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December 7, 1993
Project No. RC0019.005

Mr. Barney Chan
Division of Hazardous Materials
Department of Environmental Health
Alameda County Health Care Services Agency
80 Swan Way
Oakland, CA 94621

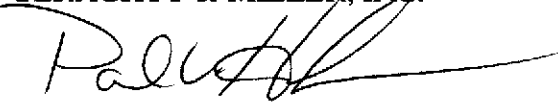
SUBJECT: Results of Quarterly Ground-Water Monitoring, October 1993
Former Penske Truck Leasing Facility
725 Julie Ann Way, Oakland, California.

Dear Mr. Chan:

The above referenced report is being forwarded to you at the request of Penske Truck Leasing Co. The report details the results of the quarterly ground-water monitoring well sampling for October 1993 at the former Penske Truck Leasing Facility at 725 Julie Ann Way, Oakland. The quarterly sampling has been completed in response to the requirements for ground-water sampling contained in the Alameda County Health Care Services, Department of Environmental Health letter to Penske dated October 24, 1989.

If you have any questions, please do not hesitate to call.

Sincerely,
GERAGHTY & MILLER, INC.


Paul V. Hehn
Staff Geologist/Project Manager

Attachment: Results of Quarterly Ground-Water Monitoring, October 1993

cc: Mr. Marc Althen
Penske Truck Leasing Co.



November 15, 1993
Project No. RC0019.005

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 Groundwater Monitoring, October 1993
Former Penske Truck Leasing Facility
725 Julie Ann Way, Oakland, California.**

Dear Mr. Althen:

This report presents the results of the quarterly groundwater monitoring performed on October 28, 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 1993 to June 1994.

FIELD PROCEDURES

The quarterly groundwater monitoring was performed on October 28, 1993. Groundwater samples were collected from Monitor Wells MW-1 through MW-5. The monitor-well locations are shown in Figure 2.

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 sampled on October 28, 1993, 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. Following purging, groundwater 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.

Groundwater samples were put into the appropriate USEPA-approved containers, placed on ice, and transported to Superior Precision Analytical, Inc., in Martinez, 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), for benzene, toluene, ethylbenzene, and total xylenes (BTEX) (USEPA Method 8020), and for total dissolved solids (USEPA Method 160.0).

RESULTS

SHALLOW GROUNDWATER FLOW

A summary of the depth-to-water data is presented in Table 1. Depth to water ranged from 6.86 feet (Monitor Well MW-5) to 8.50 feet (Monitor Well MW-2) below the ground surface. A contour map based on the groundwater elevation data collected October 28, 1993, is presented in Figure 2.

The difference in the elevation of the groundwater surface between Wells MW-2 and MW-4 is 0.16 feet, producing a hydraulic gradient (slope of the groundwater surface) of approximately 0.0017 foot/foot in a westerly direction.

GROUNDWATER ANALYTICAL RESULTS

A summary of the groundwater 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 groundwater samples collected from Monitor Wells MW-1 (140 micrograms per liter [$\mu\text{g/L}$]) and MW-4 (160 $\mu\text{g/L}$). TPH as diesel was detected in the



groundwater samples collected from Monitor Wells MW-1 (7,600 µg/L), MW-4 (600 mg/L), and MW-5 (370 µg/L). Benzene was detected in the groundwater samples collected from Monitor Wells MW-1 (4.7 µg/L) and MW-4 (46 µg/L). All other BTEX constituent results are presented in Table 2. TPH as gasoline and BTEX were not detected in the trip blank. Additional analysis of total dissolved solids in the groundwater samples detected concentrations ranging from 1,500 milligrams per liter (mg/L) from Monitor Well MW-2 to 5,200 mg/L from Monitor Well MW-4 (Table 2).

FIELD PARAMETERS

As in all previous quarterly sampling events at this facility, the specific conductance measurements for the groundwater purged during the sampling continue to be very high (Table 1). The high specific conductance measurements were verified by correspondingly high concentrations of total dissolved solids detected in the groundwater samples (Table 2).

