamination exists on the property. The highest concentrations reported from the four wells were from the groundwater sample collected at MW-1 (inside the building). Groundwater flow direction for this sampling period was shown to be in a southwesterly direction.

Phase II investigation activities are on-going at the site. It is recommended that quarterly groundwater sampling be continued.

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, conclusions or recommendations presented herein is at the sole risk of the said user.



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

P.E No. 40087



APPENDIX A

Analytical Results

CHROMALAB, INC.

Environmental Services (SDB)

September 9, 1997

Submission #: 9709039

ROGERS ENVIRONMENTAL SERVICES
2657 Bailey Ct.
Fremont, CA 94536

Attn: Gary Rogers

RE: Analysis for project MOTOR PARTNERS, number 1004.95.

REPORTING INFORMATION

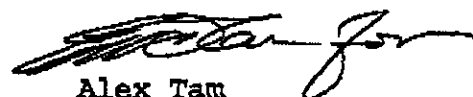
Samples were received with discrepancies noted below on September 2, 1997. They were refrigerated upon receipt and analyzed as described in the attached report. ChromaLab followed EPA or equivalent methods for all testing reported.

No discrepancies were observed or difficulties encountered with the testing.

Motor oil was found in sample MW 1.



Bruce Havlik
Chemist



Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 9, 1997

Submission #: 9709039

ROGERS ENVIRONMENTAL SERVICES

Atten: Gary Rogers

Project: MOTOR PARTNERS
Received: September 2, 1997

Project#: 1004.95

re: 4 samples for TPH - Diesel analysis.
Method: EPA 8015M

Matrix: WATER Extracted: September 8, 1997
Sampled: September 2, 1997 Run#: 8530 Analyzed: September 8, 1997


Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
146021	MW 2	N.D.	50	N.D.	80.0	1

Matrix: WATER Extracted: September 8, 1997
Sampled: September 2, 1997 Run#: 8530 Analyzed: September 9, 1997

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
146018	MW 3	N.D.	50	N.D.	80.0	1
146019	MW 4	N.D.	50	N.D.	80.0	1
146020	MW 1	8200	50	N.D.	80.0	1

Note: Estimated concentration due to overlapping fuel patterns.


Bruce Havlik *for*
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

September 9, 1997

Submission #: 9709039

ROGERS ENVIRONMENTAL SERVICES

Atten: Gary Rogers

Project: MOTOR PARTNERS
 Received: September 2, 1997

Project#: 1004.95

re: One sample for Gasoline BTEX MTBE analysis.
 Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW 3

Spl#: 146018

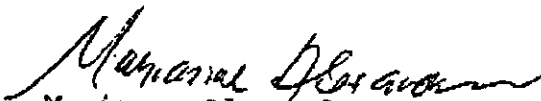
Matrix: WATER


Sampled: September 2, 1997

Run#: 8545

Analyzed: September 9, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	8100	250	N.D.	100	5
MTBE	65	25	N.D.	84	5
BENZENE	240	2.5	N.D.	104	5
TOLUENE	50	2.5	N.D.	104	5
ETHYL BENZENE	170	2.5	N.D.	105	5
XYLENES	72	2.5	N.D.	102	5


 Marianne Alexander
 Gas/BTEX Supervisor


 Michael Verona
 Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

September 9, 1997

Submission #: 9709039

ROGERS ENVIRONMENTAL SERVICES

Atten: Gary Rogers

Project: MOTOR PARTNERS
Received: September 2, 1997

Project#: 1004.95

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW 4

Spl#: 146019


Matrix: WATER

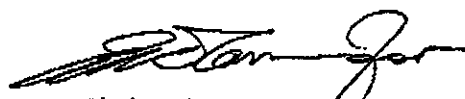
Sampled: September 2, 1997

Run#: 8545

Analyzed: September 9, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	100	50	N.D.	100	1
MTBE	N.D.	5.0	N.D.	84	1
BENZENE	3.2	0.50	N.D.	104	1
TOLUENE	N.D.	0.50	N.D.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	105	1
XYLENES	0.70	0.50	N.D.	102	1


Marianne Alexander
Gas/BTEX Supervisor


Michael Verona
Operations Manager

CHROMALAB, INC.

