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REPORT OF SUBSURFACE INVESTIGATION

11:00 AM
FRI OCT 11 1992

RODDING-CLEANING SERVICE
2585 Nicholson Street
San Leandro, CA

July 29, 1992

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I. INTRODUCTION

The site location is the Rodding-Cleaning Service facility in San Leandro, California. The location of the site is shown in Figure 1. In conjunction with the facility operation, the site has historically operated one underground fuel storage tank and one underground waste oil storage tank for a number of years.

The two underground storage tanks were removed from the site by Scott-Broadway in 1991. At the time of the removal, four soil samples and ~~two~~^{one} groundwater samples were collected from the two tank excavations. The results of the analysis of soil samples collected from the tank sidewalls indicated the presence of Diesel and Gasoline at concentrations of up to 470 mg/kg (ppm) and 1,400 mg/kg (ppm), respectively. In addition, the results of the groundwater sample analyses indicated the presence of Total Petroleum Hydrocarbons as Gasoline at concentrations of up to 38 mg/L (ppm).

The scope of work undertaken by Hageman-Aguilar, Inc., involved 1) the conduct of a soil sampling program in order to determine the lateral extent of subsurface soil contamination surrounding the locations of the former underground storage tanks, 2) the utilization of an on-site mobile laboratory in order to provide immediate laboratory data in the field during the soil investigation, 3) the backfilling of the existing underground tank excavation, and 4) the installation of one shallow groundwater monitoring ^{Well} at the perceived down-gradient location.

II. SITE DESCRIPTION

Hydrogeologic Setting

The soils beneath the site consist of Quaternary Alluvium overlying Franciscan bedrock (Geologic Map of California, San Francisco Sheet, State of California Division of Mines and Geology, 1980). Bedrock is likely to occur at a depth of greater than 50 feet beneath the site. On this portion of the low-lying Bay Plain in close proximity to San Francisco Bay, the soils beneath the site can be expected to consist primarily of fine grain soils (silts and clays), with the majority of shallow groundwater movement occurring in thin sand and gravel layers and/or "stringers".

Based upon the surface topography, as well as the various hydrologic features shown on the vicinity map, the general regional shallow groundwater can be expected to flow from the San Leandro Hills (area of groundwater recharge) and move southwesterly toward San Francisco Bay (area of discharge).

Site Description

Figure 2 is an aerial photograph of the property and surrounding area taken by Pacific Aerial Surveys, Oakland, California, on June 12, 1990. This photograph shows the condition of the subject site at the time of this most recent subsurface investigation, along with the locations of buildings on various neighboring properties.

A map of the site is shown in Figure 3. This map shows the

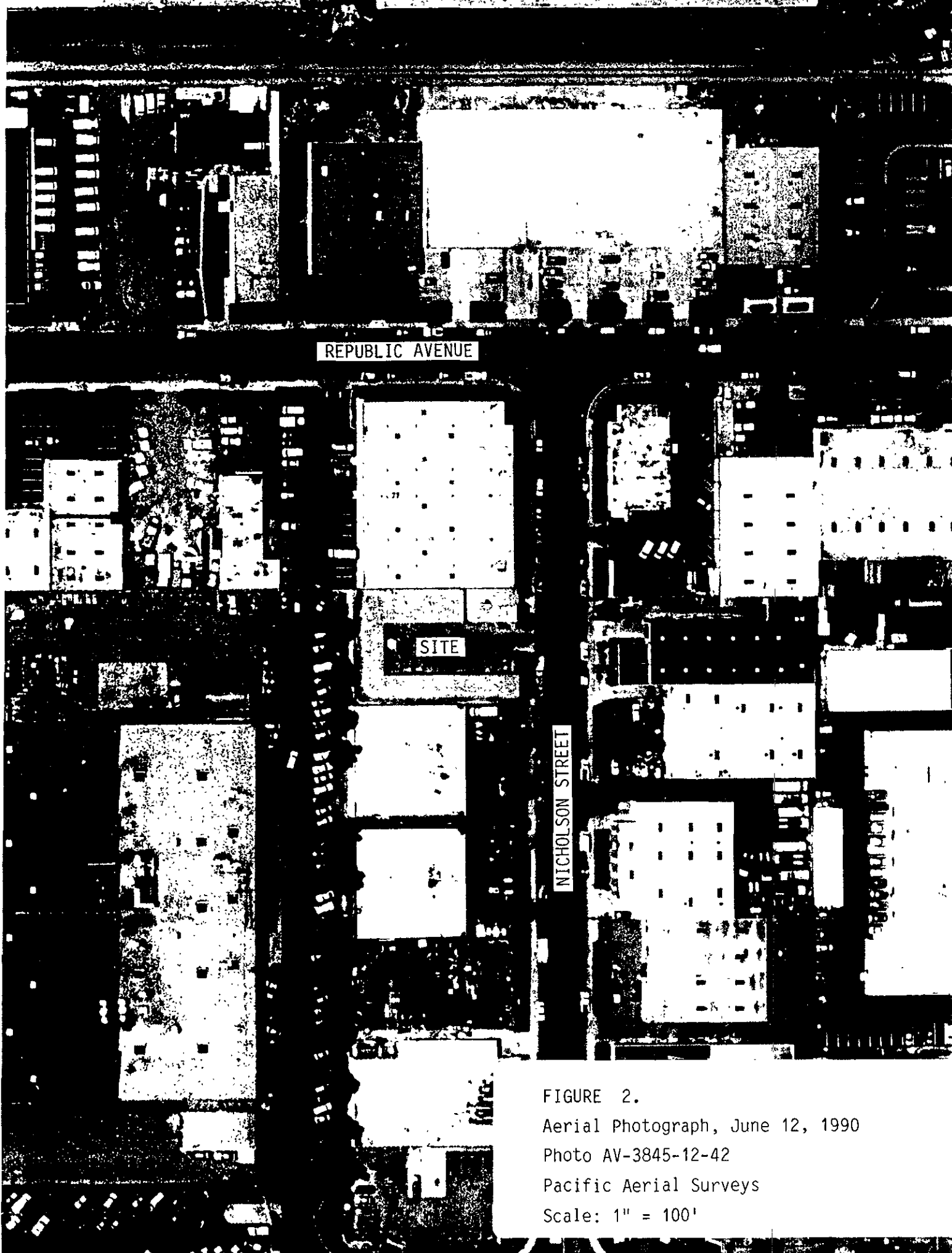


FIGURE 2.
Aerial Photograph, June 12, 1990
Photo AV-3845-12-42
Pacific Aerial Surveys
Scale: 1" = 100'

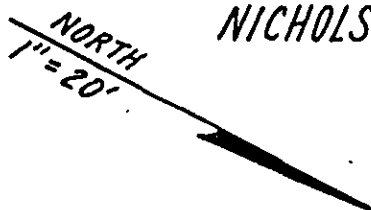
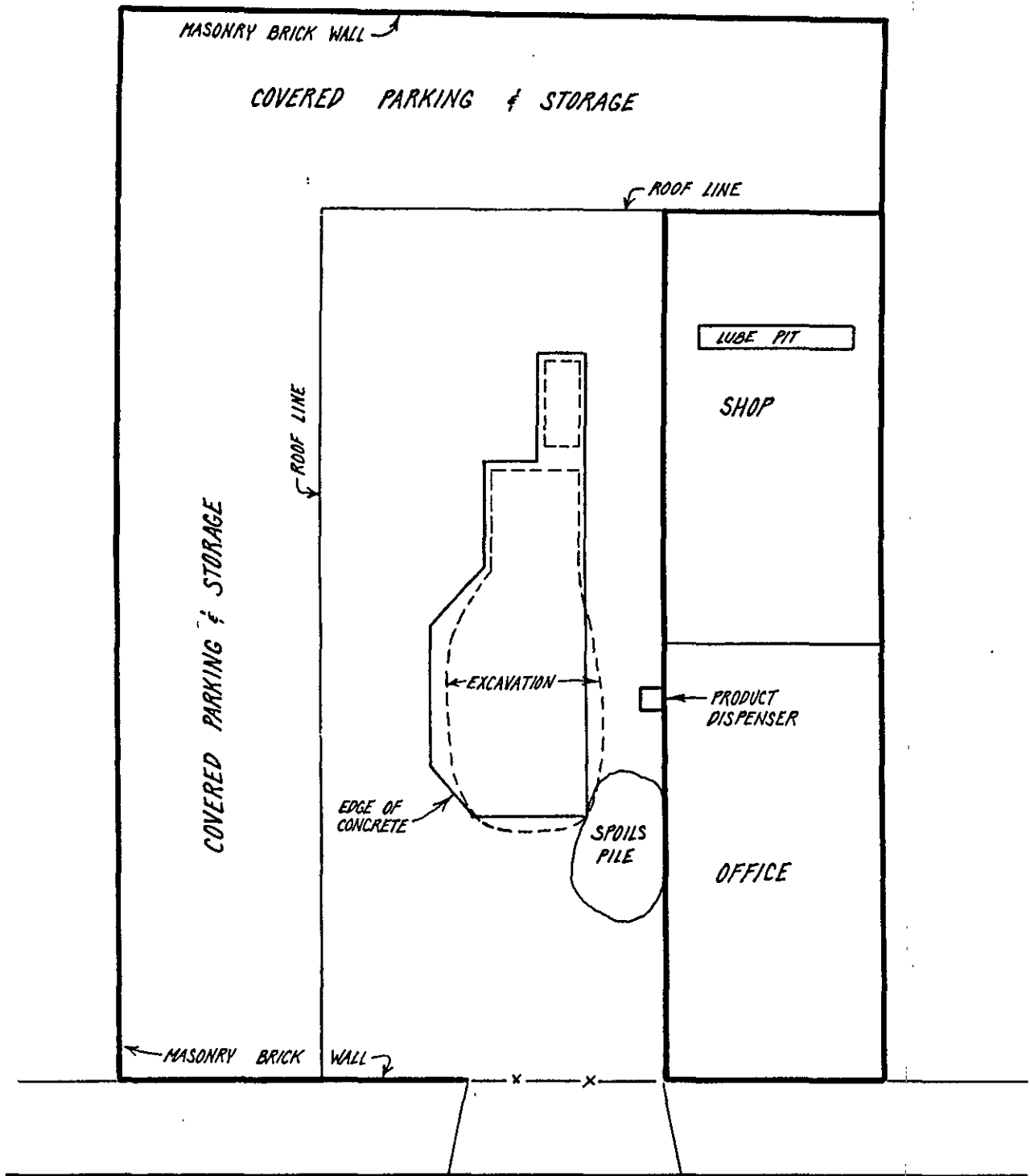


FIGURE 3. Site Map Showing Layout Prior to Subsurface Investigation.

layout of the facility, along with the location of the previous tank excavation. At the present time, the entire site is covered by concrete pavement.