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 Groundwater Analytical Results – Monthly and Quarterly Sampling
Figure 1	Site Location Map
Figure 2	Shallow Groundwater 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 Water (a) (feet)	Top of Casing Elevation (feet)	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)
								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	
	8-Apr-93	6.37	5.43	-0.94	33.80	71.32	65	6.60	66.7	>2,000	
	6-Aug-93	7.39	5.43	-1.96	33.88	68.67	69	7.22	68.1	5,890	
	28-Oct-93	7.85	5.43	-2.42	33.80	67.48	68	7.00	68.3	5,910	
	MW-2	2-Oct-90	10.38	6.21	-4.17	32.97	48.07	47	6.92	86.4	
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	
8-Apr-93		6.95	6.20	-0.75	29.32	58.16	60	6.90	66.7	>2,000	
6-Aug-93		8.05	6.20	-1.85	29.33	55.33	66.5	7.26	66.4	6,250	
28-Oct-93		8.50	6.20	-2.30	29.43	54.40	55	7.08	71.2	6,780	

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 Water (a) (feet)	Top of Casing Elevation (feet)	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)
								pH	Temp. (°F)	SC (µS/cm)	
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	
	8-Apr-93	6.98	6.10	-0.88	33.55	69.08	72	6.90	68.2	>2,000	
	6-Aug-93	8.01	6.10	-1.91	33.55	66.40	56 (d)	7.43	67.3	6,490	
	28-Oct-93	8.45	6.10	-2.35	33.60	65.40	66	7.02	72.0	6,590	
MW-4	4-Feb-93	6.68	5.18 (c)	-1.50	32.70	64.38	60 (d)	NM	63.5	14,100	4
	8-Apr-93	6.21	5.18	-1.03	33.04	69.76	70	6.80	69.1	>2,000	
	6-Aug-93	7.20	5.18	-2.02	32.92	66.87	60 (d)	7.44	68.9	13,900	
	28-Oct-93	7.64	5.18	-2.46	32.98	65.88	66	6.79	72.1	11,940	
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
	8-Apr-93	5.43	4.71	-0.72	31.36	67.42	68	7.20	68.0	>2,000	
	6-Aug-93	6.19	4.71	-1.48	31.30	65.29	68	7.47	63.6	5,180	
	28-Oct-93	6.86	4.71	-2.15	31.43	62.72	48 (d)	7.12	70.6	4,980	

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 Water (a) (feet)	Top of Casing Elevation (feet)	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)
								pH	Temp. (°F)	SC (µS/cm)	

- (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 Groundwater 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)	Total Dissolved Solids (c)
		Gasoline (a)	Diesel (a)					
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/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)	(d)	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 (f)	320	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)	--
	8-Apr-93	180	7,800	0.5	2.1	0.8	13	--
	6-Aug-93	740	17,000	75	100	25	130	3,500
	28-Oct-93	140	7,600	4.7	1.9	3.2	5.4	3,500
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)	(d)	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 (e)	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 (e)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)	--
	8-Apr-93	150	74 (h)	1	2.1	1	13.0	--
	6-Aug-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	990
	28-Oct-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	1,500
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)	(d)	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)(g)	9.8	4.6	4.5	8.7	--
	8-Apr-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	--
	6-Aug-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	3,400
	28-Oct-93	ND(<50)	ND(<50)	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	2,700
MW-4	4-Feb-93	58 (f)	450	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)	--
	8-Apr-93	74	220	19	0.4	ND(<0.3)	ND(<0.9)	--
	6-Aug-93	95	ND(<50)	68	0.9	1.1	ND(<0.9)	5,800
	28-Oct-93	160	600	46	0.7	1.6	1.2	5,200
MW-5	4-Feb-93	ND(<50)	240	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.3)	--
	8-Apr-93	ND(<50)	480	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	--
	6-Aug-93	ND(<50)	120	0.8	ND(<0.3)	ND(<0.3)	ND(<0.9)	2,800
	28-Oct-93	ND(<50)	370	ND(<0.3)	ND(<0.3)	ND(<0.3)	ND(<0.9)	2,400