Environmental Services (SDB)

September 9, 1997

Submission #: 9709039

ROGERS ENVIRONMENTAL SERVICES

Atten: Gary Rogers

Project: MOTOR PARTNERS
Received: September 2, 1997

Project#: 1004.95

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW 1

Spl#: 146020

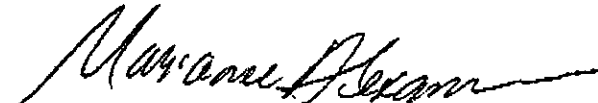
Matrix: WATER

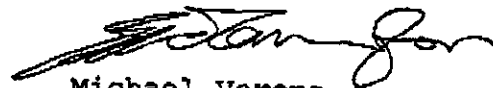
Sampled: September 2, 1997

Run#: 8545

Analyzed: September 9, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	18000	1000	N.D.	100	20
MTBE	N.D.	100	N.D.	84	20
BENZENE	1300	10	N.D.	104	20
TOLUENE	81	10	N.D.	104	20
ETHYL BENZENE	1300	10	N.D.	105	20
XYLENES	2800	10	N.D.	102	20


Marianne Alexander
Gas/BTEX Supervisor


Michael Verona
Operations Manager

510-791-7157

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096PM 1102 0: BTEXQC0220
ALEXANCM 18/91

CHROMALAB, INC.

Environmental Services (SDB)

September 9, 1997

Submission #: 9709039

ROGERS ENVIRONMENTAL SERVICES

Atten: Gary Rogers

Project: MOTOR PARTNERS
Received: September 2, 1997

Project#: 1004.95

re: One sample for Gasoline BTEX MTBE analysis.
Method: SW846 8020A Nov 1990 / 8015Mod

Client Sample ID: MW 2

Spl#: 146021

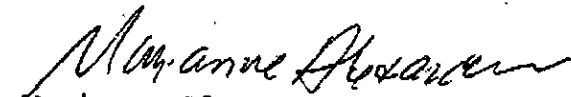
Matrix: WATER

Sampled: September 2, 1997

Run#: 8545

Analyzed: September 9, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	220	50	N.D.	100	1
MTBE	N.D.	5.0	N.D.	84	1
BENZENE	N.D.	0.50	N.D.	104	1
TOLUENE	1.2	0.50	N.D.	104	1
ETHYL BENZENE	0.80	0.50	N.D.	105	1
XYLENES	1.7	0.50	N.D.	102	1


Marianne Alexander
Gas/BTEX Supervisor


Michael Verona
Operations Manager

APPENDIX B

Quarterly Monitoring Data Sheets

Quarterly Monitoring Data Sheet

Date: <u>9/2/97</u> Project Location: <u>Motor Partners Site</u> <u>1234 40th Ave., Oakland</u> Sampler: <u>G. Rogers</u>	Well Diameter: <u>2 Inches</u> Well ID: <u>MW-1</u> Well Type: <u>Monitoring Well</u> Total Depth as Built: <u>19 ft</u> Screened Interval: <u>7 ft to 17 ft</u>
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Water Level Data	Purge Calculation (Min 3 Casing Volumes)
Time Depth Sounded: <u>11:05 AM</u> Measured Depth to Water: <u>9.08 ft.</u> Measured Total Depth: <u>16.8 ft.</u>	gal/ft X ft = gal X 3 = gal <u>0.163 X 7.72 = 1.3 X 3 = 3.8</u>

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)
11:11		0	70.3	626	6.92	>200
11:16		2	68.1	608	7.00	186
11:21		4	67.1	578	6.97	83
11:26		6	66.9	559	7.05	37

Observations/Comments:

Inside Building

Laboratory Analysis:

Sample at 12:55 PM
 Water depth - 9.28 ft.
 Analyze for TPH-D, TPH-G, BTEX, and MTBE

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: 9/2/97
 Project Location: Motor Partners Site
1234 40th Ave., Oakland
 Sampler: G. Rogers

