

March 8, 1993  
Project No. RC01905

Mr. Marc E. Althen  
Director, Environmental Services  
Penske Truck Leasing Co.  
Route 10, Green Hills  
P.O. Box 563  
Reading, PA 19603

**SUBJECT:** Results of Quarterly Ground-Water Monitoring, January 1993  
Former Penske Truck Leasing Facility  
725 Julie Ann Way, Oakland, California.

Dear Mr. Althen:

This report presents the results of the quarterly ground-water monitoring performed on February 4, 1993, at the former Penske Truck Leasing Co. (Penske) facility referenced above (Figure 1). The scope of work for this project was presented to Penske in a Geraghty & Miller, Inc. (Geraghty & Miller) letter dated July 2, 1992. The monitoring program consists of collecting quarterly depth-to-water measurements and water samples from the three monitor wells located at the project site for the period from July 1992 to April 1993.

### **FIELD PROCEDURES**

The quarterly ground-water monitoring was performed on February 4, 1993. Ground-water samples were collected from Monitor Wells MW-1 through MW-5. The monitor-well locations are shown in Figure 2. Monitor Wells MW-4 and MW-5 were completed on February 2, 1993, and this is the first sampling of these additional monitor wells.

Prior to sampling, depth-to-water and total-well-depth measurements were obtained from each well. Additionally, the wells were checked for the presence of liquid-phase hydrocarbons. Liquid-phase hydrocarbons were not observed in any of the wells during this monitoring event. Each well was purged of approximately three to four casing volumes of water using a 1-inch diaphragm pump. All equipment that entered the well was washed in a solution of nonphosphate cleaner and water and then triple rinsed in deionized water prior to sampling each well. Purged

water was monitored for pH, temperature, and specific conductance. A summary of the field data is presented in Table 1. All values for specific conductance have been updated in this table to present the correct conversions which were incorrectly presented in previous quarterly sampling reports. Following purging, ground-water samples were collected using a disposable polyethylene bailer, with a new bailer used for each well. The purged water was stored in 55-gallon drums and retained onsite for subsequent disposal by Penske.

A trip blank, consisting of a sample vial containing laboratory-grade water, accompanied the sample vials from the laboratory to the site and back to the laboratory, and was also submitted for analysis. The purpose of the trip blank is to assess whether any of the compounds analyzed for may have been imparted to the samples by air in the vicinity of the sample bottles during shipping, by the sample container, by the preservative, or by other exogenous sources.

Ground-water samples were put into the appropriate USEPA-approved containers, placed on ice, and transported to Superior Precision Analytical, Inc., in San Francisco, California, along with appropriate chain-of-custody documentation. The water samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline (USEPA Method 8015, modified), for TPH as diesel (USEPA Method 8015, modified), and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) (USEPA Method 8020).

## **RESULTS**

### **SHALLOW GROUND-WATER FLOW**

A summary of the depth-to-water data is presented in Table 1. Depth to water ranged from 6.55 feet (Monitor Well MW-1) to 8.94 feet (Monitor Well MW-5) below the ground surface. A contour map based on the ground-water elevation data collected February 4, 1993, is presented in Figure 2. The maximum difference in the elevation of the ground-water surface between Wells MW-2 and MW-5 is 3.26 feet, producing a hydraulic gradient (slope of the ground-water surface) of approximately 0.021 foot/foot in a northwesterly direction.

### **GROUND-WATER ANALYTICAL RESULTS**

A summary of the ground-water analytical results is presented in Table 2. Copies of the certified laboratory reports and chain-of-custody documentation are included in Attachment 1. TPH as gasoline was detected in the ground-water samples collected from Monitor Wells MW-1

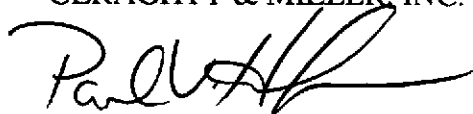
(68 micrograms per liter [ $\mu\text{g/L}$ ]), MW-3 (270  $\mu\text{g/L}$ ), and MW-4 (58  $\mu\text{g/L}$ ). TPH as diesel was detected in the ground-water samples collected from Monitor Wells MW-1 (320  $\mu\text{g/L}$ ), MW-4 (450  $\mu\text{g/L}$ ), and MW-5 (240  $\mu\text{g/L}$ ). Benzene was detected in the ground-water sample collected from Monitor Well MW-3 (9.8  $\mu\text{g/L}$ ). All other BTEX constituent results are presented in Table 2. TPH as gasoline and BTEX were not detected in the trip blank.