III. SOIL INVESTIGATION

Soil Sampling

On May 15, 1992, nineteen soil borings were drilled on the property. The locations of the soil borings are shown on Figure 4.

Borings B-1 through B-18 were drilled by KL Drilling of Alameda, California, with a trailer-mounted drill rig using 4-inch solid stem augers. Due to access problems, boring B-19 was hand-augered by Hageman-Aguiar personnel. At each soil boring location, soil samples for chemical analyses were collected at the 4- and 6-foot depths by driving a split-barrel sampler fitted with brass liners. All samples were immediately brought to the on-site mobile laboratory where the sample was logged in for immediate commencement of sample extraction prior to IR analysis for Total Recoverable Hydrocarbons.

Boring Logs

The soil sampling operation was conducted under the supervision of Gary Aguiar (Registered Civil Engineer #34262). The boring logs are included as Attachment A.

As shown by the boring logs, the site is underlain by large amounts of clay. Shallow Groundwater was encountered in each of the borings at a depth of approximately 6.5 feet below the ground surface. The shallow groundwater appeared to be present in a sand & gravel layer that began somewhere near the 6-foot depth. A sieve analysis was performed on a

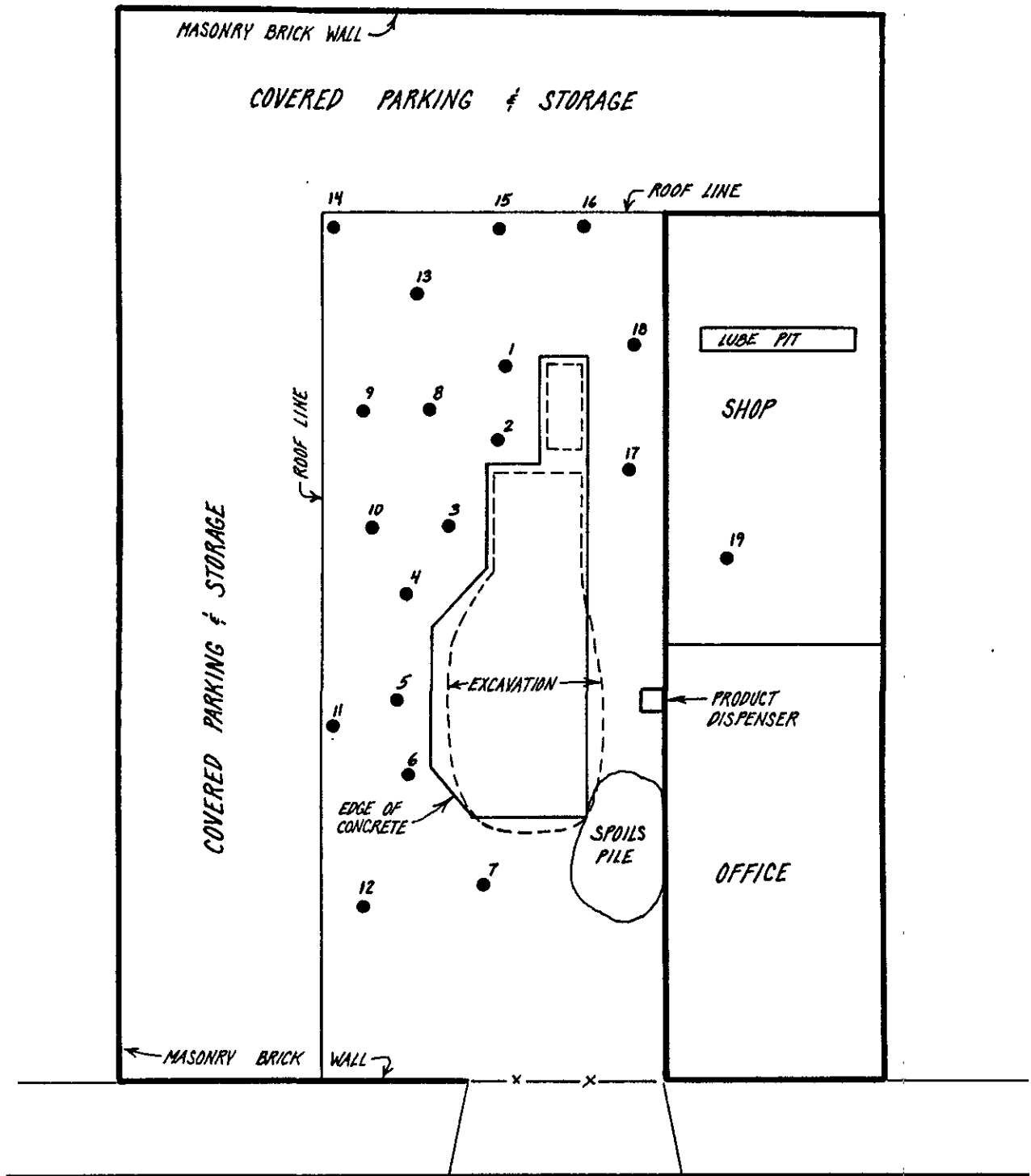


FIGURE 4.
Locations of Soil Borings.

composite sample of aquifer material from the various soil borings. The results of the analysis are presented in Attachment B.

Borehole Sealing

Following the completion of the soil sampling operation, each boring was filled with neat cement grout.

Results of Field Analyses

All analyses were conducted by a California State DOHS certified laboratory in accordance with EPA recommended procedures (Priority Environmental Laboratory, Milpitas, California). All soil samples collected during the subsurface investigation field operations were immediately analyzed in an on-site mobile laboratory for Total Recoverable Hydrocarbons by infrared spectroscopy (EPA Method 418.1).

The results of the soil sampling are presented in Tables 1. As shown in Table 1, the results of field laboratory analysis of samples collected from the soil borings indicated the presence of Total Recoverable Hydrocarbons at concentrations of up to 16,000 mg/kg (ppm).

Results of Laboratory Analysis

Following the completion of the field work, all of the soil samples were transported under chain of custody to the

TABLE 1.

Soil Sampling Results

EPA Method 418.1 (Infrared Spectroscopy)

Boring	Depth (feet)	Total Recoverable Hydrocarbons (mg/kg)
B-1	4	100
	6	5,800
B-2	4	250
	6	11,000
B-3	4	ND
	6	5,600
B-4	4	260
	6	9,500
B-5	4	ND
	6	4,200
B-6	4	59
	6	1,800
B-7	4	280
	6	1,300
DETECTION LIMIT		50

TABLE 1 (continued)

Soil Sampling Results

Boring	Depth (feet)	Total Recoverable Hydrocarbons (mg/kg)
B-8	4 6	170 7,100
B-9	4 6	230 6,600
B-10	4 6	ND 9,900
B-11	4 6	490 3,800
B-12	4 6	ND 1,800
B-13	4 6	ND 16,000
B-14	4 6	ND 7,500
DETECTION LIMIT		50

TABLE 1 (continued)

Soil Sampling Results

Boring	Depth (feet)	Total Recoverable Hydrocarbons (mg/kg)
B-15	4 6	ND 4,200
B-16	4 6	ND 3,400
B-17	4 6	ND 2,900
B-18	4 6	ND 2,800
B-19	4 6	300 2,000
DETECTION LIMIT		50

laboratory. Based upon the results of the field analyses, seven selected soil samples were analyzed by gas chromatography (EPA Method 8015) for Total Extractable Petroleum Hydrocarbons, Total Petroleum Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX).

As shown in Table 2, the concentrations of Gasoline found in the various samples coincide closely with the concentrations of Total Recoverable Hydrocarbons determined in the field.

Data Analysis

Figure 5 shows lines of equal concentration of Total Recoverable Hydrocarbons in the subsurface soils beneath the site at the 4-foot depth. These data are indicative of concentrations of petroleum hydrocarbons in the soil above the shallow groundwater table (unsaturated zone). As shown in Figure 5, the soil concentrations are obviously centered around the locations of the former underground tanks, and have apparently migrated laterally out in the unsaturated zone up to 20 feet from the previous tank locations. It should be noted that the Total Recoverable Hydrocarbons concentrations at this depth appear to be only somewhat elevated, with the highest value being 490 mg/kg (ppm) at the location of boring B-11.

Figure 6 shows lines of equal concentration of Total Recoverable Hydrocarbons in the subsurface soils beneath the site at the 6-foot depth. These data indicate significant Petroleum concentrations in the soil at the 6-foot depth, corresponding to a location immediately above the shallow groundwater table. The plot suggests that the Petroleum

TABLE 2.

Analysis by Gas Chromatography (EPA method 8015 and 8020)

Boring	Depth (feet)	Total Recoverable Petroleum Hydrocarbons (mg/Kg) <i>418.1</i>	TPH as Gasoline (mg/Kg)	TPH as Kerosene (mg/Kg)	TPH as Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl- benzene (ug/Kg)	Total Xylenes (ug/Kg)	Motor Oil (mg/Kg)
B-2	4	250	270	ND	8.6	1,300	1,700	1,800	4,900	ND
B-6	4	59	280	ND	ND	780	1,000	1,000	3,900	ND
B-7	4	280	340	ND	280	1,500	1,900	1,600	6,200	ND
B-8	4	170	240	ND	ND	950	1,200	1,300	4,700	ND
B-9	4	230	230	ND	17	1,200	1,600	1,700	6,200	ND
B-11	4	490	360	ND	86	600	1,200	1,500	5,100	ND
B-19	4	300	440	ND	40	680	1,200	1,600	6,300	ND
Detection Limit		50	1.0	1.0	1.0	5.0	5.0	5.0	5.0	10

