

**SITE ASSESSMENT REPORT
ADDITIONAL SOIL AND
GROUND-WATER ASSESSMENT
FORMER PENSKE TRUCK
LEASING CO. FACILITY
725 JULIE ANN WAY
OAKLAND, CALIFORNIA**

March 15, 1993

Prepared by

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804
(510) 233-3200

March 31, 1993
Project No. RC01906

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

SUBJECT: Site Assessment Report - Additional Soil and Ground Water Assessment
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 additional soil and ground water assessment completed at the former Penske Truck Leasing Facility at 725 Julie Ann Way, Oakland. The additional site assessment was presented in a Work Plan prepared by Geraghty & Miller dated August 20, 1992 and forwarded to the Alameda County Health Care Services, Department of Environmental Health on November 11, 1992.

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

Sincerely,
GERAGHTY & MILLER, INC.



Paul V. Hehn
Staff Geologist/Project Manager

Attachment: Site Assessment Report - Additional Soil and Ground Water Assessment

cc: Mr. Marc Althen
Penske Truck Leasing Co.

March 31, 1993
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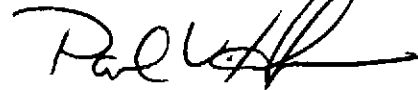
**SITE ASSESSMENT REPORT
FORMER PENSKE TRUCK LEASING CO. FACILITY
725 JULIE ANN WAY
OAKLAND, CALIFORNIA**

March 15, 1993

Geraghty & Miller, Inc. is submitting this report to Penske Truck Leasing Company for work performed at the above-referenced facility. The report was prepared in conformance with Geraghty & Miller's strict quality assurance/quality control procedures to ensure that the report meets industry standards in terms of the methods used and the information presented. If you have any questions or comments concerning this report, please contact one of the individuals listed below.

Respectfully submitted,

GERAGHTY & MILLER, INC.



Paul V. Hehn
Staff Geologist/Project Manager



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

1.0 INTRODUCTION

This report presents the results of the additional soil and ground-water assessment activities performed by Geraghty & Miller, Inc. (Geraghty & Miller) at the former Penske Truck Leasing Co. (Penske) facility located at 725 Julie Ann Way, Oakland, California (Figure 1). The objective of the additional assessment activities was to better define the extent of petroleum hydrocarbons in the soil and shallow ground water hydraulically downgradient (northwest) from the former location of the underground storage tanks and existing ground-water monitor wells previously installed by Geraghty & Miller (Geraghty & Miller, November 15, 1990) (Figure 2). The scope of work for this project was presented in a Geraghty & Miller document dated August 20, 1992.

2.0 BACKGROUND

For background information on this former Penske facility, and the results of the previous site-assessment activities, refer to the Geraghty & Miller report, "Results of Initial Soil and Ground-Water Assessment Activities," dated November 15, 1990.

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3.0 SITE ASSESSMENT ACTIVITIES

3.1 EXPLORATORY DRILLING AND MONITORING WELL INSTALLATION

Prior to drilling, a request for a monitor-well construction permit was submitted to Alameda County on January 8, 1993. A Ground Water Protection Ordinance Permit (#93013) was subsequently issued by the Alameda County Flood Control and Water Conservation District on January 14, 1993. A copy of the permit is included in Appendix A.

Two exploratory soil borings (MW-4 and MW-5) were drilled at the former Penske facility on February 2, 1993. Exploratory boring locations are presented in Figure 2. The borings were drilled by West Hazmat Drilling Corp. of Hayward, California, using a CME-75 truck-mounted auger drilling rig. The soil borings were drilled using 10-inch diameter hollow-stem augers to the final borehole size and depth. All drilling equipment that entered the borehole was steam cleaned prior to drilling each boring.

During drilling, soil samples were collected at 5-foot depth intervals using a modified California split-spoon sampler equipped with three brass liners, which was advanced into the undisturbed soil beyond the tip of the augers. The sampler was washed in a nonphosphate cleaner solution and rinsed with deionized water prior to each use. The middle brass liner was removed, sealed with Teflon™ tape and plastic end caps, placed on ice, and transported, along with appropriate chain-of-custody documentation, to Superior Precision Analytical, Inc. (Superior), a State of California Department of Health Services-certified laboratory located in San Francisco, California. The soil samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline and diesel (USEPA Method 8015, modified) and benzene, toluene, ethylbenzene, and xylenes (BTEX) (USEPA Method 8020).

The soil from one of the two remaining brass liners was described according to the Unified Soil Classification System by a Geraghty & Miller geologist. The exploratory boring logs are included in Appendix B. Combustible vapor measurements were made on the soil samples for segregation of the soil for disposal purposes. Combustible vapor

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measurements were performed on the soil from the remaining brass liner by placing the soil in a glass jar, covering the jar with aluminum foil, allowing approximately 20 minutes for any vapors present in the soil to equilibrate in the headspace, then inserting the tip of a Gastech™ Model 1314 explosimeter, calibrated to hexane, through the foil into the headspace of the jar.

The exploratory borings were terminated at approximately 20 feet below the zone in which water was first encountered during drilling. The total depths for both Borings MW-4 and MW-5 were 36.5 feet below the ground surface.

Upon completion of drilling, the borings were completed as ground-water monitor wells by installing 4-inch diameter, flush threaded, Schedule 40 PVC casing. Slotted well screen (0.010-inch manufactured slots) was installed through the hollow-stem augers. The annular space between the well screen and borehole was backfilled using #2/12 sand to approximately 2 feet above the top of the well screen. Two feet of bentonite were placed above the sand pack, and the remainder of the annular space was backfilled with cement-grout containing approximately 5 percent bentonite. A locking watertight well cap and traffic-rated flush-mounted well box were installed at the ground surface. Monitor-well construction details are included on the boring logs presented in Appendix B.

Upon completion, the top-of-casing elevation and location for each well were surveyed relative to the City of Oakland control datum by a State-licensed surveyor from Field Designs Registered Land Surveyors of Richmond, California. The City of Oakland datum is reported to be 3.00 feet above mean sea level. A copy of the survey map is included in Appendix C.

The soil generated during the drilling activities was stored in drums. Four separate soil samples were collected from different drums of stockpiled soil. The soil samples were collected by advancing a clean, brass sample liner approximately 6 inches into the stockpiled soil. The four samples were placed on ice and transported to Superior, where they were composited into one sample for analysis. The composite soil sample was analyzed for TPH as gasoline and diesel (USEPA Method 8015, modified), BTEX (USEPA Method 8020), and total organic lead by DHS LUFT method. The composited soil sample was also tested for reactivity, corrosivity, and ignitability, as required for soil-disposal purposes. The water generated during the steam cleaning of the drilling

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equipment was placed in drums. The soil and water were retained on-site for proper handling and disposal by Penske.

3.2 GROUND-WATER SAMPLING

Water samples were collected on February 5, 1993, from Monitor Wells MW-4 and MW-5. Prior to sampling, depth-to-water and total-well-depth measurements were obtained from each well, using a water level probe, and each well was checked for the presence of liquid-phase hydrocarbons using an interface probe. Both probes were washed with a nonphosphate cleaner and triple rinsed with deionized water prior to use in each well. Liquid-phase hydrocarbons were not observed in any of the wells.

Each well was developed by purging approximately four casing volumes of water using a 1-inch surface diaphragm pump. The purged water was not monitored for temperature, pH, and specific conductance due to an equipment failure in the field. A summary of the field data is presented in Table 1. The purge water was retained in 55-gallon drums on-site for proper handling and disposal by Penske.

Following development, water samples were collected, using a new polyethylene disposable bailer for each well. The water samples were placed in 40 milliliter (ml) vials and 100-ml amber glass bottles, placed on ice, and transported, along with chain-of-custody documentation, to Superior. The water samples were analyzed for TPH as gasoline and diesel (USEPA Method 8015, modified) and BTEX (USEPA Method 8020).

4.0 REGIONAL HYDROGEOLOGIC SETTING

The regional hydrogeology for this site was previously presented in Geraghty & Miller's report to Penske on the initial site assessment dated November 15, 1990.

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5.0 RESULTS OF ASSESSMENT ACTIVITIES

5.1 HYDROGEOLOGIC CONDITIONS

Based on the results of the exploratory drilling activities conducted during the assessment activities, and as presented in cross sections A-A' and B-B' (Figures 3 and 4), the project site is underlain by primarily clay, sand, silty sand, clayey sand, and sandy clay to a depth of approximately 36.5 feet below the ground surface, the total depth explored (Borings MW-4 and MW-5). Depth to water measured on February 4, 1993, ranged from 6.68 feet (Well MW-4) to 8.94 feet (Well MW-5) below ground surface.

5.2 SOIL ANALYTICAL RESULTS

The analytical results for soil samples are summarized in Table 2. Copies of the certified analytical reports and chain-of-custody documentation are included in Appendix D. Soil samples collected from depths of approximately 5 feet, 10 feet, and 15 feet below the ground surface were analyzed. TPH as gasoline was detected in the soil samples collected from Boring MW-4 from depths of approximately 5 feet (440 milligrams per kilogram [mg/kg]), 10 feet (26 mg/kg), and 15 feet (6 mg/kg) below the ground surface. TPH as diesel was detected in the soil samples collected from Boring MW-4 from depths of approximately 5 feet (4,100 mg/kg), 10 feet (320 mg/kg), and 15 feet (170 mg/kg) below the ground surface. TPH as diesel was also detected in the soil samples collected from Boring MW-5 from depths of 5 feet (21 mg/kg) and 15 feet (130 mg/kg) below the ground surface. Concentrations of BTEX were detected in the soil samples collected from 5 feet, 10 feet, and 15 feet below ground surface from Boring MW-4 (see Table 2).

5.3 GROUND-WATER ANALYTICAL RESULTS

A summary of the ground-water analytical results is presented in Table 3. Copies of the certified laboratory analytical reports and chain-of-custody documentation are included in Appendix D. TPH as gasoline was detected in the water sample collected from Monitor Well MW-4 (58 µg/L). TPH as diesel was detected in the water samples from

both Monitor Wells MW-4 (450 $\mu\text{g/L}$) and MW-5 (240 $\mu\text{g/L}$). BTEX was not detected in the water samples collected from either Monitor Well MW-4 or Monitor Well MW-5.

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6.0 DISCUSSION

Petroleum hydrocarbons in the form of TPH as gasoline, TPH as diesel, and BTEX have been detected in soil samples collected from depths of 5 feet, 10 feet, and 15 feet below the ground surface in Boring MW-4. Only TPH as diesel was detected in the soil samples collected from depths of 5 feet and 15 feet in Boring MW-5. TPH as gasoline, TPH as diesel, and BTEX were detected in the ground-water samples collected from Monitor Well MW-4. Only TPH as diesel was detected in the water sample collected from Monitor Well MW-5.