Well Diameter: 2 Inches Well ID: MW-2
 Well Type: Monitoring Well
 Total Depth as Built: 22 ft
 Screened Interval: 10 ft to 20 ft

Water Level Data

Purge Calculation (Min 3 Casing Volumes)

Time Depth Sounded: 11:45 AM
 Measured Depth to Water: 8.24 ft.
 Measured Total Depth: 19.7 ft.

gal/ft X ft = gal X 3 = gal
0.163 X 11.5 = 1.9 X 3 = 5.6

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)
11:49		0	69.8	529	7.43	>200
11:52		2	70.0	531	7.26	>200
11:56		4	70.1	537	7.29	>200
12:00		6	70.1	534	7.32	173
12:03		8	70.3	541	7.40	112

Observations/Comments:

Clear and Sunny

Laboratory Analysis:

Sample at 1:07 PM
 Water depth - 8.27 ft.
 Analyze for TPH-D, TPH-G, BTEX and MTBE

Data for Volume Calculation:

1 cu. ft. = 7.48 gal = 62.4 lbs (approx)
 2" well = 0.163 gal/linear ft.
 4" well = 0.653 gal/linear ft.

1 gal = 0.134 cu. ft. = 8.34 lbs (approx)
 3" well = 0.367 gal/linear ft.
 6" well = 1.469 gal/linear ft.

Quarterly Monitoring Data Sheet

Date: <u>9/2/97</u> Project Location: <u>Motor Partners Site</u> <u>1234 40th Ave., Oakland</u> Sampler: <u>G. Rogers</u>	Well Diameter: <u>2 Inches</u> Well ID: <u>MW-3</u> Well Type: <u>Monitoring Well</u> Total Depth as Built: <u>23 ft</u> Screened Interval: <u>7 ft to 20 ft</u>
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Water Level Data	Purge Calculation (Min 3 Casing Volumes)
Time Depth Sounded: <u>9:55 AM</u> Measured Depth to Water: <u>9.26 ft.</u> Measured Total Depth: <u>19.4 ft.</u>	$\text{gal/ft} \times \text{ft} = \text{gal} \times 3 = \text{gal}$ $0.163 \times 10.14 = 1.7 \times 3 = 5.0$

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)
10:03		0	73.2	641	7.45	101
10:08		2	73.2	742	7.47	44
10:13		4	71.8	670	7.40	16
10:23		6	71.7	669	7.24	16

Observations/Comments:

Cloudy, Overcast

Laboratory Analysis:

Sample at 12:35 PM
 Water depth - 8.54 ft.
 Analyze for TPH-D, TPH-G, BTEX and MTBE

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>9/2/97</u> Project Location: <u>Motor Partners Site</u> <u>1234 40th Ave., Oakland</u> Sampler: <u>G. Rogers</u>	Well Diameter: <u>2 Inches</u> Well ID: <u>MW-4</u> Well Type: <u>Monitoring Well</u> Total Depth as Built: <u>25 ft</u> Screened Interval: <u>5 ft to 25 ft</u>
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Water Level Data	Purge Calculation (Min 3 Casing Volumes)
Time Depth Sounded: <u>10:33 AM</u> Measured Depth to Water: <u>7.84 ft.</u> Measured Total Depth: <u>24.7 ft.</u>	$\text{gal/ft} \times \text{ft} = \text{gal} \times 3 = \text{gal}$ $0.163 \times 16.9 = 2.7 \times 3 = 8.2$

Purge Data

Time	Flowrate (gpm)	Volume (gal)	Temp (°F)	EC (µs/cm)	pH	Turbidity (NTU)
10:42		0	72.1	572	7.98	>200
10:46		2	72.7	562	7.59	77
10:50		4	73.0	564	7.43	30
10:53		6	72.6	550	7.39	37
10:57		8	72.4	567	7.28	25

Observations/Comments:

Scattered Clouds but Sunny

Laboratory Analysis:

Sample at 12:47 PM
 Water depth - 7.86 ft.
 Analyze for TPH-D, TPH-G, BTEX and MTBE

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.