ND = Not Detected

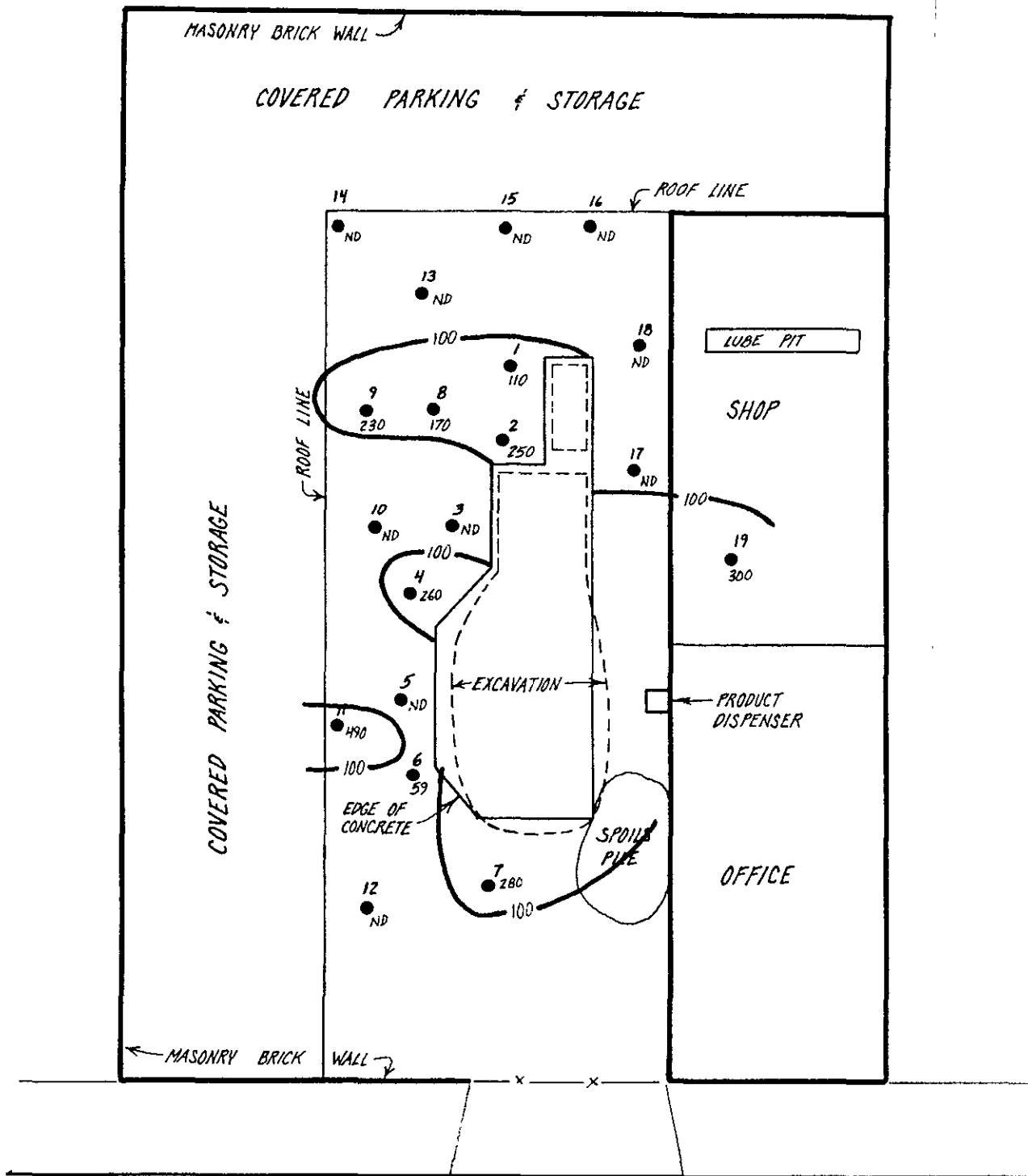


FIGURE 5. Lines of Equal Concentration of Total Recoverable Hydrocarbons in mg/Kg (ppm) in the Soil at 4-foot Depth.

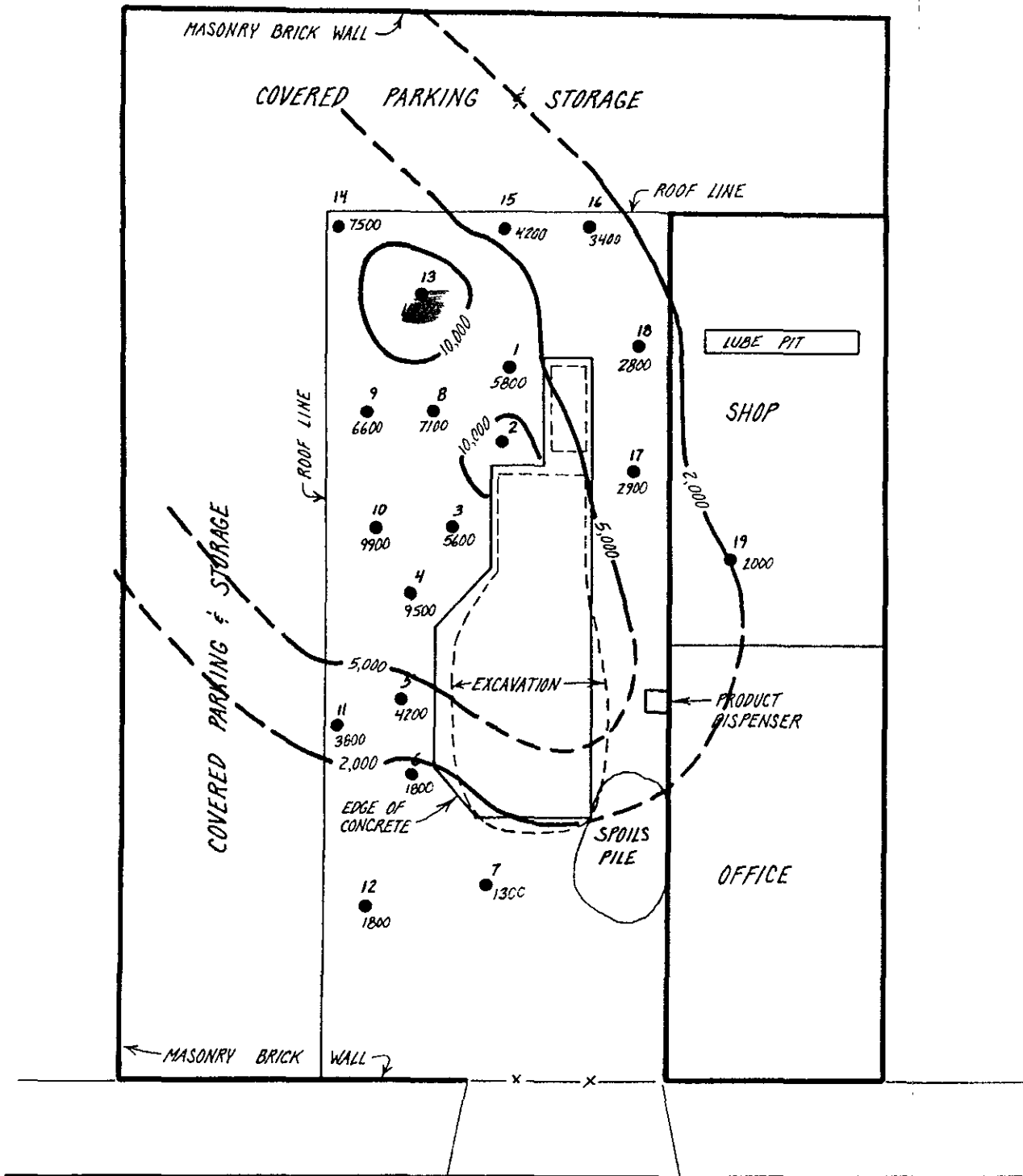


FIGURE 6. Lines of Equal Concentration of Total Recoverable Hydrocarbons in mg/Kg (ppm) in the Soil at 6-foot Depth.

Hydrocarbon concentrations are centered around the locations of the former underground storage tanks, and that the concentrations have "spread out" toward the south, consistent with the mechanism of longitudinal dispersion in the direction of the shallow groundwater flow. The data clearly indicate a well-defined plume of petroleum concentrations migrating to the south, either floating on top of, or dissolved within the shallow groundwater. Any free-product migration can be expected to occur within the capillary fringe above the shallow water table.

Waste Generation

All drill cuttings were stockpiled on-site and covered with plastic sheeting, until the results of laboratory analyses were obtained. The disposal of the drill cuttings were the responsibility of the property owner (waste generator), and beyond the scope of work as described in this report.

IV. EXCAVATION BACKFILL

Following the soil investigation, it appeared that further excavation around the tank pit would not be practical due to the apparently extensive down-gradient migration of petroleum concentrations, either floating on top of, or dissolved within the shallow groundwater. In addition, the petroleum hydrocarbons concentrations within the unsaturated zone immediately adjacent to the tank excavation appeared to be only somewhat elevated.

On May 26, 1992, the excavation was backfilled with pea gravel. The backfill was capped with approximately one foot of Class II base rock, followed by concrete pavement.

V. GROUNDWATER INVESTIGATION

Monitoring Well Installation

The location of the monitoring well is shown in Figure 7. The location was selected based upon the expected shallow groundwater flow direction, based both upon the expected regional hydrogeology and the results of the previous soil sampling program (delineation of contaminant plume).

On June 2, 1992, the shallow groundwater monitoring wells were installed on the site (well MW-1). The well was installed with a truck-mounted drill rig using 12-inch hollow-stem augers. The borings were drilled by Gregg Drilling, Concord, CA. During the drilling for the monitoring wells, soil samples for chemical analyses were collected at 5-foot intervals until a saturated zone was encountered. The ends of one brass liner from each drive were sealed with teflon film, over which was placed a plastic end-cap. The end-cap was then sealed onto the brass tube with clean plastic adhesive tape. All samples were immediately placed on ice, then transported under chain-of-custody to the laboratory upon completion of the field work.

Well MW-1 was cased with 15 feet of 6-inch PVC slotted screen pipe (0.02" slots) and completed to a depth of 19 feet below the ground surface. The larger well casing diameter was selected in order that the well could be utilized for successful free product recovery, should the need arise.

The annular space of well MW-1 was packed with #3 Monterey sand to approximately one foot above the top of the screened section. Approximately one-half foot of wetted bentonite