### **RECOMMENDATION**

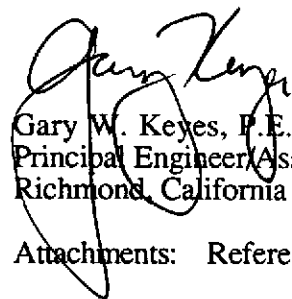
Geraghty & Miller recommends that a copy of this monthly ground-water monitoring report be forwarded to the Alameda County Health Care Services Agency, Department of Environmental Health in Oakland, California.

Geraghty & Miller appreciates the opportunity to be of service to Penske. If you have any questions regarding this report, please do not hesitate to call us.

Sincerely,  
GERAGHTY & MILLER, INC.



Paul V. Hehn  
Staff Geologist/Project Manager



Gary W. Keyes, P.E.  
Principal Engineer/Associate  
Richmond, California Office Manager

Attachments: References

Table 1	Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data
Table 2	Summary of Ground-Water Analytical Results – Monthly and Quarterly Sampling
Figure 1	Site Location Map
Figure 2	Shallow Ground-Water Contours
Attachment 1	Copies of Certified Laboratory Reports and Chain-of-Custody Documentation

**REFERENCES**

- Geraghty & Miller, Inc. November 15, 1990. Results of Initial Soil and Ground-Water Assessment Activities, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California.
- . February 7, 1991. Scope of Work and Project Budget Estimate for Ground-Water Monitoring Activities for the Period February 1991 through February 1992, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California.
- . July 2, 1992. Scope of Work and Project Budget Estimate for Ground-Water Monitoring Activities for the Period July 1992 through April 1993, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California.

**Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data**  
 Former Penske Truck Leasing Facility,  
 725 Julie Ann Way, Oakland, California.

Well	Date	Depth to Top of Casing		Top of Water Measured		Depth of Well (a)	Calculated Purge Volume (b)	Actual Purge Volume	Field Measurements			Casing Diameter
		(a)	(feet)	(feet)	(feet)				pH	Temp. (°F)	SC (µS/cm)	
MW-1	2-Oct-90	9.76	5.42	-4.34	37.28	58.56	47	6.71	87.5	5,280	4	
	28-Feb-91	8.54	5.42	-3.12	33.58	65.00	70	6.30	66.0	9,700		
	25-Mar-91	7.35	5.42	-1.93	33.50	71.00	75	6.50	64.0	7,200		
	1-May-91	7.91	5.42	-2.49	33.70	67.00	51	6.20	65.0	3,500		
	5-Aug-91	8.63	5.42	-3.21	NM	51.00	68	NM	63.6	7,690		
	23-Oct-91	9.00	5.42	-3.58	33.77	67.00	67	9.40	64.2	7,470		
	6-Jan-92	8.52	5.42	-3.10	33.87	65.00	69	9.40	63.2	6,640		
	20-Jul-92	7.94	5.42	-2.52	33.95	65.02	66	7.20	65.7	6,410		
	23-Oct-92	8.62	5.42	-3.20	33.57	64.80	60	7.50	69.8	1,930		
	4-Feb-93	6.55	5.43 (c)	-1.12	33.84	70.96	71	8.02	65.0	9,520		
MW-2	2-Oct-90	10.38	6.21	-4.17	32.97	48.07	47	6.92	86.4	5,460	4	
	28-Feb-91	9.19	6.21	-2.98	29.39	53.00	55	6.60	64.0	9,000		
	25-Mar-91	7.95	6.21	-1.74	29.39	57.00	70	6.60	63.0	6,400		
	1-May-91	8.58	6.21	-2.37	29.60	55.00	50	6.20	64.0	3,000		
	5-Aug-91	9.33	6.21	-3.12	NM	40.00	54	NM	65.1	5,680		
	23-Oct-91	9.57	6.21	-3.36	29.35	52.00	53	7.60	65.4	7,970		
	6-Jan-92	9.08	6.21	-2.87	29.50	53.00	53	9.18	62.8	6,990		
	20-Jul-92	8.60	6.21	-2.39	29.45	54.21	55	6.50	65.2	6,690		
	23-Oct-92	9.33	6.21	-3.12	29.18	51.60	55	7.20	69.8	1,900		
	4-Feb-93	7.17	6.20 (c)	-0.97	29.37	57.72	55	8.25	64.0	10,310		
MW-3	2-Oct-90	10.38	6.10	-4.28	37.08	56.82	54	6.89	88.4	639	4	
	28-Feb-91	9.45	6.10	-3.35	31.61	58.00	60	6.10	66.0	1,020		
	25-Mar-91	7.98	6.10	-1.88	31.60	70.00	75	6.40	65.0	8,200		
	1-May-91	8.58	6.10	-2.48	33.70	65.00	50	6.40	67.0	4,100		
	5-Aug-91	9.26	6.10	-3.16	NM	50.00	67	NM	64.1	6,190		
	23-Oct-91	9.60	6.10	-3.50	33.48	66.00	66	7.30	67.3	8,430		
	6-Jan-92	9.08	6.10	-2.98	33.66	64.00	64	9.98	61.7	7,010		
	20-Jul-92	8.59	6.10	-2.49	33.76	65.44	66	6.80	66.0	7,540		
	23-Oct-92	9.30	6.10	-3.20	33.47	63.40	65	7.50	71.6	1,800		
	4-Feb-93	7.19	6.10 (c)	-1.09	33.65	68.79	65	8.29	64.0	10,290		

**Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data**  
 Former Penske Truck Leasing Facility,  
 725 Julie Ann Way, Oakland, California.

Well	Date	Depth to Top of Casing		Top of Water Elevation (feet)	Measured Depth of Well (a) (feet)	Calculated Purge Volume (b) (gallons)	Actual Purge Volume (gallons)	Field Measurements			Casing Diameter (inches)
		Water (a) (feet)	Elevation (feet)					pH	Temp. (°F)	SC (µS/cm)	
MW-4	4-Feb-93	6.68	5.18 (c)	-1.50	32.70	64.38	60 (d)	NM	63.5	NM	4
MW-5	4-Feb-93	8.94	4.71 (c)	-4.23	31.40	61.65	40 (d)	8.43	63.2	16,870	4

- (a) Measured from top of PVC casing.
- (b) Based on four casing volumes.
- (c) All well elevations resurveyed to site benchmark on February 10, 1993.
- (d) Well went dry during purging.

SC Specific Conductance  
 (µS/cm) Microsiemens per centimeter  
 NM Not measured

All elevations are measured relative to a site benchmark (elevation 6.62') based on the City of Oakland datum which is 3 feet higher than mean sea level.

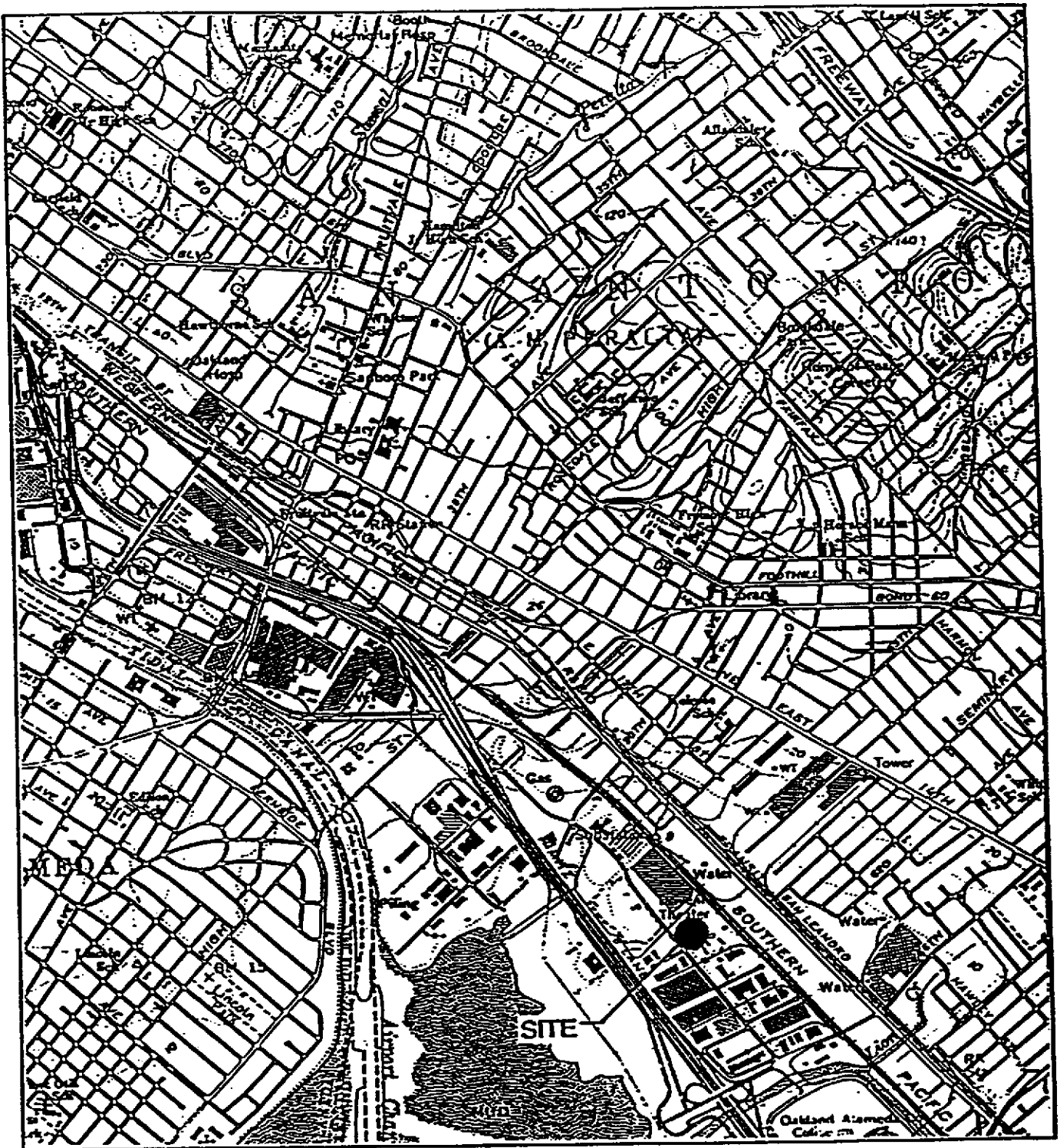
**Table 2: Summary of Ground-Water Analytical Results - Monthly and Quarterly Sampling**  
 Former Penske Truck Leasing Facility,  
 725 Julie Ann Way, Oakland, California.