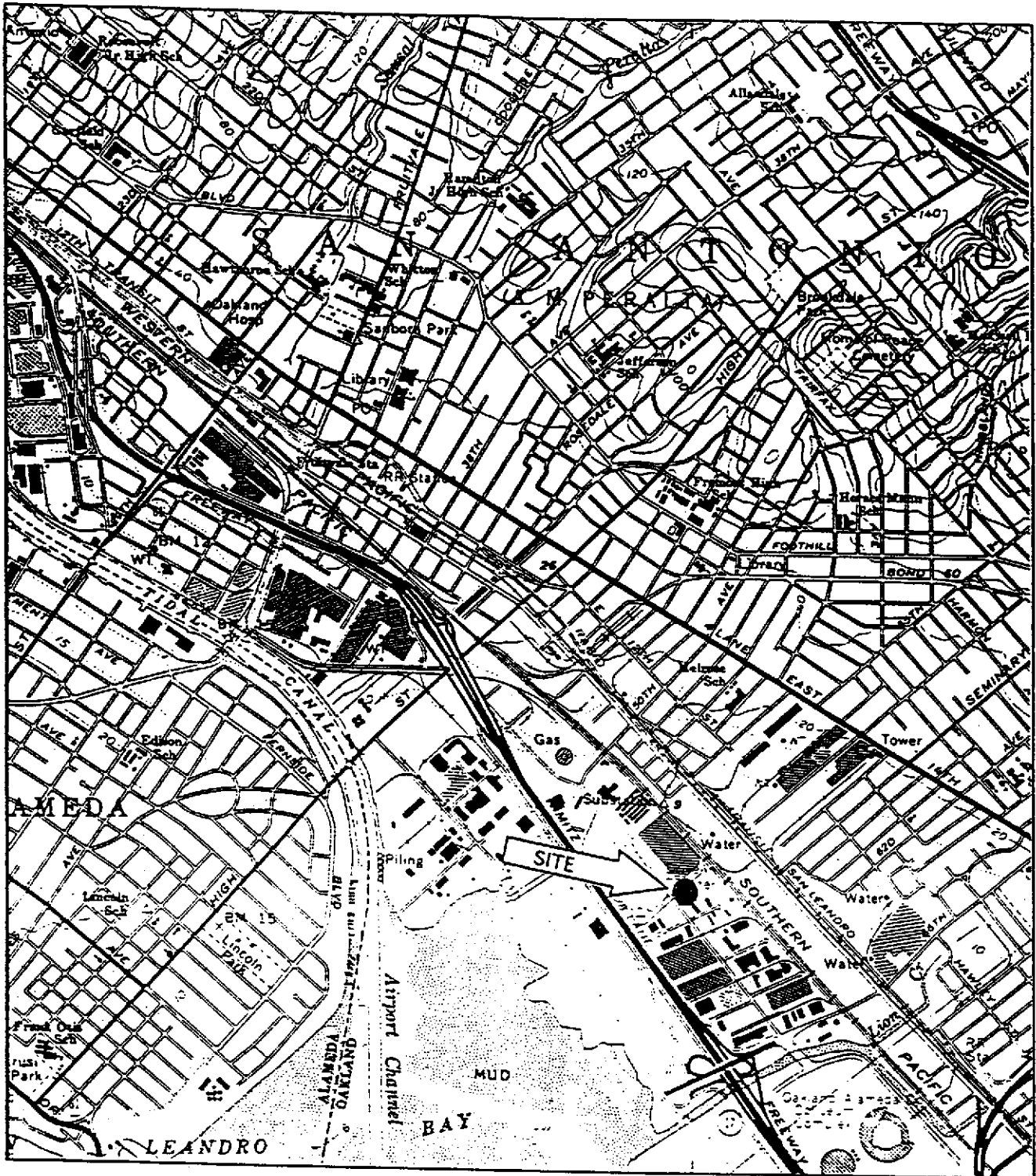
Table 2: Summary of Groundwater Analytical Results - Monthly and Quarterly Sampling
 Former Penske Truck Leasing Facility,
 725 Julie Ann Way, Oakland, California.