7.0 REFERENCES

Geraghty & Miller, Inc. 1990. Results of Initial Soil and Ground-Water Assessment Activities, Former Penske Truck Leasing Co. Facility, 725 Julie Ann Way, Oakland, California. November 15, 1990.

———. 1992. Work Plan and Budget Estimate for Additional Soil and Ground-Water Assessment, Former Penske Truck Leasing Facility, 725 Julie Ann Way, Oakland, California. August 20, 1992.

Table 1: Summary of Field Sampling, Depth-to-Water, and Casing Elevation Data
 Former Penske Truck Leasing Co. 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-4	4-Feb-93	6.68	5.18	-1.50	32.7	64.0	60 (c)	NM	63.0	14,100	4
MW-5	4-Feb-93	8.94	4.71	-4.23	31.4	62.0	40 (c)	NM	63.0	16,870	4

(a) Measured from top of PVC casing.

(b) Based on four casing volumes.

(c) Well went dry during purging.

SC Specific Conductance

(µS/cm) Microsiemens per centimeter

NM Not measured - pH meter not operating.

All elevations are measured relative to a site benchmark (elevation 6.62') based on the City of Oakland datum.

Table 2: Soil Sample Analytical Results
 Former Penske Truck Leasing Co. Facility
 725 Julie Ann Way, Oakland, California.

Boring	Date	Depth (feet)	TPH		Benzene (b) (mg/kg)	Toluene (b) (mg/kg)	Ethyl- benzene (b) (mg/kg)	Xylenes (b) (mg/kg)
			Gasoline (a) (mg/kg)	Diesel (a) (mg/kg)				
MW-4	2-Feb-93	5	440	4100	1.6	ND (<0.15)	8.3	1.4
		10	26	320	0.38	0.009	0.7	0.56
		15	6	170	0.022	0.045	0.045	0.15
MW-5	2-Feb-93	5	ND (<1)	21	ND(<.003)	ND(<.003)	ND(<.003)	ND(<.003)
		10	ND (<1)	ND (<1)	ND(<.003)	ND(<.003)	ND(<.003)	ND(<.003)
		15	ND(<1)	130	ND(<.003)	ND(<.003)	ND(<.003)	ND(<.003)

Composite Soil Sample:

SP-1 A-D	ND(<1)	37	ND(<.003)	ND(<.003)	ND(<.003)	0.014
Total Organic Lead:	ND (<2 mg/kg)		(by DHS Method - Luft Manual)			
pH:	8.9		(by USEPA Method 9041)			
Flashpoint:	>100 degrees C		(by USEPA Method SW-846 Method 1010)			
Reactive Cyanide:	ND (<1 mg/kg)		(by USEPA Method 9010)			
Reactive Sulfide:	ND (<10 mg/kg)		(by USEPA Method SW 7.3.4.2)			

(a) Analyzed by USEPA Method 8015, modified.

(b) Analyzed by USEPA Method 8020.

mg/kg Milligrams per kilogram

() Detection limit

ND Not detected

Analysis by Superior Precision Analytical, Inc., San Francisco, California.

Project No. RC01906

GERAGHTY & MILLER, INC.

Table 3: Ground-Water Analytical Results
 Former Penske Truck Leasing Co. Facility
 725 Julie Ann Way, Oakland, California.

Well	Date	TPH Gasoline (a) (µg/L)	TPH Diesel (a) (µg/L)	Benzene (b) (µg/L)	Toluene (b) (µg/L)	Ethyl- benzene (b) (µg/L)	Xylenes (b) (µg/L)
MW-4	4-Feb-93	58 (c)	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) Does not match typical gasoline pattern. Pattern of peaks observed in the chromatogram are indicative of hydrocarbons heavier than gasoline.

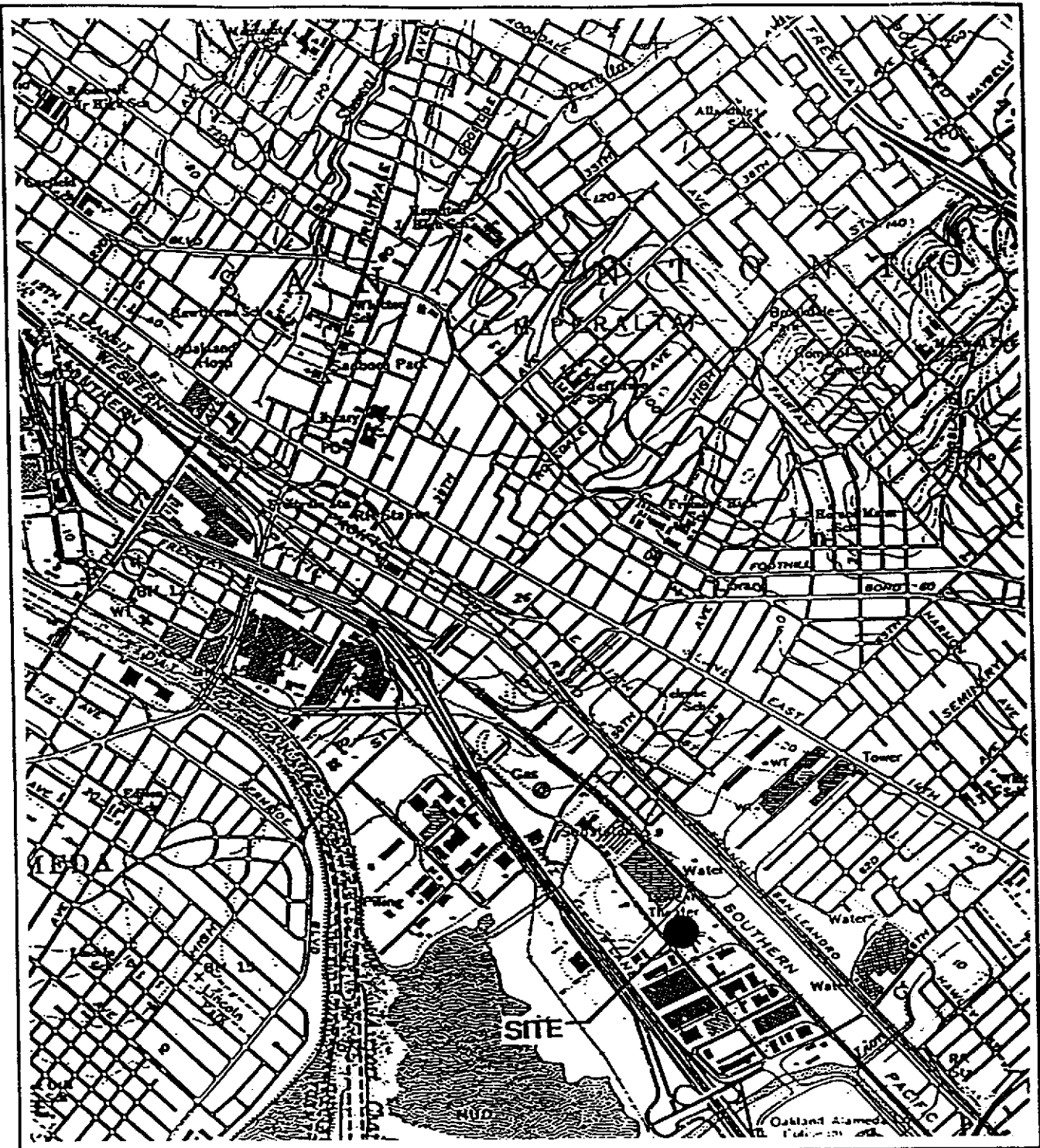
mg/kg Milligrams per kilogram

() Reported detection limit

ND Not Detected

Analysis by Superior Precision Analytical, Inc., San Francisco, California.

Project No. RC01906



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



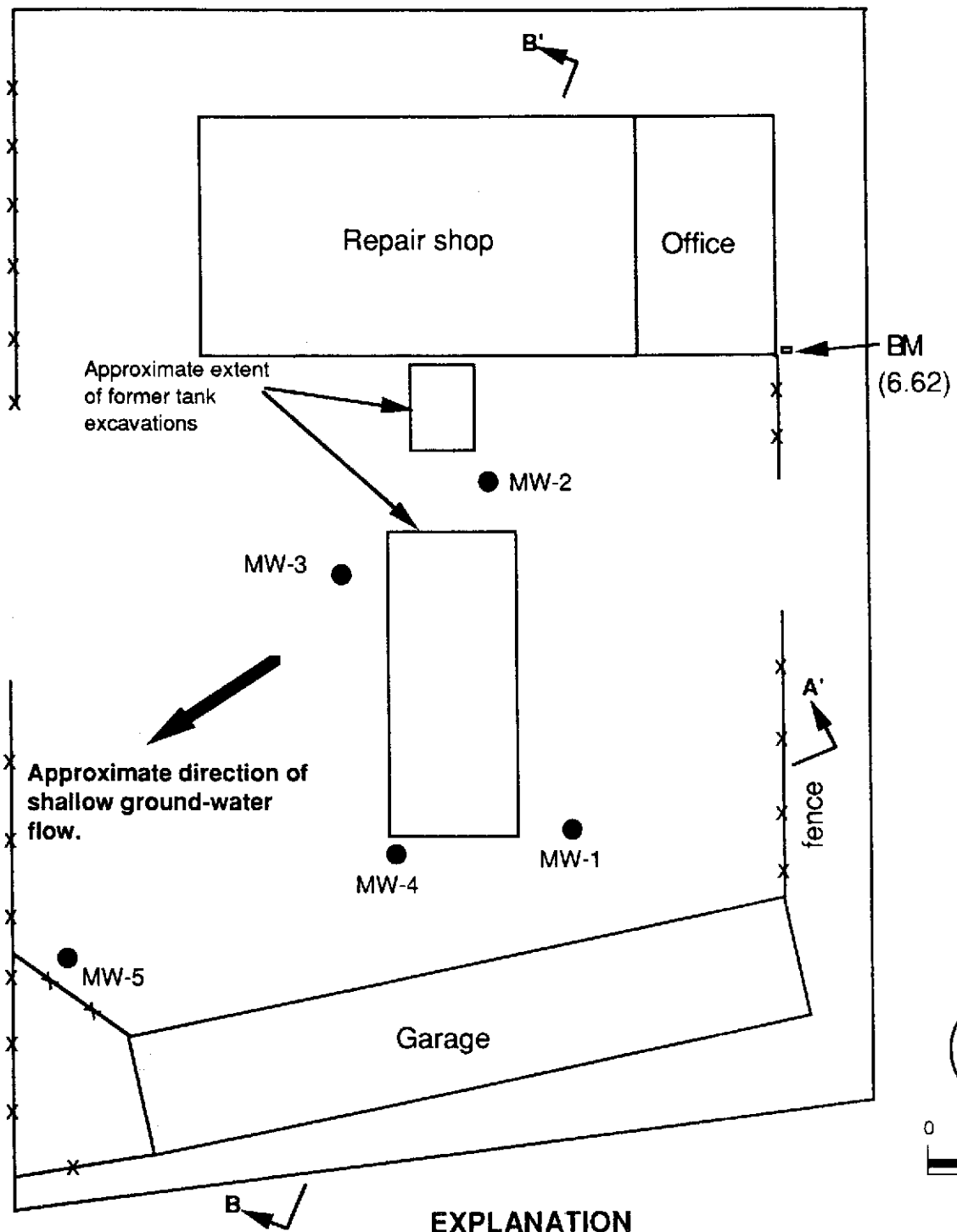
**GERAGHTY
 & MILLER, INC.**
Environmental Services