Well	Date	TPH		Benzene (b)	Toluene (b)	Ethyl- benzene (b)	Xylenes (b)
		Gasoline (a)	Diesel (a)				
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1	2-Oct-90	170	2,900	20	18	1.9	5.7
	28-Feb-91	260	550	43	1	7	1
	25-Mar-91	73	160	10	ND(<0.3)	0.5	ND(<0.3)
	1-May-91	ND(<50)	(c)	2.2	ND(<0.3)	ND(<0.3)	ND(<0.3)
	5-Aug-91	310	330	22	5.5	9.5	23
	23-Oct-91	440	1,800	23	21	6.2	35
	6-Jan-92	430	1,600	56	8.4	18	22
	20-Jul-92	ND(<50)	25,000	0.4	0.8	1	2.1
	23-Oct-92	280	6,500	9.3	13	8.2	15
	4-Feb-93	68 (e)	320	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
MW-2	2-Oct-90	ND(<50)	80	0.4	ND(<0.3)	ND(<0.3)	0.5
	28-Feb-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	25-Mar-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	1-May-91	ND(<50)	(c)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	5-Aug-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Oct-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	6-Jan-92	11,000	1200 (d)	ND(<0.3)	83	82	940
	20-Jul-92	73	120	1.7	3.3	1.1	9.6
	23-Oct-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	0.5
	4-Feb-93	ND(<50)	330 (d)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
MW-3	2-Oct-90	ND(<50)	90	28	3.1	0.6	1.5
	28-Feb-91	ND(<50)	ND(<50)	6	ND(<0.3)	ND(<0.3)	ND(<0.3)
	25-Mar-91	ND(<50)	ND(<50)	0.6	ND(<0.3)	ND(<0.3)	ND(<0.3)
	1-May-91	ND(<50)	(c)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	5-Aug-91	ND(<50)	ND(<50)	1.7	ND(<0.3)	ND(<0.3)	ND(<0.3)
	23-Oct-91	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	6-Jan-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	20-Jul-92	66	ND(<50)	1.1	2.2	0.7	6.4
	23-Oct-92	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
	4-Feb-93	270	ND(<100)(f)	9.8	4.6	4.5	8.7
MW-4	4-Feb-93	58 (e)	450	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)
MW-5	4-Feb-93	ND(<50)	240	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)

- (a) Analyzed by USEPA Method 8015, modified.  
 (b) Analyzed by USEPA Method 8020.  
 (c) No results - sample for TPH as diesel not collected.  
 (d) Diesel range concentration reported. A nonstandard diesel pattern was observed in the chromatogram.  
 (e) Does not match typical gasoline pattern. Pattern of peaks observed in the chromatograms are indicative of hydrocarbons heavier than gasoline.  
 (f) Detection limit increased due to insufficient sample amount.  
 ( ) Reported detection limit  
 ND Not detected  
 µg/L Micrograms/liter

Analysis by Superior Analytical Laboratories, Inc., San Francisco and Martinez, California.