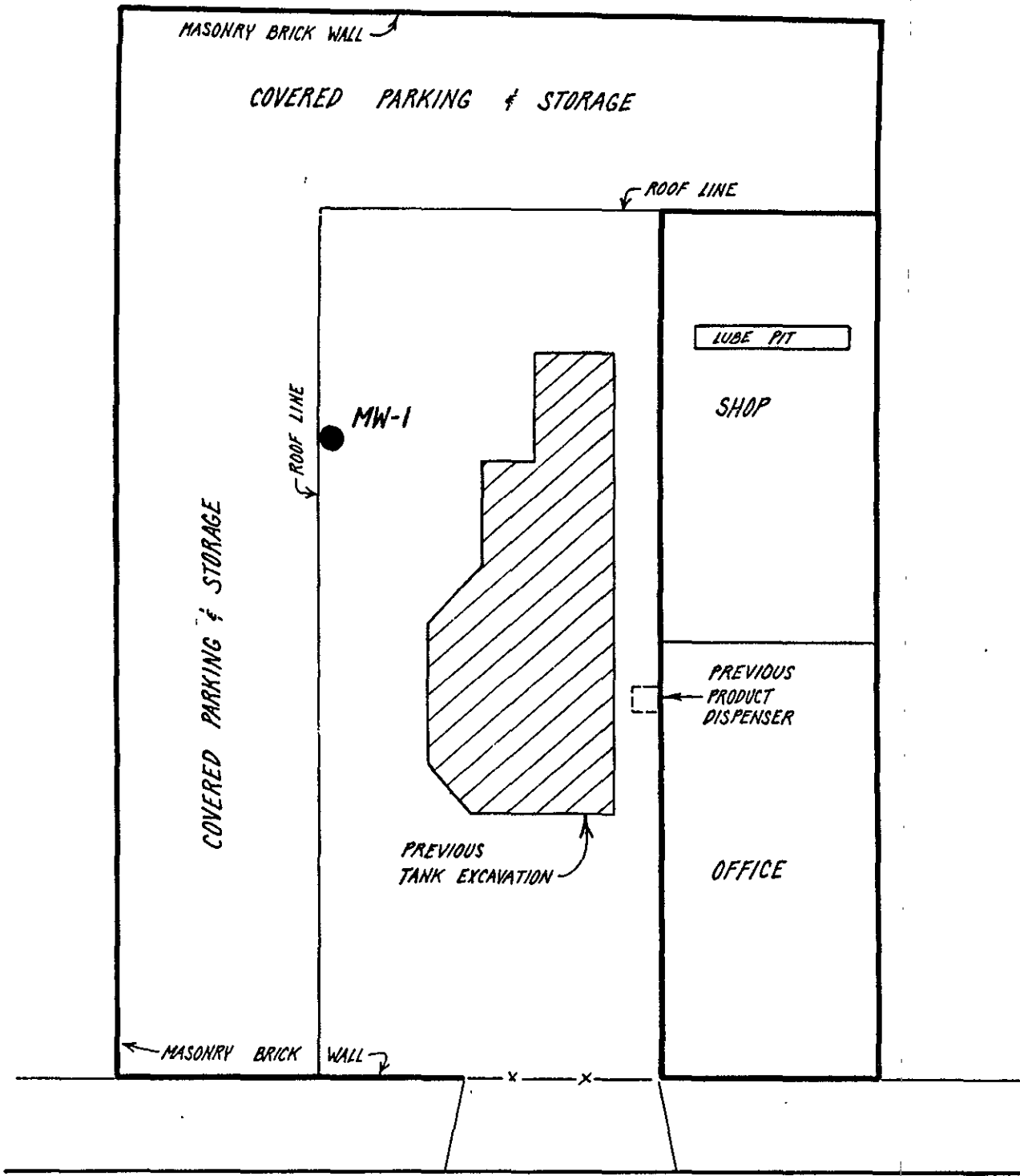


FIGURE 7.
Location of Monitoring Well.

pellets were placed upon the sand pack, followed by a neat cement grout seal up to the ground surface. The well was fitted with a water-tight locking cap and a water-tight steel traffic lid.

A well construction diagram for the monitoring well is included in Attachment D. Also included in Attachment D is a copy of the well permit issued by Zone-7, Alameda County Flood Control and Water Conservation District.

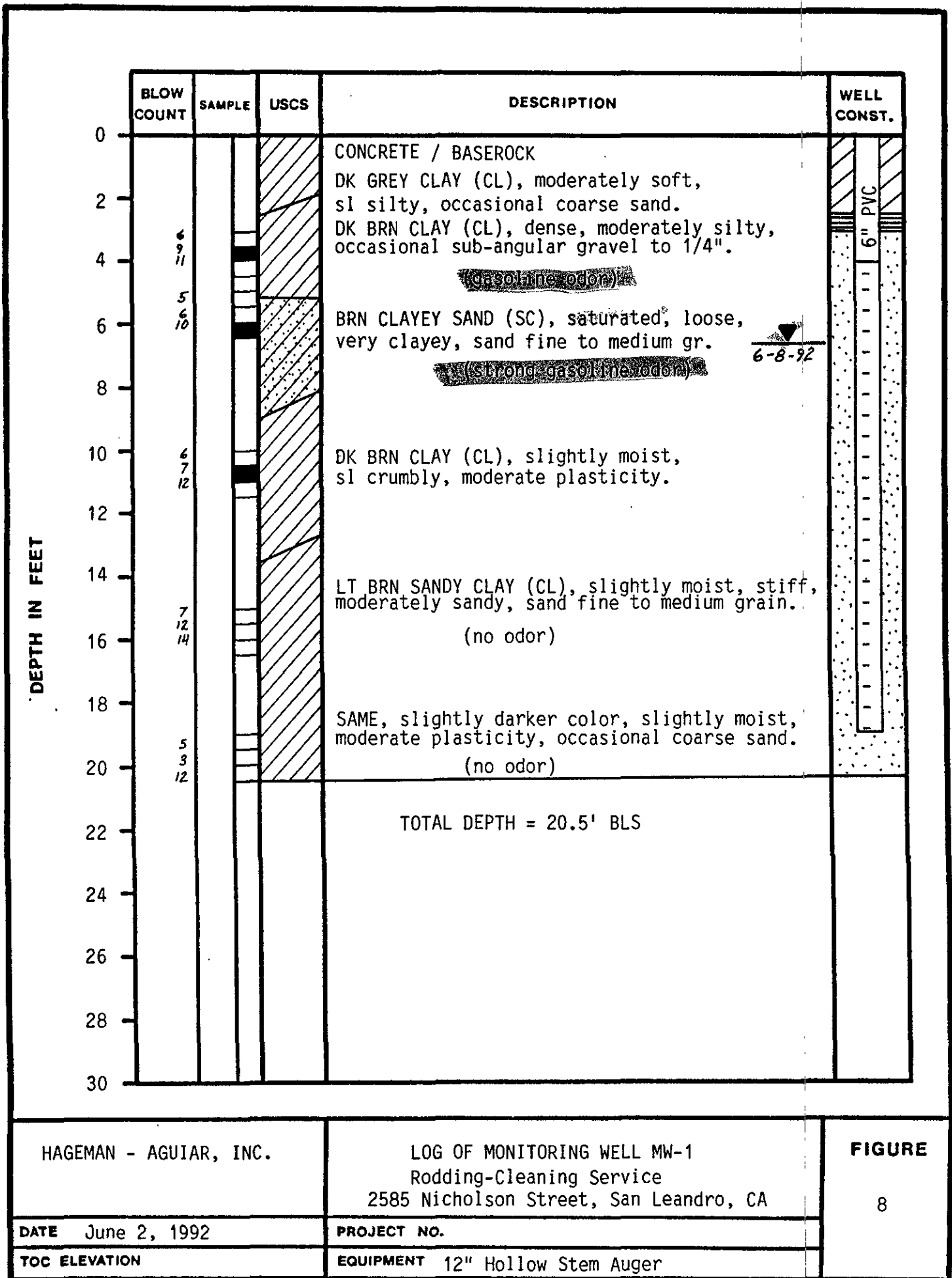
Boring Log

The monitoring well boring was logged in the field by Gary Aguiar, Registered Civil Engineer #34262. The boring log for monitoring well MW-1 is shown as Figure 8.

Monitoring Well Sampling

On June 4, 1992, the newly installed monitoring well MW-1 was developed. During the development of the well, groundwater was pumped using a stainless steel air-lift pump and a 4" PVC hand bailer. During the well development, the well was periodically surged using the hand bailer in an attempt to remove silt and thereby achieve good well development.

Prior to groundwater sampling on June 8, 1992, the well was purged by bailing approximately 5 casing volumes of water. Field conductivity, temperature, and pH meters were present on-site during the monitoring well sampling. As the purging process proceeded, the three parameters were monitored. Purging continued until readings appeared to have reasonably



stabilized. After the water level in the well had attained 80% or more of the original static water level, a groundwater sample was collected using a clean teflon bailer. The water samples were placed inside appropriate 40 mL VOA vials and 1 liter amber bottles free of any headspace. The samples were immediately placed on crushed ice, then transported under chain-of-custody to Priority Environmental Laboratory in Milpitas by the end of the work day.

At the time the monitoring well was sampled, the following information was recorded in the field: 1) depth-to-water prior to purging, using an electrical well sounding tape, 2) identification of any floating product, sheen, or odor prior to purging, using a clear teflon bailer, 3) sample pH, 4) sample temperature, and 5) specific conductance of the sample.

Copies of the monitoring development and sampling logs are included as Attachment E.

Water Level Measurement.

The shallow groundwater elevation in MW-1 was measured as 6.62 feet below ground surface on June 8, 1992.

Decontamination

Prior to the installation of each well, all drilling equipment, including augers, drill stem, and split barrel samplers, was steam-cleaned.

Waste Generation

All drill cuttings were stockpiled on-site and covered with plastic sheeting, until the results of laboratory analyses were obtained. The disposal of the drill cuttings were the responsibility of the property owner (waste generator), and beyond the scope of work as described in this report.

All water removed from the wells during development and purging was drummed and stored on-site until the results of laboratory analyses were obtained. Based upon these results, the water should be sewered (if possible) as a non-hazardous liquid waste in accordance with local sewerage agency permit requirements, or else it should be transported as a hazardous liquid waste under proper manifest to an appropriate TSD facility for treatment and disposal. The disposal of wastewater is the responsibility of the property owner (waste generator), and is beyond the scope of work as described in this report.

Laboratory Analysis

All analyses were conducted by a California State DOHS certified laboratory in accordance with EPA recommended procedures.

All soil samples were analyzed for 1) Total Petroleum Hydrocarbons as Gasoline (EPA method 8015), 2) Total Extractable Petroleum Hydrocarbons (EPA method 8015) and 3) Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA method 8020).

All Groundwater samples were analyzed for 1) Total Petroleum Hydrocarbons as Gasoline (EPA method 8015), 2) Total

Petroleum Hydrocarbons as Diesel (EPA method 8015) and
3) Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA
method 602).

Analytical Results: Soil

Table 3 presents the results of the laboratory analysis of the soil samples collected during the monitoring well installation. A copy of the laboratory certificate for the soil sample analyses is included in Attachment F.

As shown in Table 3, there appears to be significant Gasoline concentrations in the soil at the 6-foot depth, corresponding to a location immediately above the shallow groundwater table. TPH as Gasoline and Benzene were detected in the soil at concentrations of 11,000 mg/kg (ppm) and 32,000 µg/kg (ppb), respectively. These concentrations are indicative of down-gradient migration of Gasoline contamination from the previous underground storage tank locations.

TPH as Diesel was detected in the soil at the 6-foot depth at a concentration of 190 mg/kg (ppm).

Analytical Results: Groundwater

Table 4 presents the results of the laboratory analysis of the groundwater sample collected from monitoring well MW-1. A copy of the laboratory certificate for the water sample analyses is included in Attachment F.

As shown in Table 4, Gasoline was detected in the sample collected from well MW-1 at the concentration of 10,000 µg/L

TABLE 3.

Soil Sampling Results

(Monitoring Well Installation)

Boring	Depth (feet)	TPH as Gasoline (mg/Kg)	TPH as Kerosene (mg/Kg)	TPH as Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl- benzene (ug/Kg)	Total Xylenes (ug/Kg)	Motor Oil (mg/Kg)	Oil & Grease (mg/Kg)
MW-1	4 6	18 11,000	ND ND	ND 190	200 32,000	180 59,000	22 44,000	760 17,000	ND ND	ND ND
Detection Limit		1.0	1.0	1.0	5.0	5.0	5.0	5.0	10	10

ND = Not Detected

TABLE 4.