Proj. No. RC01906

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

FIGURE

1



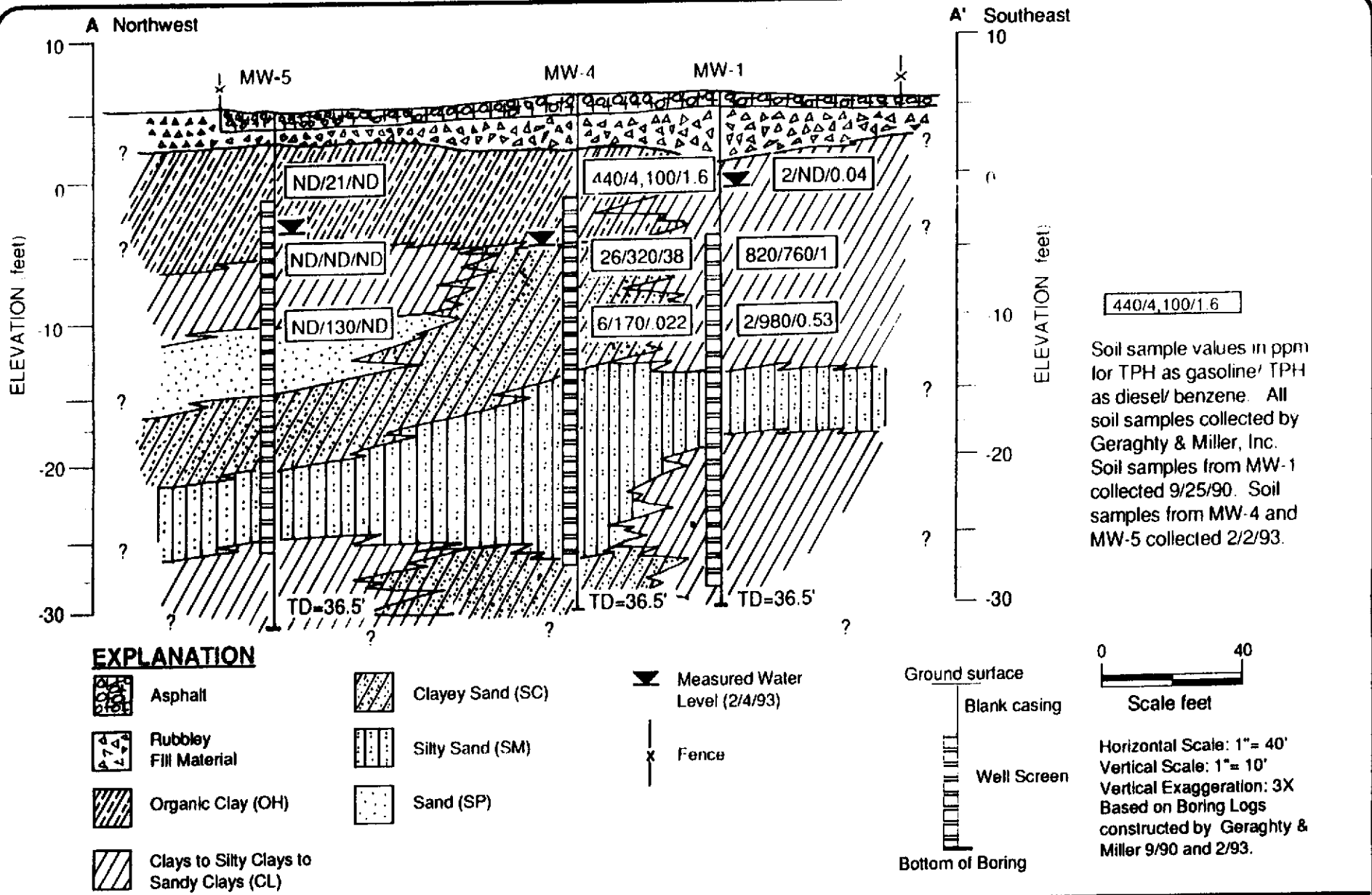
EXPLANATION

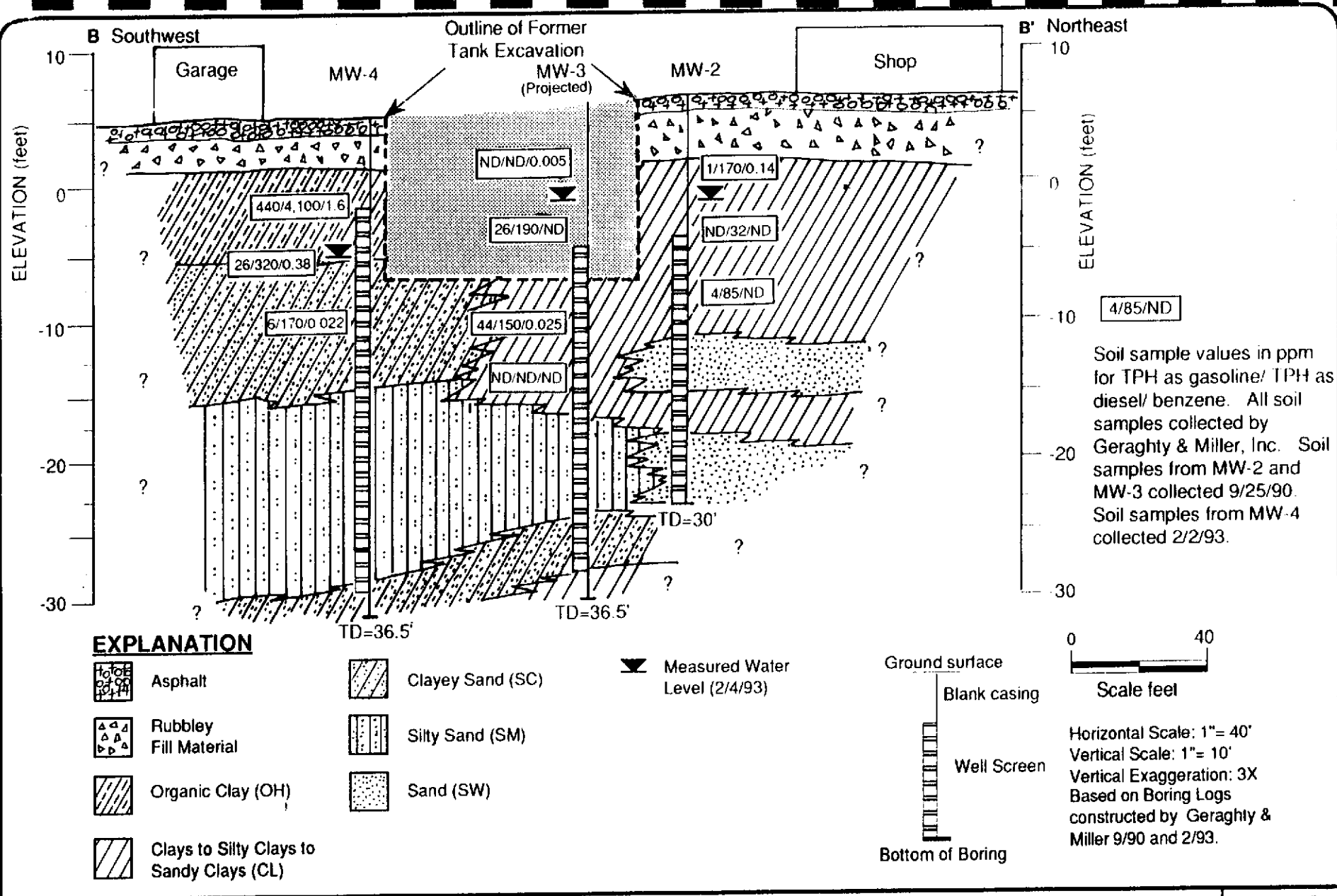
- MW-1 ● = Approximate location of ground-water monitor wells.
- BM = Survey Bench Mark (based on City of Oakland datum which is 3 feet higher than Mean Sea Level).
- B B' = Line of cross section.

GERAGHTY & MILLER, INC.
Environmental Services
 Project No. RC01906

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

FIGURE
2





APPENDIX A

COPY OF GROUND WATER PROTECTION ORDINANCE PERMIT

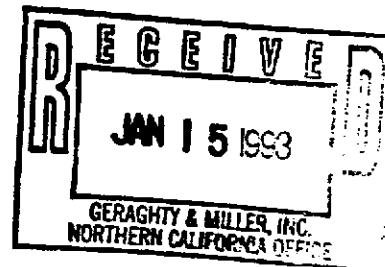
RC01906



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 (510) 484-2600

14 January 1993



Geraghty & Miller, Inc.
1050 Marina Way Couth
Richmond, CA 94804

Gentlemen:

Enclosed is drilling permit 93013 for a monitoring well construction project at 725 Julie Ann Way in Oakland for Penske Truck Leasing Company.

Please note that permit condition A-2 requires that a well construction report be submitted after completion of the work. The report should include drilling and completion logs, location sketch, and permit number.

If you have any questions, please contact Wyman Hong or me at 484-2600.

Very truly yours,

A handwritten signature in cursive script that reads "Craig A. Mayfield".

Craig A. Mayfield
Water Resources Engineer III

WH:mm
Enc.