Project No. RC01905



Reference: USGS Oakland East, Ca. 7 1/2 Min. Quad  
 Scale: 1:24,000



**GERAGHTY  
& MILLER, INC.**  
*Environmental Services*

Proj. No. RC01905

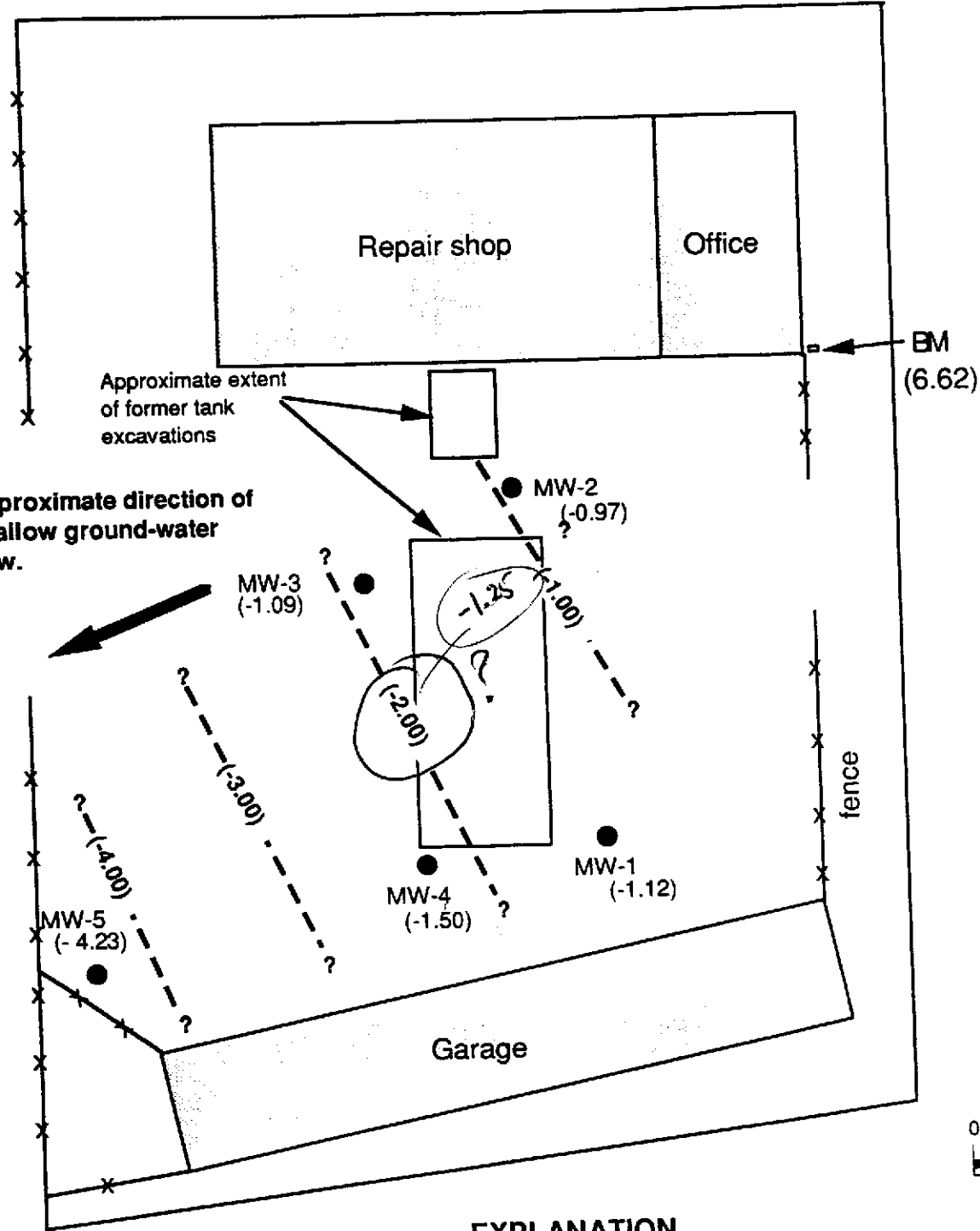
**SITE LOCATION MAP**  
 Former Penske Truck Leasing Co. Facility  
 725 Julie Ann Way  
 Oakland, California

FIGURE

1



Approximate direction of shallow ground-water flow.