Well	Date	TPH	TPH	Benzene (b)	Toluene (b)	Ethyl- benzene (b)	Xylenes (b)	Total Dissolved Solids (c)
		Gasoline (a)	Diesel (a)					
		($\mu\text{g/L}$)	($\mu\text{g/L}$)	($\mu\text{g/L}$)	($\mu\text{g/L}$)	($\mu\text{g/L}$)	($\mu\text{g/L}$)	(mg/L)

- (a) Analyzed by USEPA Method 8015, modified.
 (b) Analyzed by USEPA Method 8020.
 (c) Analyzed by USEPA Method 160.1
 (d) No results - sample for TPH as diesel not collected.
 (e) Diesel range concentration reported. A nonstandard diesel pattern was observed in the chromatogram.
 (f) Does not match typical gasoline pattern. Pattern of peaks observed in the chromatograms are indicative of hydrocarbons heavier than gasoline.
 (g) Detection limit increased due to insufficient sample amount.
 (h) Diesel range concentration reported. The chromatogram shows only a single peak in the diesel range.
- () Reported detection limit
 -- Not analyzed
 ND Not detected
 $\mu\text{g/L}$ Micrograms per liter
 mg/L Milligrams per liter

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





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



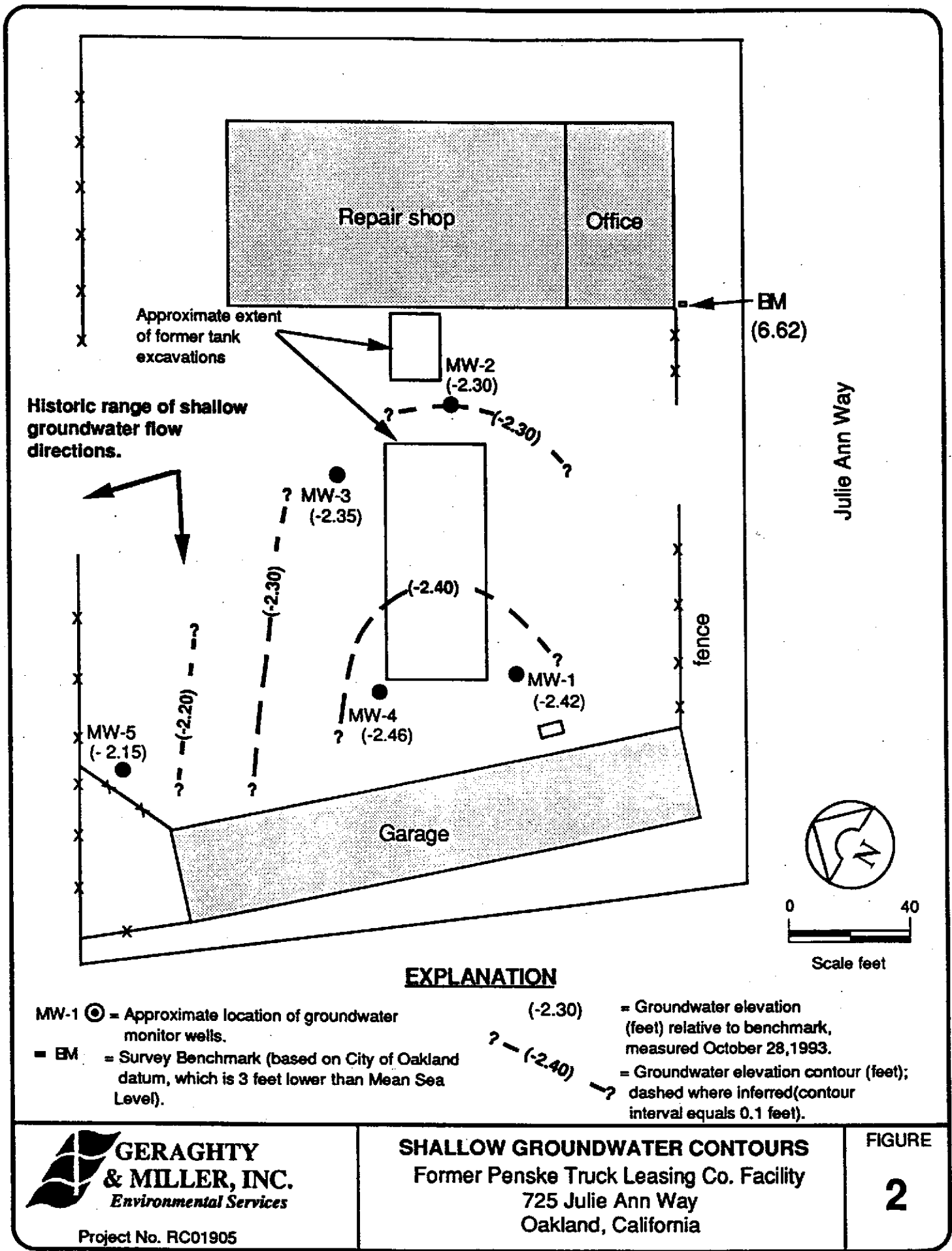
GERAGHTY & MILLER, INC.
 Environmental Services