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94566 (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 725 JULIE DAW Way OAKLAND, CALIFORNIA

PERMIT NUMBER 93013 LOCATION NUMBER

CLIENT Name PENSKE TRUCK LEASING Co. Address Route 10, P.O. Box 563 Phone (215) 775-6268 City READING, PA Zip 19603

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT Name GERAGHTY & MILLER, INC. MICHAEL M. BESSETTE Address 1050 MARINA Way Suite (570) 233-3200 City RICHMOND, CA Zip 94804

A. GENERAL

- 1. A permit application should be submitted so as arrive at the Zone 7 office five days prior proposed starting date. 2. Submit to Zone 7 within 60 days after complet of permitted work the original Department Water Resources Water Well Drillers Report equivalent for well projects, or drilling lc and location sketch for geotechnical projects. 3. Permit is void if project not begun within days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS

- 1. Minimum surface seal thickness is two inches cement grout placed by tremie. 2. Minimum seal depth is 50 feet for municipal a Industrial wells or 20 feet for domestic a Irrigation wells unless a lesser depth specially approved. Minimum seal depth monitoring wells is the maximum depth practical or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted c tings or heavy bentonite and upper two feet with c pacted material. in areas of known or suspec contamination, tremied cement grout shall be used place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concr placed by tremie.

E. WELL DESTRUCTION. See attached.

TYPE OF PROJECT Well Construction Geotechnical Investigation Cathodic Protection General Water Supply Contamination Monitoring X Well Destruction

PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other MONITORING Municipal Irrigation

DRILLING METHOD: Mud Rotary Air Rotary Auger X Cable Other

DRILLER'S LICENSE NO. 554979

WELL PROJECTS WEST HAMMST Drill Hole Diameter 10 in. Maximum Casing Diameter 4 in. Depth 35 ft. Surface Seal Depth 13 ft. Number of Wells 2

GEOTECHNICAL PROJECTS Number of Borings Maximum Hole Diameter in. Depth ft.

ESTIMATED STARTING DATE 1/25/93 ESTIMATED COMPLETION DATE 1/25/93

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

Approved Wyman Hong Date 12 Jan

APPLICANT'S SIGNATURE M.M. Besette Date 1/8/93 For Geraghty & Miller

APPENDIX B

BORING LOGS

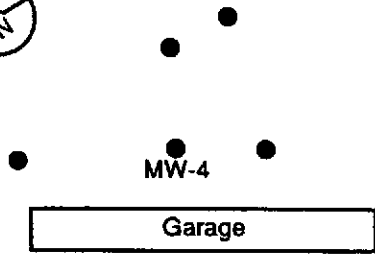
KEY TO BORING LOG SYMBOLS

UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D2488					
MAJOR DIVISIONS			SYMBOL/ GRAPHIC	DESCRIPTIONS	
COARSE GRAINED SOILS (>50% by weight larger than #200 sieve)	GRAVELS (More than 50% of coarse fraction is larger than the #4 sieve size.)	Clean gravels with little or no fines	GW		Well Graded Gravels, Gravel - Sand Mixtures
			GP		Poorly Graded Gravels, Gravels - Sand Mixtures
		Gravels with over 12% fines	GM		Silty Gravels, Poorly Graded Gravel - Sand - Silt Mixtures
			GC		Clayey Gravels, Poorly Graded Gravel - Sand - Clay Mixtures
	SANDS (More than 50% of coarse fraction is smaller than #4 sieve size.)	Clean sands with little or no fines	SW		Well Graded Sands, Gravelly Sands
			SP		Poorly Graded Sands, Gravelly Sands
		Sands with over 12% fines	SM		Silty Sands, Poorly Graded Sand - Silt Mixtures
			SC		Clayey Sands, Poorly Graded Sand - Clay Mixtures
FINE GRAINED SOILS (>50% smaller than #200 sieve)	SILTS AND CLAYS (liquid limit less than 50)		ML		Inorganic Silts and Very Fine Sands, Silty or Clayey Fine Sands
			CL		Inorganic Clays of Low to Medium Plasticity: Gravelly, Sandy or Silty Clays; Lean Clays
			OL		Organic Clays and Organic Silty Clays of Low Plasticity
	SILTS AND CLAYS (liquid limit greater than 50)		MH		Inorganic Silts, Micaceous or Diatomaceous Fine Sandy or Silty Soils, Elastic Silts
			CH		Inorganic Clays of High Plasticity. Fat Clays
			OH		Organic Clays of Medium to High Plasticity, Organic Silts
HIGHLY ORGANIC SOILS			Pt		Peat and other Highly Organic Soils

<p> Stabilized water level (date)</p> <p> Water level encountered during drilling</p> <p> Shaded interval represents soil sample. Blackened interval indicates portion of sample prepared for laboratory analysis.</p> <p> Indicates no recovery of sample</p> <p> Monitoring well</p> <p> Soil boring</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20px;"></td> <td>Asphaltic Concrete</td> </tr> <tr> <td></td> <td>Portland Cement Concrete</td> </tr> <tr> <td></td> <td>Cement Grout</td> </tr> </table> <p>PID Photo-ionization detector readings (ppmv)</p> <p>FID Flame-ionization detector readings (ppmv)</p> <p>EXP Gastech explosimeter readings (ppmv)</p>		Asphaltic Concrete		Portland Cement Concrete		Cement Grout
	Asphaltic Concrete						
	Portland Cement Concrete						
	Cement Grout						



Repair Shop Office



Julie Ann Way

LOG OF BORING MW-4

Former Penske Truck Leasing Facility 725 Julie Ann Way Oakland, California

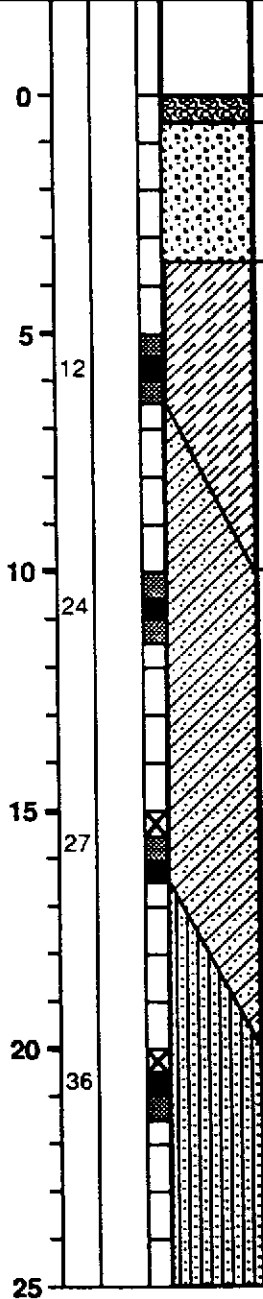
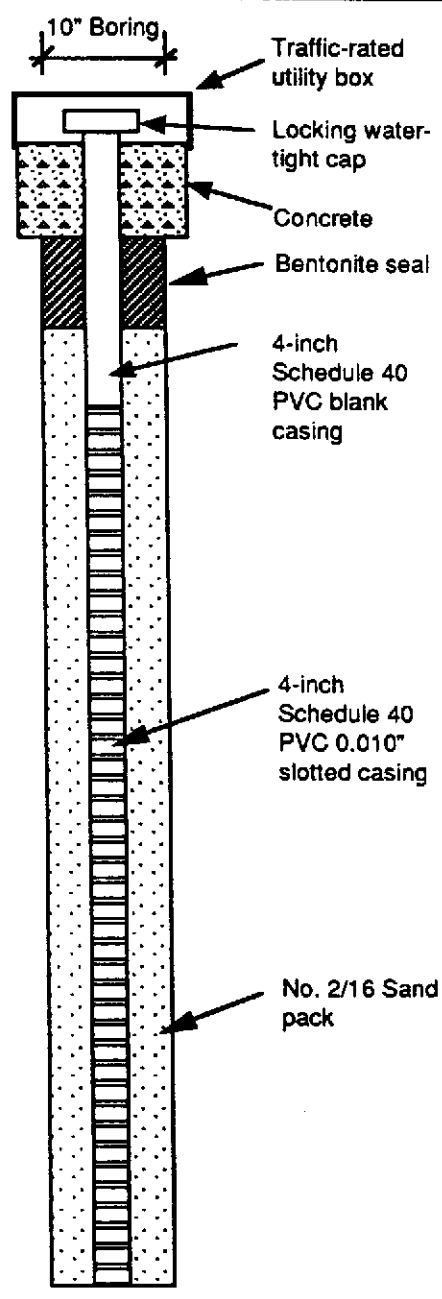
Project No.: RC01906 Date Drilled: February 2, 1993
Logged By: M. M. Bessette Drilling Method: 10" Hollow stem auger
Drilling Co.: West Hazmat Sampling Method: 2" Split spoon
Driller: Bill Smith Inclination: Vertical

WELL CONSTRUCTION

Depth (ft.)
Blows/ft.

Samples
Graphic

DESCRIPTION



Surface Elevation: 5.55 feet
Casing Elevation: 5.18 feet
Asphaltic Concrete

FILL: Gravel, rubble and brick

ORGANIC CLAY (OH); black (10YR 2/1); trace fine sand; abundant roots; stiff; moist.

CLAYEY SAND (SC); yellowish brown (10YR 5/4); poorly sorted; 50-60% fine sand, 30-40% clay, 5-15% medium sand; roots: medium dense; moist.

@ 15 feet: yellowish brown (10YR 5/6); 75-85% fine sand; 10-15% clay; 5-10% medium sand; trace fine gravel.

SAND (SM); yellowish brown (10YR 5/4); moderately sorted; 70-80% fine sand; 20-30% silt; trace medium sand; iron oxidation; medium dense; moist.