Shallow Groundwater Sampling Results

Well	Date	TPH as Diesel (ug/L)	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl- benzene (ug/L)	Total Xylenes (ug/L)
MW-1	06-08-92	ND	10,000	110	81	62	280
Detection Limit		50	0.5	0.5	0.5	0.5	0.5

ND = not detected

(ppb). In addition, Benzene was detected in the sample collected from well MW-1 at a concentration of 110 $\mu\text{g/L}$ (ppb).

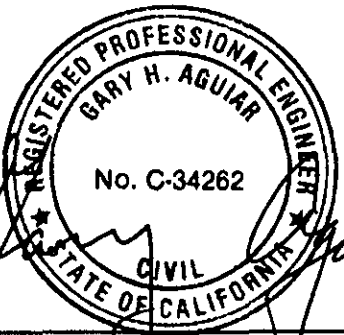
As shown in Table 4, no detectable concentration of Diesel was found in the shallow groundwater sample.

VI. CONCLUSIONS

1. Shallow groundwater is present beneath the site at a depth of approximately 6.5 feet below the ground surface.
2. The Total Recoverable Hydrocarbon concentration data collected during the soil investigation clearly indicate a well-defined plume of petroleum concentrations migrating to the south, either floating on top of, or dissolved within the shallow groundwater.
3. The Total Recoverable Hydrocarbon concentration data (plume definition) indicate that the shallow groundwater flow beneath the site is in the southerly direction.
4. TPH as Gasoline was detected in the shallow groundwater sample collected from well MW-1 at the concentration of 10,000 $\mu\text{g/L}$ (ppb).
5. Benzene was detected in the shallow groundwater sample collected from well MW-1 at a concentration of 110 $\mu\text{g/L}$ (ppb).
6. No detectable concentration of Diesel was found in the shallow groundwater sample collected from well MW-1.

REPORT OF SUBSURFACE INVESTIGATION
RODDING-CLEANING SERVICE
2585 Nicholson Street, San Leandro, CA.

July 29, 1992



[Handwritten Signature]

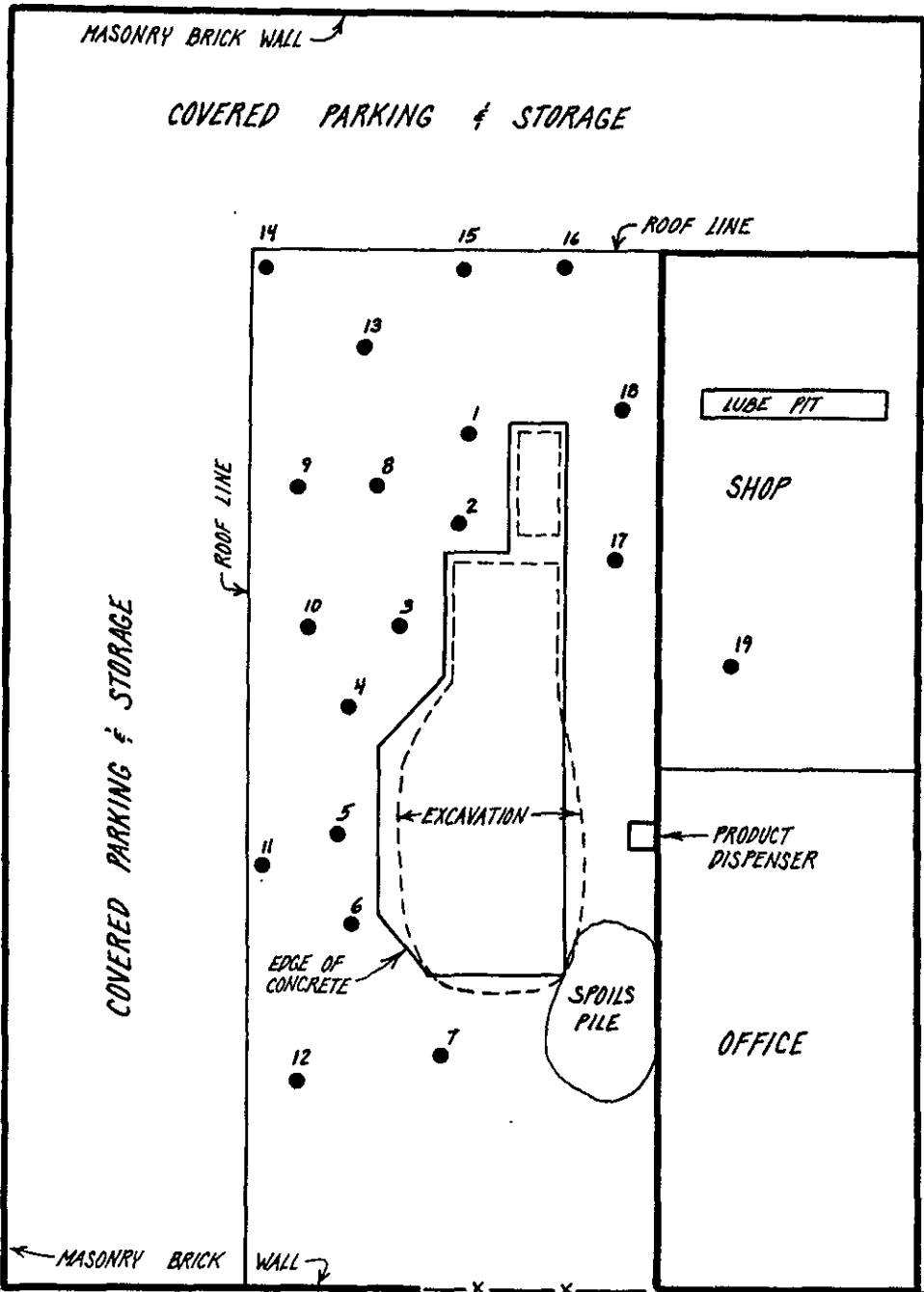
Gary Aguiar RCE 34262

[Handwritten Signature]

Bruce Hageman

ATTACHMENT A

BORING LOGS



NORTH
1" = 20'

NICHOLSON STREET

LOCATION OF BORING

SEE SITE MAP

PROJECT NAME & LOCATION

RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO

DRILLING METHOD:

6" SOLID STEM AUGER

CME - 45 DRILL RIG

SAMPLING METHOD:

2" SPLIT BARREL SAMPLER

WITH BRASS LINERS

WATER LEVEL

TIME

DATE

CASING DEPTH

SCREEN

BORING

B - 1

SHT

1 of 1

DRILLING

START

TIME

0745

DATE

5/15/92

FINISH

TIME

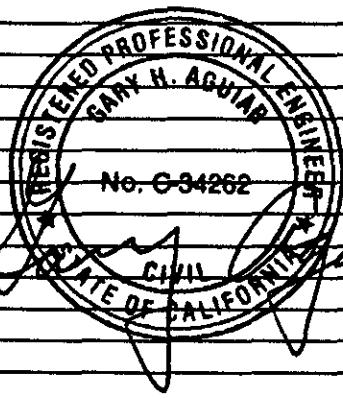
0800

DATE

5/15/92

SCALE: 1" =

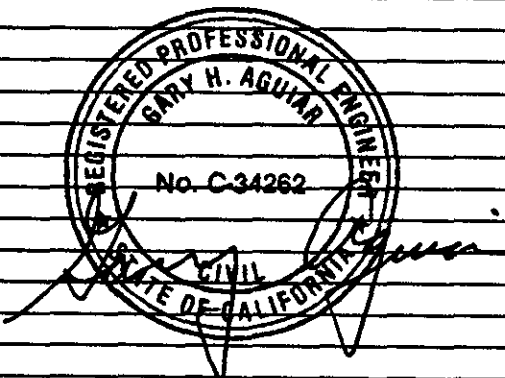
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK GREY SAND (FILL/BASE)
					2		DK BRN CLAY (CL), NEARLY DRY, STIFF, OCCASIONAL COARSE SAND
					3		
2" SPLIT	18	16	2 1/8	0750	4		SAME (RETRODUCED)
					5		BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN, MODERATELY CLAYEY
2" SPLIT	18	18	4 1/8	0800	6		GREY BRN SAND & GRAVEL (GW), SATURATED, LOOSE, SAND FINE TO MEDIUM, GRAVEL MEDIUM GRAIN
					7		
					8		(RETRODUCED)
					9		
					0		TOTAL DEPTH = 6 1/2' BLS
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION RODDING CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD: 6" SOLID STEM AUGER CME - 45 DRILL RIG	BORING B - 2
SAMPLING METHOD: 2" SPLIT BARREL SAMPLER WITH BRASS LINERS		SHT 1 of 1
WATER LEVEL		DRILLING
TIME		START TIME
DATE		FINISH TIME
CASING DEPTH	SCREEN	DATE
		5/15/92 5/15/92

SCALE: 1" =

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), SLIGHTLY MOIST, STIFF, OCCASIONAL SUB-ANGULAR GRAVEL TO 1/2"
					2		
					3		
2" SPLIT	18	18	5/10/8	0807	4		SAME (SLIGHT PETROLEUM ODDOR)
					5		
2" SPLIT	18	18	5/8/6	0812	6		GREY BRN CLAYEY SILT (ML), MOIST GREY SAND & GRAVEL (GW), SATURATED, (STRONG GASOLINE ODDOR)
					7		
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



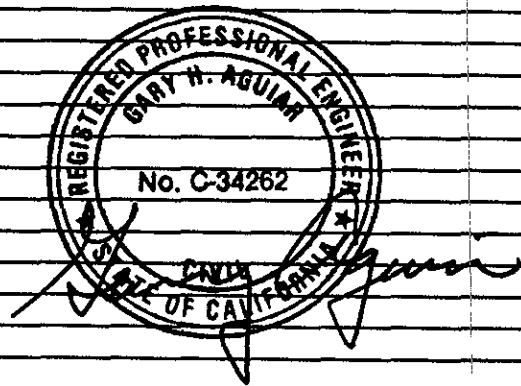
LOCATION OF BORING
SEE SITE MAP

PROJECT NAME & LOCATION
RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO

DRILLING METHOD:		BORING	
6" SOLID STEM AUGER		B-4	
CME - 45 DRILL RIG		SHT	
SAMPLING METHOD:		1 of 1	
2" SPLIT BARREL SAMPLER		DRILLING	
WITH BRASS LINERS		START	FINISH
WATER LEVEL		TIME	TIME
TIME		0830	0845
DATE		DATE	DATE
CASING DEPTH		5/15/92	5/15/92
	SCREEN		