Proj. No. RC0019.000

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

FIGURE

1



Historic range of shallow groundwater flow directions.

Approximate extent of former tank excavations

EXPLANATION

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

- (-2.30) = Groundwater elevation (feet) relative to benchmark, measured October 28, 1993.
- ? - (-2.40) - ? = Groundwater elevation contour (feet); dashed where inferred (contour interval equals 0.1 feet).

GERAGHTY & MILLER, INC.
Environmental Services

Project No. RC01905

SHALLOW GROUNDWATER 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**



Geraghty & Miller Inc.
Attn: Paul Hehn

Project RC0019.005
Reported 05-November-1993

TOTAL DISSOLVED SOLIDS BY EPA METHOD 160.1

Chronology

Laboratory Number 57251

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1	10/28/93	10/29/93	/ /	11/04/93		1
MW-2	10/28/93	10/29/93	/ /	11/04/93		2
MW-3	10/28/93	10/29/93	/ /	11/04/93		3
MW-4	10/28/93	10/29/93	/ /	11/04/93		4
MW-5	10/28/93	10/29/93	/ /	11/04/93		5



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 RC0019.005
Reported 05-November-1993

TOTAL DISSOLVED SOLIDS BY EPA METHOD 160.1

Laboratory Number	Sample Identification	Matrix
57251- 1	MW-1	Water
57251- 2	MW-2	Water
57251- 3	MW-3	Water
57251- 4	MW-4	Water
57251- 5	MW-5	Water

RESULTS OF ANALYSIS

Laboratory Number:	57251- 1	57251- 2	57251- 3	57251- 4	57251- 5
TOTAL DISSOLVED SOLIDS:	3500	1500	2700	5200	2400
Concentration:	mg/L	mg/L	mg/L	mg/L	mg/L



Superior Precision Analytical, Inc.

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

TOTAL DISSOLVED SOLIDS BY EPA METHOD 160.1 Quality Assurance and Control Data - Water

Laboratory Number 57251

Compound	Method Blank (mg/L)	RL (mg/L)	RPD (%)
TOTAL DISSOLVED SOLIDS:	ND<4	4	3%

Definitions:

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

mg/L = Parts per million (ppm)

QC File No. 57251

Senior Chemist
Account Manager



Geraghty & Miller Inc.
Attn: Paul Hehn

Project RC0019.005
Reported 05-November-1993

**TOTAL PETROLEUM HYDROCARBONS AS DIESEL
BY EPA METHOD 8015M**

Chronology

Laboratory Number 57251

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1	10/28/93	10/29/93	11/01/93	11/03/93		1
MW-2	10/28/93	10/29/93	11/01/93	11/04/93		2
MW-3	10/28/93	10/29/93	11/01/93	11/04/93		3
MW-4	10/28/93	10/29/93	11/01/93	11/03/93		4
MW-5	10/28/93	10/29/93	11/01/93	11/03/93		5