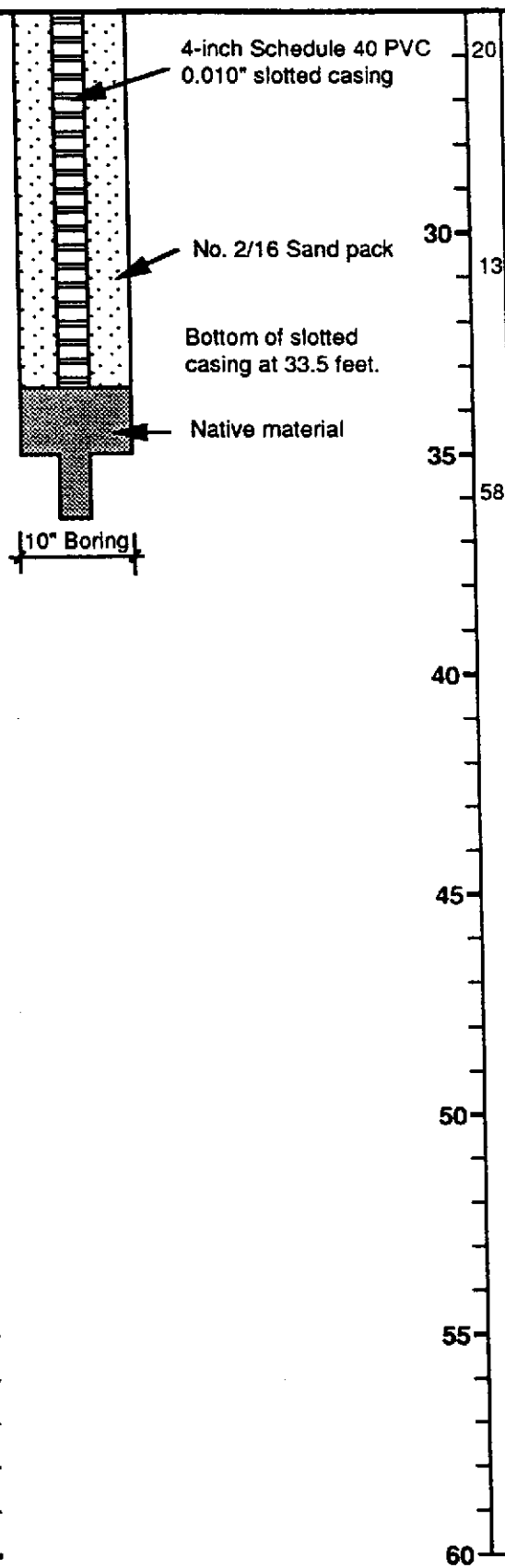
**LOG OF BORING MW-4
(continued)**

WELL CONSTRUCTION

Depth (ft.)
Blows/ft.

Samples
Graphic

DESCRIPTION



@ 26 feet: wet.

CLAYEY SAND (SC); yellowish brown (10YR 5/6); poorly sorted; 50-60% fine sand; 30-40% clay; 5-15% silt; dense; wet.

Bottom of Boring: 36.5 Feet.
Time: 10:12 AM Date: 2/2/93



Repair Shop Office

MW-5

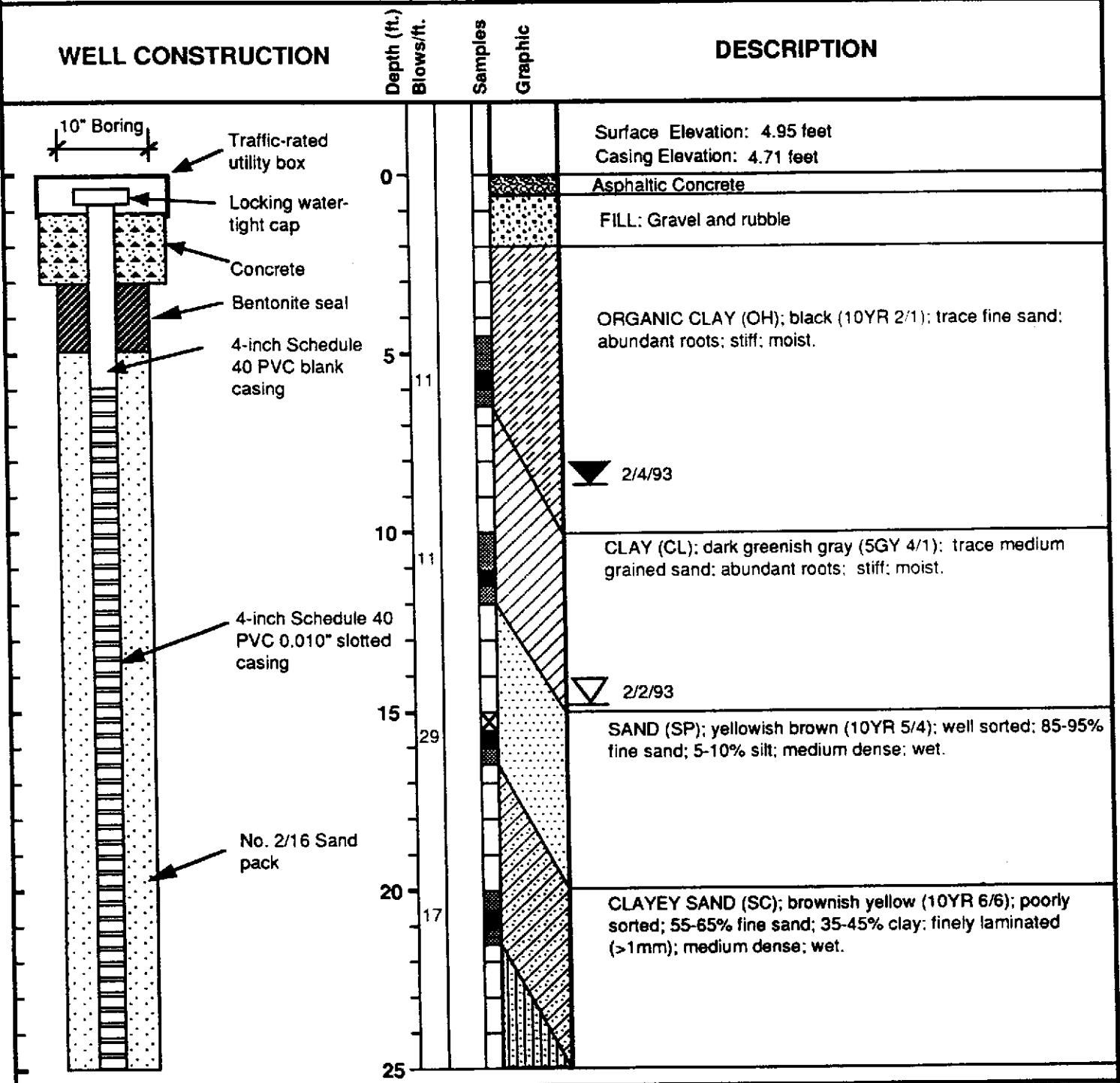
Garage

Julie Ann Way

LOG OF BORING MW-5

Former Penske Truck Leasing Facility
725 Julie Ann Way
Oakland, California

Project No.: RC01906 Date Drilled: February 2, 1993
Logged By: M. M. Bessette Drilling Method: 10" Hollow stem auger
Drilling Co.: West Hazmat Sampling Method: 2" Split spoon
Driller: Bill Smith Inclination: Vertical



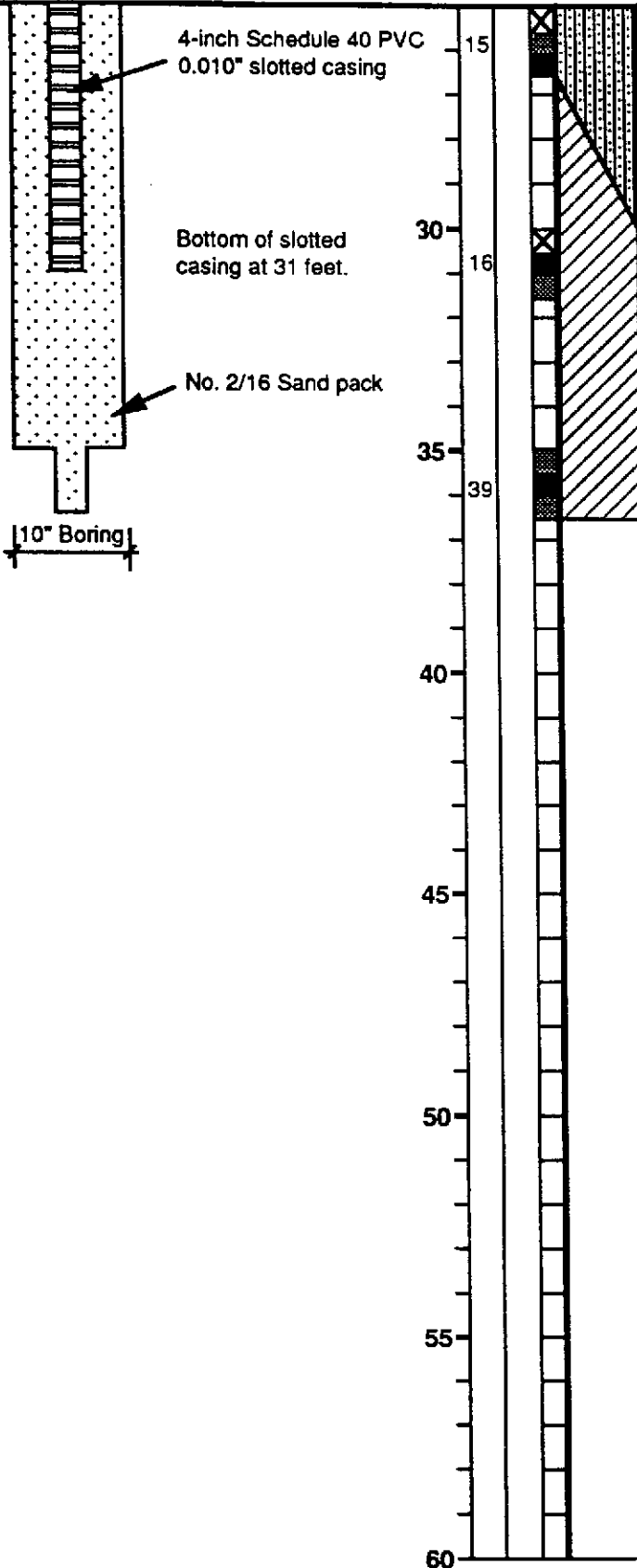
**LOG OF BORING MW-5
(continued)**

WELL CONSTRUCTION

Depth (ft.)
Blows/ft.

Samples
Graphic

DESCRIPTION



SILTY SAND (SM); yellowish brown (10YR 5/4); poorly sorted; 65-75% fine sand; 25-35% silt; trace clay; loose; moist.

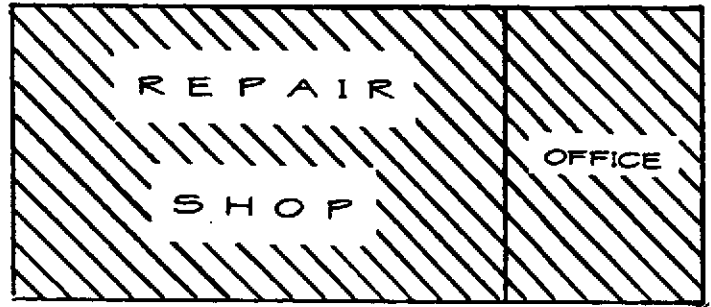
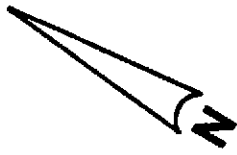
SANDY CLAY (CL); yellowish brown (10YR 5/4); poorly sorted; 65-75% clay; 25-35% fine sand; finely laminated; stiff; moist.