SCALE: 1" =

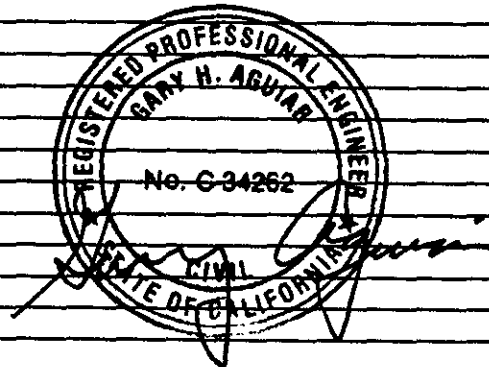
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		BRN SAND & GRAVEL (BASEROCK)
					2		
					3		DK BRN CLAY (CL), NEARLY DRY, STIFF, OCCASIONAL COARSE SAND
2" SPT	18	18	4/6/11	0840	4		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
					5		
2" SPT	18	18	3/4/7	0845	6		GREY SAND (SP), SATURATED, FINE GRAIN, SLIGHTLY CLAYEY, OCCASIONAL ROUNDED GRAVEL TO 1"
					7		
					8		(STRONG GASOLINE ODOR)
					9		
					10		TOTAL DEPTH = 6 1/2' BLS
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		



LOCATION OF BORING SEE SITE MAP		PROJECT NAME & LOCATION RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
		DRILLING METHOD: 6" SOLID STEM AUGER CME - 45 DRILL RIG	BORING B - 5
		SAMPLING METHOD: 2" SPLIT BARREL SAMPLER WITH BRASS LINERS	SHT 1 of 1
		WATER LEVEL	DRILLING
		TIME	START TIME 0850
		DATE	FINISH TIME 0900
		CASING DEPTH	DATE 5/15/92
		SCREEN	DATE 5/15/92

SCALE: 1" =

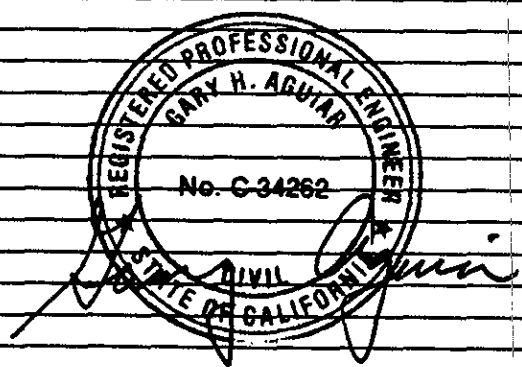
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		
					2		DK BRN CLAY (CL), NEARLY DRY, STIFF
					3		
2" SPLIT	18	18	4/5/12	0855	4		SAME (SLIGHT PETROLEUM ODOR)
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2" SPLIT	18	18	4/4/3	0900	6		GREY SAND (SP), SATURATED, FINE GRAIN SLIGHTLY CLAYEY
					7		
					8		(CASOLINE ODOR)
					9		
					0		TOTAL DEPTH = 6 1/2' BLS
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION		RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD:		BORING	
	6" SOLID STEM AUGER		B - 6	
	CME - 45 DRILL RIG		SHT	
	SAMPLING METHOD:		1 of 1	
	2" SPLIT BARREL SAMPLER		DRILLING	
	WITH BRASS LINERS		START	FINISH
	WATER LEVEL		TIME	TIME
	TIME		0900	0915
	DATE		DATE	DATE
CASING DEPTH		5/15/92	5/15/92	
	SCREEN			

SCALE: 1" =

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), VERY STIFF
					2		
					3		
2" SAT	18	18	4/6/10	0907	4		SAME, SLIGHTLY MOIST, VERY STIFF (SIGHTLY RETRODUCED)
2" SPLIT	18	0	LOST SAMPLE		5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
			COLLECT GRAB SAMPLE	0915	6		GREY SAND (SP), SATURATED, FINE GRAIN, SLIGHTLY CLAYEY
					7		
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING

SEE SITE MAP

PROJECT NAME & LOCATION

RODDING- CLEANING, 2585 NICHOLSON ST. SAN LEANDRO

DRILLING METHOD:

6" SOLID STEM AUGER

CME - 45 DRILL RIG

SAMPLING METHOD:

2" SPLIT BARREL SAMPLER

WITH BRASS LINERS

WATER LEVEL

TIME

DATE

CASING DEPTH

SCREEN

BORING

B- 7

SHT

1 of 1

DRILLING

START

TIME

0925

DATE

5/15/92

FINISH

TIME

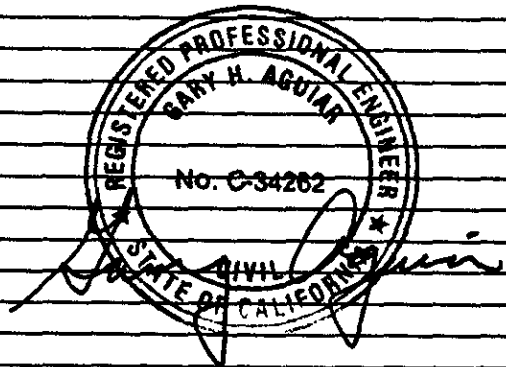
0935

DATE

5/15/92

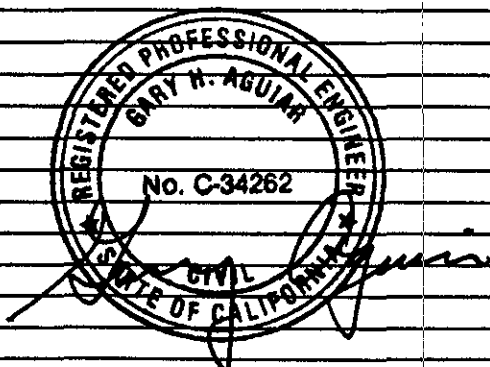
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SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		
					2		DK BRN CLAY (CL), SLIGHTLY MOIST, STIFF
					3		
2" SPLIT	18	18	4/6/8	0930	4		(NO ODOR)
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2" SPLIT	18	18	4/5/6	0935	6		DK GREY SAND (SP), SATURATED, COARSE GRAIN (STRONG GASOLINE ODOR)
					7		
					8		
					9		
					10		TOTAL DEPTH = 6 1/2' BLS
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		



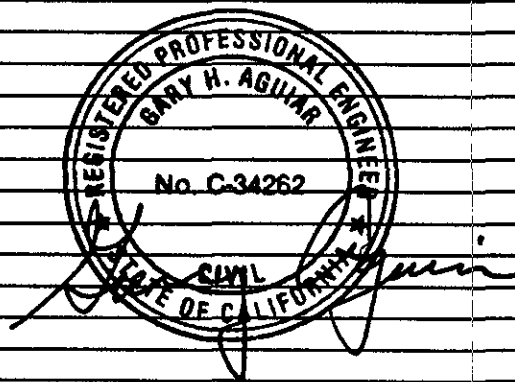
LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION RODDING - CLEANING. 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD: 6" SOLID STEM AUGER	BORING B - 8
	CME- 45 DRILL RIG	SHT 1 of 1
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER	DRILLING
	WITH BRASS LINERS	START TIME 0945
	WATER LEVEL	FINISH TIME 0955
	TIME	DATE 5/15/92
	DATE	DATE 5/15/92
	CASING DEPTH	SCREEN
	SCALE: 1" =	

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		GREY SAND (BASE)
					2		DK BRN CLAY (CL), STIFF
					3		
					4		SAME, SLIGHTLY MOIST (SLIGHT PETROLEUM ODOR)
2" SPLIT	18	18	4/6/8	0950	5		GREY BRN CLAYEY SAND (SM), MOIST VERY FINE GRAIN
2" SPLIT	18	18	3/3/5	0955	6		DK GREY CLAYEY SAND & GRAVEL (GW), SATURATED, SLIGHTLY CLAYEY
					7		
					8		(PETROLEUM ODOR)
					9		
					10		TOTAL DEPTH = 6 1/2' BLS
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD: 6" SOLID STEM AUGER CME - 45 DRILL RIG	BORING B - 9
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER WITH BRASS LINERS	SHT 1 of 1
	WATER LEVEL	DRILLING
	TIME	START TIME 1000
	DATE	FINISH TIME 1015
	CASING DEPTH	DATE 5/15/92
	SCREEN	DATE 5/15/92
	SCALE: 1" =	

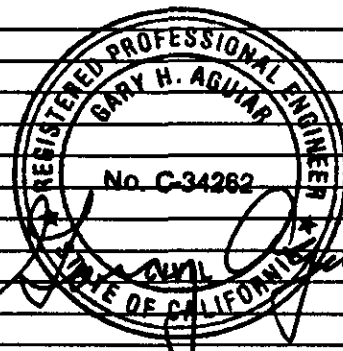
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		SAME, SLIGHTLY MOIST
2" SPLIT	18	18	5/6/10	1005	4		THIN SANDY LAYER
					5		
2" SPLIT	18	18	3/3/3	1012	6		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
					7		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, (GASOLINE ODOR)
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION	
	RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD:	BORING
	6" SOLID STEM AUGER	B - 10
	CME - 45 DRILL RIG	SHT
	SAMPLING METHOD:	1 of 1
	2" SPLIT BARREL SAMPLER	DRILLING
	WITH BRASS LINERS	START FINISH
WATER LEVEL	TIME TIME	
TIME	10/15 10/35	
DATE	DATE DATE	
CASING DEPTH	SCREEN	
	5/15/92 5/15/92	

SCALE: 1" =

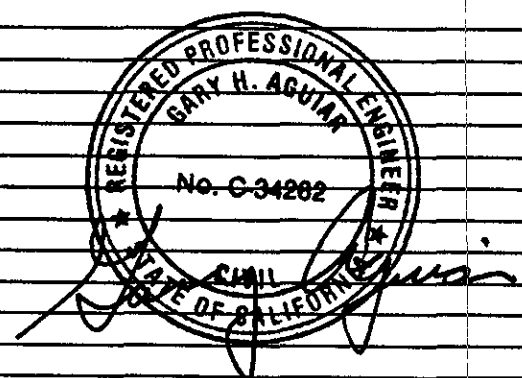
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK GREY BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		
					4		SAME, SLIGHTLY MOIST
2" SPLIT	18	18	4/6/8	1030	4		
					5		GREY BRN CLAYEY SAND (SM), SLIGHTLY MOIST, VERY FINE GRAIN
2" SPLIT	18	18	4/7/7	1035	6		
					7		DK GREY SAND (SP), SATURATED, FINE GRAIN, OCCASIONAL MEDIUM GRAIN
					8		(STRONG GASOLINE ODOR)
					9		
					0		TOTAL DEPTH = 6 1/2' BLS
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION		
	RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO		
	DRILLING METHOD:		BORING
	6" SOLID STEM AUGER		B - 11
	CME - 45 DRILL RIG		SHT
	SAMPLING METHOD:		1 of 1
	2" SPLIT BARREL SAMPLER		DRILLING
	WITH BRASS LINERS		START
	WATER LEVEL		FINISH
	TIME		1040
DATE		1055	
CASING DEPTH		DATE	
	SCREEN	5/15/92	