Geraghty & Miller Inc.
Attn: Paul Hehn

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TOTAL PETROLEUM HYDROCARBONS AS DIESEL

Laboratory Number	Sample Identification	Matrix
57251- 1	MW-1	Water
57251- 2	MW-2	Water
57251- 3	MW-3	Water
57251- 4	MW-4	Water
57251- 5	MW-5	Water

RESULTS OF ANALYSIS

Laboratory Number:	57251- 1	57251- 2	57251- 3	57251- 4	57251- 5
Diesel:	7600	ND<50	ND<50	600	370
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



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TOTAL PETROLEUM HYDROCARBONS AS DIESEL Quality Assurance and Control Data - Water

Laboratory Number 57251

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Diesel:	ND<50	50	106/96	50-149	10%

Definitions:

ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

ug/L = Parts per billion (ppb)

QC File No. 57251

Ameyi A. Nwogu
Senior Chemist
Account Manager



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Project RC0019.005
Reported 08-November-1993

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
by EPA SW-846 Methods 5030/8015M/8020.

Chronology

Laboratory Number 57251

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW-1	10/28/93	10/29/93	/ /	11/05/93		1
MW-2	10/28/93	10/29/93	/ /	11/04/93		2
MW-3	10/28/93	10/29/93	/ /	11/04/93		3
MW-4	10/28/93	10/29/93	/ /	11/04/93		4
MW-5	10/28/93	10/29/93	/ /	11/05/93		5
TRIP BLANK	10/28/93	10/29/93	/ /	11/05/93		6



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Project RC0019.005
Reported 08-November-1993

ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

Laboratory Number	Sample Identification	Matrix
57251- 1	MW-1	Water
57251- 2	MW-2	Water
57251- 3	MW-3	Water
57251- 4	MW-4	Water
57251- 5	MW-5	Water
57251- 6	TRIP BLANK	Water

RESULTS OF ANALYSIS

Laboratory Number:	57251- 1	57251- 2	57251- 3	57251- 4	57251- 5
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Gasoline:	140	ND<50	ND<50	160	ND<50
Benzene:	4.7	ND<0.3	ND<0.3	46	ND<0.3
Toluene:	1.9	ND<0.3	ND<0.3	0.7	ND<0.3
Ethyl Benzene:	3.2	ND<0.3	ND<0.3	1.6	ND<0.3
Total Xylenes:	5.4	ND<0.9	ND<0.9	1.2	ND<0.9

Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L
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-- Surrogate & Recoveries --

Trifluorotoluene (SS):	105	112	112	107	103
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Laboratory Number: 57251- 6

Gasoline:	ND<50
Benzene:	ND<0.3
Toluene:	ND<0.3
Ethyl Benzene:	ND<0.3
Total Xylenes:	ND<0.9

Concentration: ug/L

-- Surrogate & Recoveries --

Trifluorotoluene (SS): 102



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ANALYSIS FOR GASOLINE, BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES Quality Assurance and Control Data - Water

Laboratory Number 57251

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Gasoline:	ND<50	50	94/104	75-125	10%
Benzene:	ND<0.3	0.3	96/108	75-125	12%
Toluene:	ND<0.3	0.3	98/109	75-125	11%
Ethyl Benzene:	ND<0.3	0.3	101/113	75-125	11%
Total Xylenes:	ND<0.9	0.9	92/103	75-125	11%

Definitions:

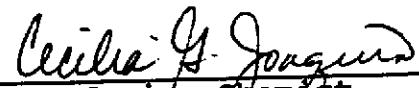
ND = Not Detected

RPD = Relative Percent Difference

RL = Reporting Limit

ug/L = Parts per billion (ppb)

QC File No. 57251


Senior Chemist
Account Manager