@ 35 feet: 80-90% clay; 10-20% fine sand; trace silt; very stiff.

Bottom of Boring: 36.5 Feet.
Time: 2:36 PM Date: 2/2/93

APPENDIX C

SURVEY DATA



CURB LINE

JULIE ANN WAY

○ MW-2

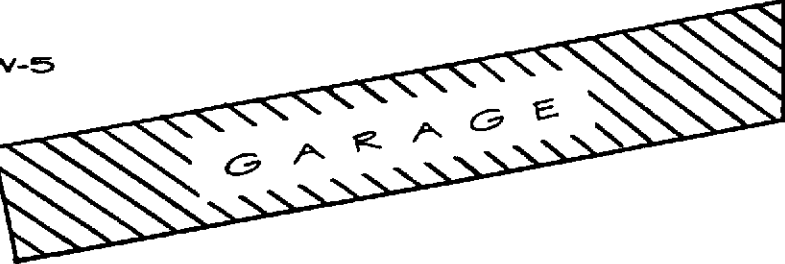
○ MW-3

○ MW-1

○ MW-4

○ MW-5

FENCE LINE



SITE PLAN

Former Penske Truck Leasing Facility
725 Julie Ann Way
Oakland, California

PREPARED BY: FIELD DESIGNS

LEGEND

○ GROUND-WATER MONITOR WELL

SCALE: 1" = 40'

DATE: 02/10/93

GROUND AND CASING ELEVATIONS

JOB #: RCD1903

DATE: 02/10/93

DATUM: EXISTING BM ON SITE ELEV. 6.62

WELL #	ELEV.e GROUND	ELEV. ON TOP CASING
MW-1	5.78 (on AC)	5.43
MW-2	6.54 (on AC)	6.20
MW-3	6.45 (on AC)	6.10
MW-4	5.55 (on AC)	5.18
MW-5	4.95 (on AC)	4.71

COMMENTS:

Date 02-12-1993

Time 05:03:06

Total Computer Time 18 1

Job 9308

Scope LOCATE MONITOR

Client GERAGHTY/MILLER

City OAKLAND

Point#	Northing	Easting	Elev.	Description
=====	=====	=====	=====	=====
11	1000.0000	5000.0000	6.330	START
12	1058.1130	4999.9997	6.626	CK BM
13	1059.4863	4998.8096	0.000	BC
14	1119.3777	5000.7321	0.000	BC
15	928.4741	4994.6087	0.000	BC
16	903.9103	4993.8904	0.000	BC
17	1064.0535	4858.8729	0.000	BC
18	902.0960	4832.2954	0.000	BC
19	925.4196	4789.7220	0.000	INT F
20	976.1983	4787.6928	0.000	END F
21	1032.7688	4997.8745	0.000	GATE POST -30.6
31	948.3963	4942.0886	5.429	MW-1
32	1032.4197	4926.6037	6.201	MW-2
33	1011.7038	4892.7392	6.100	MW-3
34	941.8272	4900.2562	5.188	MW-4
35	919.8537	4820.0308	4.710	MW-5
36	1058.0885	5023.6542	0.000	FC DWY
37	907.0085	5018.7006	0.000	FC DWY
41	947.8024	4942.9137	5.776	MW-1 AC
42	1033.1575	4926.9319	6.540	MW-2 AC
43	1011.0392	4893.0288	6.449	MW-3 AC
44	943.1674	4900.5165	5.551	MW-4 AC
45	918.3841	4820.3821	4.953	MW-5 AC
46	1058.1145	5000.0003	6.611	CK BM

RAWDATA FILE

JOB: 9308 Date 2-10-1993 Time 10:26:36.42
Mode setup:North Azm,Dist ft,scale 1.000000, Earth crv OFF,offset 0.00
Store :Pt 11 N 1000.00 E 5000.00, Elv 6.33, START
Occupy:Pt 11 N 1000.00 E 5000.00, Elv 6.33, START
Backsight:11-11, BS azm 0.0000, BS cir 0.0000
Backsight:11-11, BS azm 0.0000, BS cir 0.0000
HI / HR : Inst H 5.40 Rod H 4.62
Side shot : 11-12 Ang-Rt 359.5959 Zen 90.2838 SlpD 58.12 ,CK BM
Off center shot: Ang right 358.5441
Off center shot: Offset length -0.06
Side shot : 11-13 Ang-Rt 358.5113 Zen 90.2637 SlpD 59.50 ,BC
Off center shot: Ang right 0.3236
Off center shot: Offset length -0.40
Side shot : 11-14 Ang-Rt 0.2105 Zen 89.4747 SlpD 119.38 ,BC
Off center shot: Ang right 184.1838
Off center shot: Offset length 0.00
Side shot : 11-15 Ang-Rt 184.1838 Zen 91.0051 SlpD 71.74 ,BC
Off center shot: Ang right 183.3443
Off center shot: Offset length 0.10
Side shot : 11-16 Ang-Rt 183.3817 Zen 91.0321 SlpD 96.30 ,BC
Off center shot: Ang right 294.2249
Off center shot: Offset length 0.10
Side shot : 11-17 Ang-Rt 294.2502 Zen 87.2254 SlpD 155.12 ,BC
Off center shot: Ang right 294.2230
Off center shot: Offset length 0.10
Side shot : 11-17 Ang-Rt 294.2443 Zen 87.2517 SlpD 155.14 ,BC
Off center shot: Ang right 239.4513
Off center shot: Offset length -0.10
HI / HR : Inst H 5.40 Rod H 4.89
Side shot : 11-18 Ang-Rt 239.4327 Zen 90.3341 SlpD 194.20 ,BC
Off center shot: Ang right 250.2818
Off center shot: Delta Distance 1.00
Side shot : 11-19 Ang-Rt 250.2818 Zen 90.2841 SlpD 223.12 ,INT F
Off center shot: Ang right 263.3925
Off center shot: Offset length -0.20
Side shot : 11-20 Ang-Rt 263.3612 Zen 90.1756 SlpD 213.64 ,END F
Off center shot: Ang right 356.4330
Off center shot: Offset length -0.25
Side shot : 11-21 Ang-Rt 356.1720 Zen 90.4842 SlpD 32.84 ,GATE POST -30.6
Side shot : 11-32 Ang-Rt 293.4953 Zen 90.2722 SlpD 80.24 ,MW-2
Side shot : 11-33 Ang-Rt 276.1338 Zen 90.2334 SlpD 107.90 ,MW-3
Side shot : 11-31 Ang-Rt 228.1747 Zen 91.0232 SlpD 77.58 ,MW-1
Side shot : 11-34 Ang-Rt 239.4454 Zen 90.4910 SlpD 115.48 ,MW-4
Side shot : 11-35 Ang-Rt 245.5942 Zen 90.3710 SlpD 197.02 ,MW-5
Side shot : 11-45 Ang-Rt 245.3349 Zen 90.3253 SlpD 197.30 ,MW-5 AC
Side shot : 11-44 Ang-Rt 240.1542 Zen 90.3840 SlpD 114.58 ,MW-4 AC
Side shot : 11-41 Ang-Rt 227.3341 Zen 90.4716 SlpD 77.36 ,MW-1 AC
Side shot : 11-43 Ang-Rt 275.5331 Zen 90.1229 SlpD 107.54 ,MW-3 AC
Side shot : 11-42 Ang-Rt 294.2517 Zen 90.1305 SlpD 80.32 ,MW-2
Side shot : 11-42 Ang-Rt 294.2429 Zen 90.1252 SlpD 80.24 ,MW-2
Side shot : 11-36 Ang-Rt 22.0924 Zen 89.5640 SlpD 62.72 ,FC DWY
Side shot : 11-37 Ang-Rt 168.3746 Zen 89.1846 SlpD 94.86 ,FC DWY
Side shot : 11-46 Ang-Rt 0.0001 Zen 90.1333 SlpD 58.12 ,CK BM

DESCRIPTION CODES

AP = ANGLE POINT
AC = ASPHALT
BW = BACK WALK
BM = BENCH MARK
BB = BOTTOM BANK
BS = BOTTOM SLOPE (TOE)
BCxx = BUILDING CORNER
CTV = CABLE TV
CB = CATCH BASIN
CTR = CENTER
C/L = CENTER LINE
CLF = CHAIN LINK FENC
CONC = CONCRETE
CBLK = CONCRETE BLOCK
CONP = CONCRETE PIPE
CP = CONTROL POINT
COR = CORNER
CFxx = CORNER FENCE
CMP = CORRUGATED METAL PIPE
CUL = CULVERT
CULD = CUL D'SAC
DD = DRAINAGE DITCH
DL = DRIP LINE
DI = DROP INLET
DWY = DRIVEWAY
E = EDGE
EAC = EDGE AC
EACR = EDGE AC ROAD
ECR = EDGE CONCRETE ROAD
EP = EDGE PAVEMENT
EW = EDGE WATER
EL = ELEVATION
FC = FACE CURB @ TOP CURB
F = FENCE
FI = FIELD INLET
FH = FIRE HYDRANT
FL = FLOW LINE
FND = FOUND
FW = FRONT WALK
G = GAS
GND = GROUND
HP = HIGH POINT
INT = INTERSECTION
INV = INVERT
IR = IRRIGATION
JP = JOINT POLE
LF = FENCE LINE
LP = LIGHT POLE
LOP = LOW POINT
MH = MAN HOLE

M = METER

OC = ON CURVE
OS = ON SLOPE
OVH = OVERHEAD
P = PARALLEL
PGE = P, G & E
PC = PROPERTY CORNER
PL = PROPERTY LINE
R = RIGHT ANGLE
RET = RETURN (CURB)
RW = RETAINING WALL
ROW = RIGHT OF WAY
RD = ROAD
RK = ROCK
STN = STONE
ST = STREET
TEL = TELCO/TELEPHONE
TBM = TEMPORARY BENCH MARK
TB = TOP BANK
TS = TOP SLOPE
V = VALVE
VD = V-DITCH
VG = VALLEY GUTTER
VLT = VAULT
H2O = WATER
WL = WATER LINE
W = WOOD
WI = WIRE
WP = WORK POINT