Julie Ann Way

**EXPLANATION**

MW-1 = Approximate location of ground-water monitor wells.  
 = BM = Survey Benchmark (based on City of Oakland datum, which is 3 feet lower than Mean Sea Level).

(-1.50) = Ground-Water elevation (feet) relative to benchmark, measured February 4, 1993.  
 ? - (-3.00) = Ground-water elevation contour (feet); dashed where inferred (contour interval equals 1.0 feet).



Proj. No. RC01905

**SHALLOW GROUND-WATER CONTOURS**  
 Former Penske Truck Leasing Co. Facility  
 725 Julie Ann Way  
 Oakland, California

FIGURE

**2**

**ATTACHMENT 1**

**COPIES OF CERTIFIED ANALYTICAL REPORTS  
AND CHAIN-OF-CUSTODY DOCUMENTATION**



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Geraghty & Miller Inc.  
Attn: Paul Hehn

Project RC01904  
Reported 02/12/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56043- 3	MW-1	02/04/93	02/12/93 Water
56043- 4	MW-2	02/04/93	02/12/93 Water
56043- 5	MW-3	02/04/93	02/12/93 Water
56043- 6	TB-LB	02/04/93	02/10/93 Water

## RESULTS OF ANALYSIS

Laboratory Number: 56043- 3 56043- 4 56043- 5 56043- 6

Diesel:	320	330**	ND<100***	NA
Gasoline:	68*	ND<50	270	ND<50
Benzene:	ND<0.3	ND<0.3	9.8	ND<0.3
Toluene:	ND<0.3	ND<0.3	4.6	ND<0.3
Ethyl Benzene:	ND<0.3	ND<0.3	4.5	ND<0.3
Xylenes:	ND<0.3	ND<0.3	8.7	ND<0.3
Concentration:	ug/L	ug/L	ug/L	ug/L



CERTIFICATE OF ANALYSIS

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 56043

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.3ug/L

Table with 4 columns: ANALYTE, MS/MSD RECOVERY, RPD, CONTROL LIMIT. Rows include Diesel, Gasoline, Benzene, Toluene, Ethyl Benzene, and Xylenes with their respective recovery and control limit values.

\* Does not match typical gasoline pattern. Pattern of peaks observed in the chromatogram are indicative of hydrocarbons heavier than gasoline.

\*\* Does not match typical Diesel pattern.

\*\*\* Detection limit increased due to insufficient sample amount.

Richard Srna, Ph.D.

Handwritten signature and Laboratory Director title.

2/12/93



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Geraghty & Miller Inc.  
Attn: Paul Hehn

Project RCO1904  
Reported 02/12/93

## TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56043- 1	MW-4	02/04/93	02/12/93 Water
56043- 2	MW-5	02/04/93	02/12/93 Water

## RESULTS OF ANALYSIS

Laboratory Number: 56043- 1 56043- 2

Diesel:	450	240
Gasoline:	58*	ND<50
Benzene:	ND<0.3	ND<0.3
Toluene:	ND<0.3	ND<0.3
Ethyl Benzene:	ND<0.3	ND<0.3
Xylenes:	ND<0.3	ND<0.3
Concentration:	ug/L	ug/L



**C E R T I F I C A T E   O F   A N A L Y S I S**

**ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS**

Page 2 of 2  
QA/QC INFORMATION  
SET: 56043

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
ug/L = parts per billion (ppb)

**OIL AND GREASE ANALYSIS** By Standard Methods Method 5520F:  
Minimum Detection Limit in Water: 5000ug/L

**Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:**  
Minimum Quantitation Limit for Diesel in Water: 50ug/L

**EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:**  
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

**EPA SW-846 Method 8020/BTXE**  
Minimum Quantitation Limit in Water: 0.3ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Diesel:	98/103	6	75-125
Gasoline:	82/80	3	76-111
Benzene:	84/83	2	78-110
Toluene:	83/82	1	78-111
Ethyl Benzene:	82/82	1	78-118
Xylenes:	78/77	1	73-113

\* Does not match typical gasoline pattern. Pattern of peaks observed in the chromatogram are indicative of hydrocarbons heavier than gasoline.

Richard Srna, Ph. D.  
  
Laboratory Director 1/17/93