SCALE: 1" =

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		BRN SAND & GRAVEL (BASE)
					2		DK BRN CLAY (CL), NEARLY DRY, STIFF
					3		
					4		SAME, SLIGHTLY MOIST
2" SPLIT	18	18	3/4/8	1045	4		
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2" SPLIT	18	18	4/5/6	1055	6		
					7		GREY SAND & GRAVEL (GW), SATURATED, GRAVEL FINE GRAIN
					8		
					9		
					10		TOTAL DEPTH = 6 1/2' BLS
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		



LOCATION OF BORING

SEE SITE MAP

PROJECT NAME & LOCATION

RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO

DRILLING METHOD:

6" SOLID STEM AUGER

CME - 45 DRILL RIG

SAMPLING METHOD:

2" SPLIT BARREL SAMPLER

WITH BRASS LINERS

WATER LEVEL

TIME

DATE

CASING DEPTH

SCREEN

BORING

B - 12

SHT

1 of 1

DRILLING

START FINISH

TIME TIME

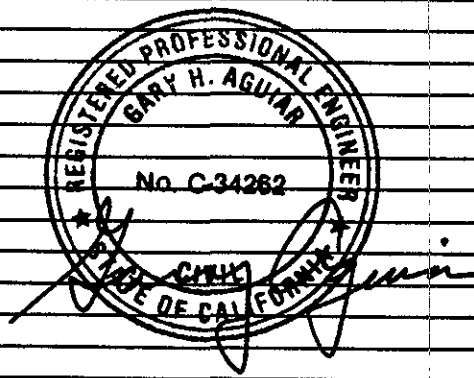
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DATE DATE

5/15/92 5/15/92

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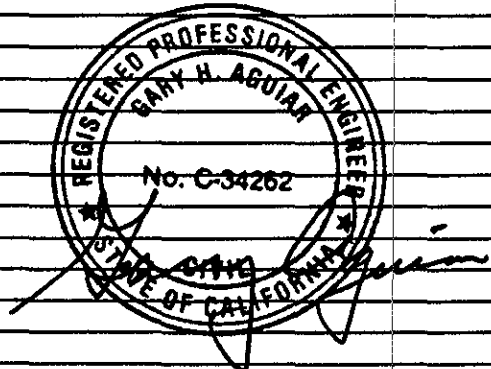
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH In feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		SAME, SLIGHTLY MOIST
2" SPLIT	18	18	4/6/7	1105	4		GREY BRN CLAYEY SAND (SM), MOIST VERY FINE GRAIN
					5		
2" SPLIT	18	18	—	1110	6		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, GRAVEL FINE GRAIN
					7		
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP		PROJECT NAME & LOCATION RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
		DRILLING METHOD: 6" SOLID STEM AUGER	BORING B - 13
		CME - 45 DRILL RIG	SHT
		SAMPLING METHOD: 2" SPLIT BARREL SAMPLER	1 of 1
		WITH BRASS LINERS	DRILLING
		WATER LEVEL	START
		TIME	TIME
		DATE	1130 1155
		CASING DEPTH	DATE
		SCREEN	5/15/92 5/15/92

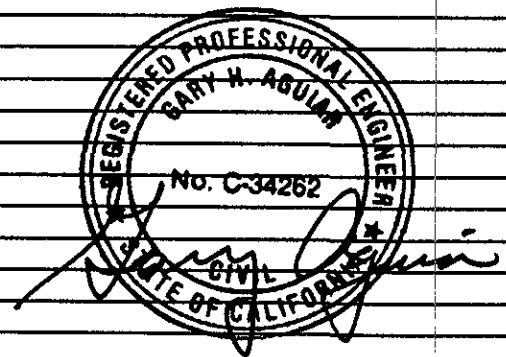
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SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		
2" SPLIT	18	18	3/6/8	1150	4		SAME, SLIGHTLY MOIST, OCCASIONAL ANGULAR & SUBANGULAR GRAVEL TO 1/2"
					5		GREY BRN CLAYEY SAND (SM), MOIST VERY FINE GRAIN
2" SPLIT	18	18	4/5/6	1155	6		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, GRAVEL FINE GRAIN
					7		
					8		TOTAL DEPTH = 6 1/2' BLS
					9		
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION		RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD:		BORING	
	6" SOLID STEM AUGER		B - 14	
	CME - 45 DRILL RIG		SHT	
	SAMPLING METHOD:		1 of 1	
	2" SPLIT BARREL SAMPLER		DRILLING	
	WITH BRASS LINERS		START	FINISH
	WATER LEVEL		TIME	TIME
	TIME		1200	1215
	DATE		DATE	DATE
CASING DEPTH		SCREEN		
SCALE: 1" =		5/15/92	5/15/92	

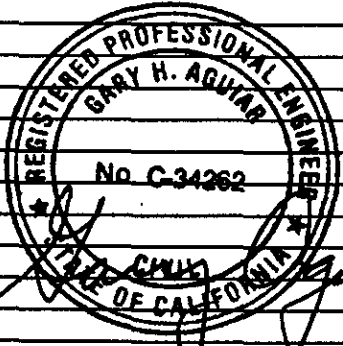
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		
2" SPLIT	18	18	4/6/8	1210	4		SAME, SLIGHTLY MOIST (NO ODOR)
2" SPLIT	18	18	3/4/5	1215	6		GREY BRN CLAYEY SAND (SM), MOIST VERY FINE GRAIN
					7		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, GRAVEL FINE GRAIN
					8		
					9		
					10		TOTAL DEPTH = 6 1/2' BLS
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION RODDING-CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD: 6" SOLID STEM AUGER	
	CME - 45 DRILL RIG	
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER	
	WITH BRASS LINERS	
	WATER LEVEL	
	TIME	
	DATE	
	CASING DEPTH	
	SCREEN	
BORING B - 15		
SHT 1 of 1		
DRILLING		
START	FINISH	
TIME 1215	TIME 1230	
DATE	DATE	
5/15/92	5/15/92	

SCALE: 1" =

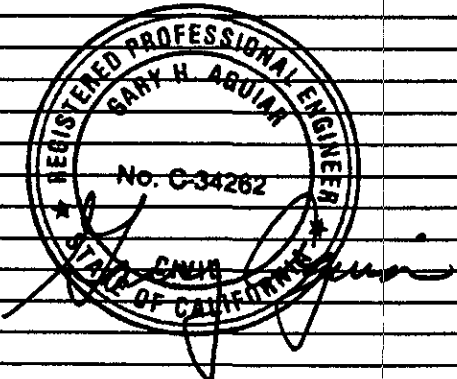
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		
					4		SAME, SLIGHTLY MOIST
2" SPT	18	18	4/18/12	1222	4		
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2" SPT	18	18	PUSH	1228	6		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, GRAVEL FINE GRAIN
					7		
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION			ST. SAN LEANDRO	
	RODDING - CLEANING, 2585 NICHOLSON			BORING	
	DRILLING METHOD:			B - 16	
	6" SOLID STEM AUGER			SHT	
	CME - 45 DRILL RIG			1 of 1	
	SAMPLING METHOD:			DRILLING	
	2" SPLIT BARREL SAMPLER			START	FINISH
	WITH BRASS LINERS			TIME	TIME
	WATER LEVEL			1230	1245
	TIME			DATE	DATE
DATE			5/15/92	5/15/92	
CASING DEPTH			SCREEN		

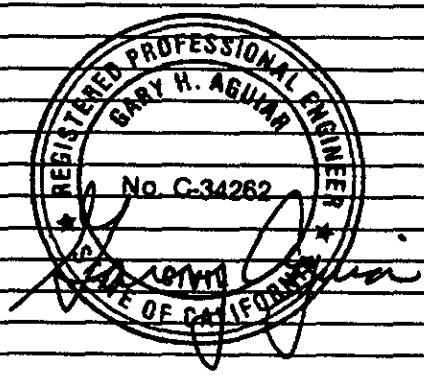
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SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		SAME, SLIGHTLY MOIST, STIFF
2" SPLIT	18	18	5/7/9	1237	4		
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2" SPLIT	18	18	PUSH	1245	6		GREY CLAYEY SAND & GRAVEL (GC), SATURATED GRAVEL FINE GRAIN
					7		
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION RODDING - CLEANING, 2585 NICHOLSON ST. SAN LEANDRO	
	DRILLING METHOD: 6" SOLID STEM AUGER CME - 45 DRILL RIG	BORING B - 17
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER WITH BRASS LINERS	SHT 1 of 1 DRILLING
	WATER LEVEL	START TIME 1255
	TIME	FINISH TIME 1310
	DATE	DATE
	CASING DEPTH	SCREEN
		5/15/92
		5/15/92
	SCALE: 1" =	

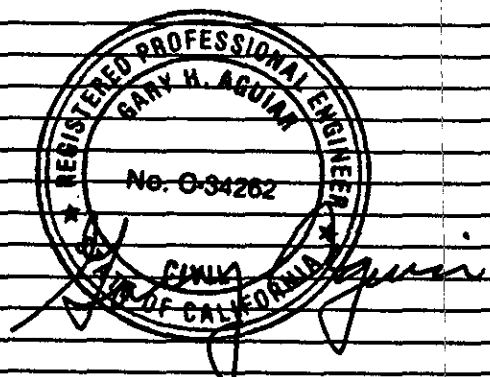
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH In feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		BRN SAND & GRAVEL (BASE)
					2		DK BRN CLAY (CL), NEARLY DRY, STIFF
					3		
					4		SAME, SLIGHTLY MOIST, STIFF (NO ODOR)
2" SPLIT	18	18	4/6/12	1300	4		
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2" SPLIT	18	18	PUSH	1310	6		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, GRAVEL FINE GRAIN
					7		
					8		
					9		TOTAL DEPTH = 6 1/2' BLS
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION			
	RODDING-CLEANING, 2585 NICHOLSON ST. SAN LEANDRO			
	DRILLING METHOD:			BORING
	6" SOLID STEM AUGER			B - 18
	CME - 45 DRILL RIG			SHT
	SAMPLING METHOD:			of
	2" SPLIT BARREL SAMPLER			DRILLING
	WITH BRASS LINERS			START TIME
WATER LEVEL			FINISH TIME	
TIME			1320	
DATE			1340	
CASING DEPTH			DATE	
SCREEN			5/15/92	