APPENDIX D

COPIES OF CERTIFIED LABORATORY 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 RC01906
Reported 02/10/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56027- 1	MW-4-5	02/02/93	02/09/93 Soil
56027- 2	MW-4-10	02/02/93	02/09/93 Soil
56027- 3	MW-4-15	02/02/93	02/09/93 Soil
56027- 8	MW-5-5	02/02/93	02/09/93 Soil
56027- 9	MW-5-10	02/02/93	02/09/93 Soil
56027-10	MW-5-15	02/02/93	02/09/93 Soil

RESULTS OF ANALYSIS

Laboratory Number: 56027- 1 56027- 2 56027- 3 56027- 8 56027- 9

Diesel:	4100	320	170	21	ND<10
Gasoline:	440	26	6	ND<1	ND<1
Benzene:	1.6	0.38	0.022	ND<.003	ND<.003
Toluene:	ND<0.15	0.009	0.045	ND<.003	ND<.003
Ethyl Benzene:	8.3	0.70	0.045	ND<.003	ND<.003
Xylenes:	1.4	0.56	0.15	ND<.003	ND<.003
Concentration:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg

Laboratory Number: 56027-10

Diesel:	130
Gasoline:	ND<1
Benzene:	ND<.003
Toluene:	ND<.003
Ethyl Benzene:	ND<.003
Xylenes:	ND<.003
Concentration:	mg/kg



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 3 of 3
QA/QC INFORMATION
SET: 56027

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
mg/kg = parts per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Soil: 10mg/kg

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Soil: 0.003mg/kg

<u>ANALYTE</u>	<u>MS/MSD RECOVERY</u>	<u>RPD</u>	<u>CONTROL LIMIT</u>
Diesel:	92/87	6%	67-129
Gasoline:	89/88	1%	75-111
Benzene:	84/89	6%	75-114
Toluene:	86/89	3%	78-114
Ethyl Benzene:	88/90	2%	76-120
Xylenes:	84/86	2%	71-117

Richard Srna, Ph.D.

Cecilia G. Joaquin (for)
Laboratory Director

Project Number RC01906
 Project Location PENSKE/OAKLAND
 Laboratory SUPERIOR PRECISION, S.F.
 Sampler(s)/Affiliation M.M. BESSETTE
D.A. YANTOS

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION							TOTAL		
				TPH-GASOLINE	BTEX	TPH-DIESEL	8015/8020	8015	HOLD				
MW-4-5	S	01/23/93	0155	X	X								1
MW-4-10		0906		X	X								1
MW-4-15		0915		X	X								1
MW-4-20		0930							X				1
MW-4-25		0943							X				1
MW-4-30		0952							X				1
MW-4-35		1012							X				1
MW-5-5		1337		X	X								1
MW-5-10		1348		X	X								1
MW-5-15		1357		X	X								1
MW-5-20		1403							X				1
MW-5-25		1412							X				1
MW-5-30		1423							X				1
MW-5-35		1436							X				1
											Total No. of Bottles/Containers	14	

Please Initial: DAJ
 Samples Stored In Ice: Yes
 Appropriate Containers: Yes
 Samples Preserved: N/A
 Vials without headspace: N/A
 Comments: OK

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: D.A. Yantos Organization: GERAGHTY+MILLER Date: 2/3/93 Time: 12:23 Seal Intact? Yes No N/A
 Received by: MURPHY Organization: ARBO Date: 2/3/93 Time: 12:23 Yes No N/A
 Relinquished by: Nancy Pettit Organization: Superior Date: 1/1 Time: _____ Seal Intact? Yes No N/A
 Received by: _____ Organization: _____ Date: 2/3/93 Time: 13:20 Yes No N/A

Special Instructions/Remarks: GERAGHTY+MILLER, INC. MR. PAUL HEHN
1050 MARINA WAY SOUTH (510) 233-3200 (OFFICE)
RICHMOND, CA 94804 (510) 233-3204 (FAX)

Delivery Method: In Person Common Carrier Lab Courier Other



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 RC01906
Reported 02/10/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56026- 1	SP-1 A-D COMP	02/02/93	02/08/93 Soil

RESULTS OF ANALYSIS

Laboratory Number: 56026- 1

Diesel:	37
Gasoline:	ND<1
Benzene:	ND<.003
Toluene:	ND<.003
Ethyl Benzene:	ND<.003
Xylenes:	0.014

Concentration: mg/kg



Superior Precision Analytical, Inc.

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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: 56026

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
mg/kg = parts per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Soil: 1mg/kg

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Soil: 0.003mg/kg

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Diesel:	92/87	6%	75-125
Gasoline:	87/88	1%	75-111
Benzene:	82/86	5%	75-114
Toluene:	85/88	3%	78-114
Ethyl Benzene:	88/90	2%	76-120
Xylenes:	84/86	2%	71-117

Richard Srna, Ph.D.

Cecilia J. Jorgensen (for)
Laboratory Director



Superior Precision Analytical, Inc.

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

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

LABORATORY NO.: 56026
CLIENT: Geraghty & Miller Inc.
CLIENT JOB NO.: RC01906

DATE RECEIVED: 02/03/93
DATE REPORTED: 02/10/93

ANALYSIS FOR FLASH POINT by EPA SW-846 Method 1010

#	Sample Identification	Flash Point (degree C)
1	SP-1 A-D COMP	>100

Richard Srna, Ph.D.

Beilia J. Jaquini (for)
Laboratory Director

Project Number RC01906

Project Location PENSKE/OAKLAND

Laboratory SUPERIOR PRECISION, S.F.

Sampler(s)/Affiliation M.M. BESSETTE
D.A. YANTOS

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

				SAMPLE BOTTLE / CONTAINER DESCRIPTION							TOTAL					
				ORGANIC LEAD	DHS LUFT	CORROSIVITY	REACTIVITY	IGNITABILITY	TPH-GASOLINE	BTEX 8015/8020	TPH-DIESEL	8015				
* SP-1A→D	S	2/2/93	1640	X	X	X	X	X	X	X				4	COMPOSITE 4:1	
										add per D. Yantos 2/3/93 instructions mr.						
										<div style="border: 1px solid black; padding: 5px;"> Loose labels: <u>DMW</u> Samples Stored in ice: <u>yes</u> Appropriate containers: <u>yes</u> Samples preserved: <u>all</u> Vials without headspace: <u>all</u> Comments: <u>OK</u> </div>						
													Total No. of Bottles/Containers		4	

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: <u>D.A. Yantos</u>	Organization: <u>GERAGHTY + MILLER</u>	Date: <u>2/3/93</u> Time: <u>12:23</u>	Seal Intact? Yes No N/A
Received by: <u>MAURICE</u>	Organization: <u>QERO</u>	Date: <u>2/3/93</u> Time: <u>12:23</u>	
Relinquished by: <u>N. Pettit</u>	Organization: <u>superior</u>	Date: <u>1/1</u> Time: _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date: <u>2/15/93</u> Time: <u>13:30</u>	<u>Yes</u> No N/A

Special Instructions/Remarks: * COMPOSITE SP-1A→D 4:1 * GERAGHTY + MILLER, INC. MR. PAUL HEHN
1050 MARINA WAY S. (510) 233-3200 (OFFICE)
RICHMOND CA 94804 (510) 233-3204 (FAX)

Delivery Method: In Person Common Carrier Lab Courier Other _____ SPECIFY _____



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 87794
CLIENT: Geraghty & Miller
CLIENT JOB NO.: RCO1906

DATE RECEIVED: 02/09/93
DATE REPORTED: 02/12/93

ANALYSIS FOR pH
by EPA Method 9041

LAB #	Sample Identification	pH
1	SP-1 A-D	8.90

RPD = 1%

Richard Srna, Ph.D.

Nancy A. Nelson
Laboratory Director

Project Number RC01906

Project Location PENSKE/OAKLAND

Laboratory SUPERIOR PRECISION, S.F.

Sampler(s)/Affiliation M.M. BESSETTE

D.A. YANTOS

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

ORGANIC LEAD
DHS LUFT
CORROSIVITY
REACTIVITY
IGNITABILITY
TPH-GASOLINE
BTX 8015/8020
TPH-DIESEL
8015

TOTAL

*

SP-1A-D S 2/2/93 1640

X X X X X X X

4 COMPOSITE 4:1

add per D. Yantos 2/3/93 instructions DM.

Please label: DM
 Samples stored in ice: yes
 Appropriate containers: yes
 Samples preserved: N/A
 VOA's without headspace: N/A
 Comments: OK

Total No. of Bottles/Containers

4

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: <u>D.A. Yantos</u>	Organization: <u>GERAGHTY + MILLER</u>	Date: <u>2/3/93</u> Time: <u>12:23</u>	Seal Intact? Yes No N/A
Received by: <u>M. Bessette</u>	Organization: <u>QERO</u>	Date: <u>2/3/93</u> Time: <u>10:23</u>	
Relinquished by: <u>M. Bessette</u>	Organization: <u>SUPERIOR</u>	Date: <u>1/1</u> Time: _____	Seal Intact? Yes No N/A
Received by: <u>M. Bessette</u>	Organization: <u>SUPERIOR</u>	Date: <u>2/3/93</u> Time: <u>13:30</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Special Instructions/Remarks: * COMPOSITE SP-1A-D 4:1 * GERAGHTY + MILLER, INC. MR. PAUL HEHN
1050 MARINA WAY S. (510) 233-3200 (OFFICE)
RICHMOND CA 94804 (510) 233-3204 (FAX)



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 87754
CLIENT: Geraghty & Miller
CLIENT JOB NO.: RC01906

DATE RECEIVED: 02/03/93
DATE REPORTED: 02/11/93
DATE SAMPLED : 02/02/93

ANALYSIS FOR TOTAL ORGANIC LEAD by DHS METHOD (LUFT MANUAL)

LAB #	Sample Identification	Concentration (mg/Kg)
-----	-----	-----
1	SP-1 A-D	ND<2

mg/kg - parts per million (ppm)
Minimum Detection Limit for Organic Lead in Soil: 2 mg/kg

QAQC Summary: MS/MSD Average Recovery : 101%
Duplicate RPD : 2%

Richard Srna, Ph.D.

Delomina V. Janguilig
Laboratory Director

SP # 56021 87754

Project Number RC01906

Project Location PENSKE/OAKLAND

Laboratory SUPERIOR PRECISION, S.F.

Sampler(s)/Affiliation M.M. BESSETTE

D.A. YANTOS

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

SAMPLE BOTTLE / CONTAINER DESCRIPTION

ORGANIC LEAD
DHS LUFT
CORROSIVITY

REACTIVITY
IGNITABILITY
TPH-GASOLINE
BTX 8015/8020
TPH-DIESEL
8015

TOTAL

*

SP-1A-D S 2/2/93 1640

X X X X X X

4 COMPOSITE 4:1

add per D. Yantos 2/5/93 instructions

Place Initials: DMW

Samples Stored in Ice: yes

Appropriate containers: yes

Samples preserved: N/A

VOC's without headspace: N/A

Comments: OK

Total No. of Bottles/ Containers

4

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: <u>D.A. Yantos</u>	Organization: <u>GERAGHTY + MILLER</u>	Date: <u>2/3/93</u> Time: <u>12:23</u>	Seal Intact? Yes No N/A
Received by: <u>MORRIS</u>	Organization: <u>GERO</u>	Date: <u>2/3/93</u> Time: <u>12:23</u>	
Relinquished by: <u>M. Pettit</u>	Organization: <u>SUPERIOR</u>	Date: <u>1/1</u> Time: _____	Seal Intact? Yes No N/A
Received by: _____	Organization: _____	Date: <u>2/3/93</u> Time: <u>13:30</u>	

Special Instructions/Remarks: * COMPOSITE SP-1A-D 4:1 * GERAGHTY + MILLER, INC. MR. PAUL HEHN
1050 MARINA WAY S. (510) 233-3200 (OFFICE)
RICHMOND CA 94804 (510) 233-3204 (FAX)



Superior Precision Analytical, Inc.

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

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

LABORATORY NO.: 56026
CLIENT: Geraghty & Miller
CLIENT PROJECT NO.: RC01906

DATE RECEIVED: 02/03/93
DATE REPORTED: 02/11/93

Following is a list of Cross referenced Lab Numbers and Sample I.D.'s for referring to the following reports.

<u>Superior Lab Number</u>	<u>Subbed Lab Number</u>	<u>Customer Sample Identification</u>
56026-1	9302057-01	SP-1 A-D COMP

Subbed to: CLAYTON ENVIRONMENTAL CONSULTANTS

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

February 11, 1993

Ms. Onyi Nwogu
SUPERIOR ANALYTICAL LABORATORY
1555 Burke Street, Unit 1
San Francisco, CA 94124

Client Ref. 56026
Clayton Project No. 93020.57

Dear Ms. Nwogu:

Attached is our analytical laboratory report for the samples received on February 4, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters for

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
 for
 Superior Analytical Laboratory

Client Reference: 56026
 Clayton Project No. 93020.57

Sample Identification: 56026-1
 Lab Number: 9302057-01
 Sample Matrix/Media: SOIL

Date Sampled: 02/02/93
 Date Received: 02/04/93

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	—	02/09/93	—	EPA 9010
Reactive Sulfide	<10	10	mg/kg	—	02/09/93	—	SW 7.3.4.2

ND Not detected at or above limit of detection
 < Not detected at or above limit of detection
 — Information not available or not applicable

Results are reported on a wet weight basis, as received

Results of Analysis
 for
 Superior Analytical Laboratory

Client Reference: 56026
 Clayton Project No. 93020.57

Sample Identification: METHOD BLANK
 Lab Number: 9302057-02
 Sample Matrix/Media: SOIL

Date Sampled: --
 Date Received: --

Analyte	Concentration	Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Analysis Method
Reactive Cyanide	<1	1	mg/kg	--	02/09/93	--	EPA 9010
Reactive Sulfide	<10	10	mg/kg	--	02/09/93	--	SW 7.3.4.2

ND Not detected at or above limit of detection
 < Not detected at or above limit of detection
 -- Information not available or not applicable

Results are reported on a wet weight basis, as received

Quality Assurance Results Summary
for
Clayton Project No. 93020.57

Clayton Lab Number: 9302085-378
Ext./Prep. Method: EPA9010
Date: 02/08/93
Analyst: MCN
Std. Source: BAKER 3080-1
Sample Matrix/Media: SOIL

Analytical Method: EPA9010
Instrument ID: 07487
Date: 02/09/93
Time: 01:
Analyst: MCN
Units: MG/KG

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (MRPD)
CYANIDE	ND	10.0	11.3	113	11.3	113	113	58	195	0.0	25

Quality Assurance Results Summary
for
Clayton Project No. 93020.57

Clayton Lab Number: 9302086-01A
Ext./Prep. Method: EPA7 3 4 2
Date: 02/08/93
Analyst: MCH
Std. Source: BAKER 611700
Sample Matrix/Media: SOIL

Analytical Method: EPA7 3 4 2
Instrument ID: 00008
Date: 02/09/93
Time: 01:
Analyst: MCH
Units: MG/KG

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (NRPD)
REACTIVE SULFIDE	ND	272	250	92	240	88	90	61	111	4.1	25

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Chain of Custody and Analysis Request

From: Superior Precision Analytical, Inc.
1555 Burke St. Unit I
San Francisco, CA 92124

Turn Around Time
 (circle one)
 Same Day 72 Hrs
 24 Hrs 5 Day
 48 Hrs 10 Day



Superior Precision Analytical, Inc.

P.O. Box 1545
 Martinez, California 94553

Phone No. (415) 647-2081 Fax No. (415) 821-7123

Contact: [Signature]
 P.O. No. 56026

Work Subcontracted to: Clayton

Section II: Analysis Request

Laboratory Sample Identification	S = Soil A = Air W = Water Matrix	CAM17	Metals:	418.1	8270	8080 (pest. and PCB's)	Reservatory	Client Sample Identification	Number of Containers	Preservative (yes or no)	Sampling Remarks
9302057 1 56026-1	SOIL						X	SP-1A-D	1		<input type="checkbox"/> Chevron <input checked="" type="checkbox"/> Non-Chevron <p style="text-align: center;">** Please Fax Results **</p> <p style="font-size: small;">Please fax and mail results to Superior SF Also invoice Superior SF.</p>
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Relinquished by <u>[Signature]</u> Organization <u>Superior SF</u>	Date/Time <u>2/3/83</u>	Received by <u>[Signature]</u> Organization <u>Superior SF</u>	Date/Time <u>2/3/83</u>	Lab please initial the following: Samples Stored in Ice <u>W</u> Appropriate Containers <u>Yes</u> Samples Preserved _____ VDAs without Headspace _____ Comments <u>Received at [Signature]</u> (Initials)
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____	
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____	

Project Number RCQ1906

Project Location PENSKE/OAKLAND

Laboratory SUPERIOR PRECISION, S.F.

Sampler(s)/Affiliation M.M. BESSETTE

D.A. YANTOS

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

* SP-1A-D S 2/2/93 1640

SAMPLE BOTTLE / CONTAINER DESCRIPTION																							
			ORGANIC LEAD	DHS LUFT	CORROSIVITY	REACTIVITY	IGNITABILITY	TPH-GASOLINE	BTEX	TPH-DIESEL	TOTAL												
			X	X	X	X	X	L	L		4 composite 4:1												
								Add per D instructions 2/3/93															
								unstructions 1/1/93															
								<table border="1"> <tr> <td>Sample Intact</td> <td>Yes</td> </tr> <tr> <td>Sample Stored in cool</td> <td>Yes</td> </tr> <tr> <td>Appropriate containers</td> <td>Yes</td> </tr> <tr> <td>Samples preserved</td> <td>N/A</td> </tr> <tr> <td>Labels without hazardous</td> <td>N/A</td> </tr> <tr> <td>Comments:</td> <td>OK</td> </tr> </table>				Sample Intact	Yes	Sample Stored in cool	Yes	Appropriate containers	Yes	Samples preserved	N/A	Labels without hazardous	N/A	Comments:	OK
Sample Intact	Yes																						
Sample Stored in cool	Yes																						
Appropriate containers	Yes																						
Samples preserved	N/A																						
Labels without hazardous	N/A																						
Comments:	OK																						
										Total No. of Bottles/Containers	4												

Sample Code: L = Liquid; S = Solid; A = Air

Relinquished by: <u>D.A. Yantos</u>	Organization: <u>GERAGHTY + MILLER</u>	Date: <u>2/3/93</u> Time: <u>12:23</u>	Seal Intact? <u>Yes</u>
Received by: <u>MORRIS</u>	Organization: <u>GERO</u>	Date: <u>2/3/93</u> Time: <u>10:23</u>	Seal Intact? <u>Yes</u>
Relinquished by: <u>N. Patten</u>	Organization: <u>SUPERIOR</u>	Date: <u>1/1/93</u> Time: <u>13:30</u>	Seal Intact? <u>Yes</u>
Received by: <u>N. Patten</u>	Organization: <u>SUPERIOR</u>	Date: <u>2/3/93</u> Time: <u>13:30</u>	Seal Intact? <u>Yes</u>

Special Instructions/Remarks: * Composite SP-1A-D 4:1 * GERAGHTY + MILLER, INC. MR. PAUL HEHN
1050 MARINA WAY S. (510) 233-3200 (OFFICE)
RICHMOND CA 94804 (510) 233-3204 (FAX)

In Person Common Carrier Lab Courier Other _____ SPECIFY



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

Project Number AL01904

Project Location Oakland

Laboratory Superior

Sampler(s)/Affiliation GS/AM

SAMPLE BOTTLE / CONTAINER DESCRIPTION

SAMPLE IDENTITY Code Date/Time Sampled Lab ID

TOTAL

SAMPLE IDENTITY	Code	Date/Time Sampled	Lab ID	SAMPLE BOTTLE / CONTAINER DESCRIPTION											TOTAL					
MN-4		2-4-97		X	X															
MN-5		2-4-97		X	X															

Please initial: RB
 Samples Stored in ice. ✓
 Appropriate containers. ✓
 Samples preserved. ✓
 Vials without headspace. ✓
 Comments: _____

Sample Code: (L) = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers

Relinquished by: <u>[Signature]</u>	Organization: <u>GS/AM</u>	Date <u>2/5/97</u> Time <u>12:56</u>	Seal Intact? Yes No N/A
Received by: <u>[Signature]</u>	Organization: <u>ARMO</u>	Date <u>2/5/97</u> Time <u>12:56</u>	Seal Intact? Yes No N/A
Relinquished by: <u>[Signature]</u>	Organization: <u>ARMO</u>	Date <u>2/5/97</u> Time <u>2:05</u>	Seal Intact? Yes No N/A
Received by: <u>[Signature]</u>	Organization: <u>SUPERIOR</u>	Date <u>2/5/97</u> Time <u>1:30</u>	Seal Intact? Yes No N/A

Special Instructions/Remarks: _____

Delivery Method: In Person Common Carrier Lab Courier Other

SPECIFY

SPECIFY



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.
[Signature] 1/12/93
Laboratory Director