SCALE: 1" =

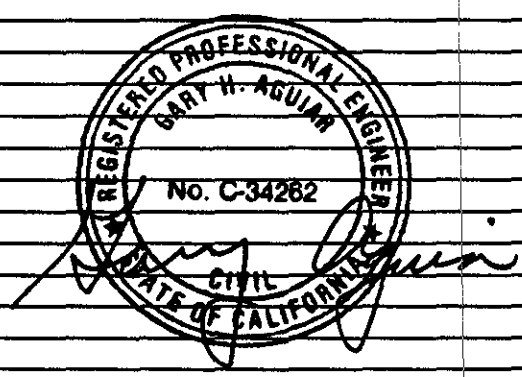
SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		
					3		SAME, SLIGHTLY MOIST
2" SPLIT	18	18	3/3/5	1330	4		
					5		GREY BRN CLAYEY SAND (SM), MOIST VERY FINE GRAIN
2" SPLIT	18	18	3/3/5	1340	6		GREY CLAYEY SAND & GRAVEL (GC), SATURATED, GRAVEL FINE GRAIN
					7		
					8		TOTAL DEPTH = 6 1/2' BLS
					9		
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



LOCATION OF BORING SEE SITE MAP	PROJECT NAME & LOCATION RODDING- CLEANING, 2585 NICHOLSON ST. SAN LEANDRO			
	DRILLING METHOD: 4" HAND AUGER			BORING B - 19
	CME - 45 DRILL RIG			SHT 1 of 1
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER			DRILLING
	WITH BRASS LINERS			START TIME 1345
	WATER LEVEL			FINISH TIME 1415
	TIME			DATE 5/15/92
	DATE			DATE 5/15/92
CASING DEPTH		SCREEN		

SCALE: 1" =

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		CONCRETE
					1		DK BRN CLAY (CL), NEARLY DRY, STIFF
					2		OCCASIONAL SUB-ANGULAR GRAVEL TO 1"
					3		
2"	6	6		1400	4		SAME, SLIGHTLY MOIST
					5		GREY BRN CLAYEY SAND (SM), MOIST, VERY FINE GRAIN
2"	6	6		1415	6		CONCRETE
					7		
					8		TOTAL DEPTH = 6' BLS
					9		
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		



ATTACHMENT B

SIEVE ANALYSIS

SIEVE ANALYSIS

Rodding-Cleaning Service

Aquifer Material at 6 feet

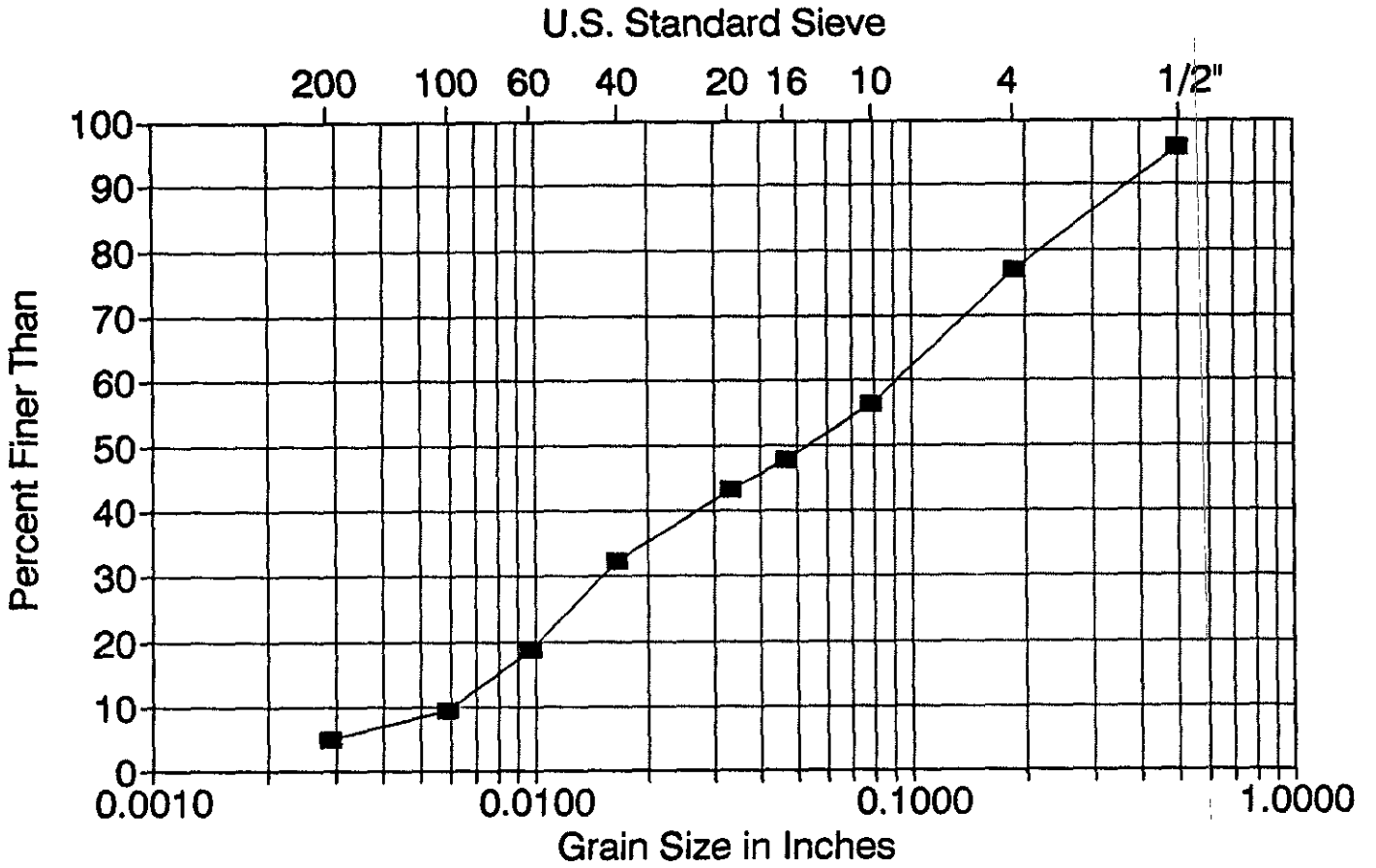
Sieve	Total Wt	Sieve Tare	Soil Wt	Sum	Delta	% Finer
1/2"	461.1	443.0	18.1	18.1	410.0	95.8
4	593.6	513.8	79.8	97.9	330.2	77.1
10	459.9	370.3	89.6	187.5	240.6	56.2
16	456.4	420.9	35.5	223.0	205.1	47.9
20	339.6	320.1	19.5	242.5	185.6	43.4
40	428.6	380.9	47.7	290.2	137.9	32.2
60	327.6	269.9	57.7	347.9	80.2	18.7
100	389.1	349.9	39.2	387.1	41.0	9.6
200	355.2	335.6	19.6	406.7	21.4	5.0
PAN	379.9	379.6	21.4	428.1	***	***

Total Wt: 601.3
Container: 173.4

Sample Wt: 427.9

SIEVE ANALYSIS

RODDING - CLEANING, Aquifer Material at 6 feet



ATTACHMENT C

**ANALYTICAL RESULTS:
SOIL INVESTIGATION**



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

Date: May 16, 1992

PEL # 9205023

HAGEMAN - AGUIAR, INC.

Attn: Gary Aguiar / Jeffrey Roth

Re: Forty one soil samples for total Recoverable Hydrocarbons analysis.

Project name: Rodding Cleaning Services.

Project location: San Leandro

Date sampled: May 15, 1992

Date submitted: May 15, 1992

Date extracted: May 15, 1992

Date analyzed: May 15, 1992

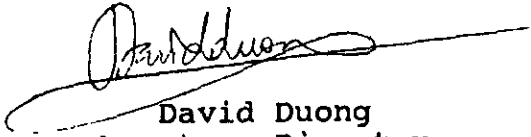
RESULTS:

SAMPLE I.D.	Total Recoverable Hydrocarbons (mg/Kg)	SAMPLE I.D.	Total Recoverable Hydrocarbons (mg/Kg)	SAMPLE I.D.	Total Recoverable Hydrocarbons (ug/Kg)
B 1-4'	110	B 8-4'	170	B 15-4'	N.D.
B 1-6'	5800	B 8-6'	7100	B 15-6'	4200
B 2-4'	250	B 9-4'	230	B 16-4'	N.D.
B 2-6'	11000	B 9-6'	6600	B 16-6'	3400
B 3-4'	N.D.	B 10-4'	N.D.	B 17-4'	N.D.
B 3-6'	5600	B 10-6'	9900	B 17-6'	2900
B 4-4'	260	B 11-4'	490	B 18-4'	N.D.
B 4-6'	9500	B 11-6'	3800	B 18-6'	2800
B 5-4'	N.D.	B 12-4'	N.D.	B 19-4'	300
B 5-6'	4200	B 12-6'	1800	B 19-6'	2000
B 6-4'	59	B 13-4'	N.D.	SP 1	910
B 6-6'	1800	B 13-6'	16000	SP 2	85
B 7-4'	280	B 14-4'	N.D.	SP 3	N.D.
B 7-6'	1300	B 14-6'	7500		

Blank N.D.

Detection limit 50

Method of Analysis 418.1


 David Duong
 Laboratory Director



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

May 20, 1992

PEL # 9205023

HAGEMAN - AGUIAR

Attn: Gary Aguiar / Jeffrey Roth

Re: Seven soil samples for Gasoline/BTEX and TEPH analyses.

Project name: Rodding Cleaning Services

Project location: San Leandro

Date sampled: May 15, 1992

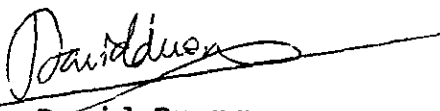
Date submitted: May 15, 1992

Date extracted: May 18-20, 1992

Date analyzed: May 18-20, 1992

RESULTS:

SAMPLE I.D.	Kerosene (mg/Kg)	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)	Motor Oil (mg/Kg)
B 2-4'	N.D.	270	8.6	1300	1700	1800	4900	N.D.
B 6-4'	N.D.	280	N.D.	780	1000	1000	3900	N.D.
B 7-4'	N.D.	340	280	1500	1900	1600	6200	N.D.
B 8-4'	N.D.	240	N.D.	950	1200	1300	4700	N.D.
B 9-4'	N.D.	230	17	1200	1600	1700	6200	N.D.
B 11-4'	N.D.	360	86	600	1200	1500	5100	N.D.
B 19-4'	N.D.	440	40	680	1200	1600	6300	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	89.9%	92.7%	85.3%	91.7%	87.6%	95.4%	91.1%	---
Duplicate spiked Recovery	----	87.5%	102.4%	87.8%	90.2%	98.0%	101.5%	---
Detection limit	1.0	1.0	1.0	5.0	5.0	5.0	5.0	10
Method of Analysis	3550 / 8015	5030 / 8015	3550 / 8015	8020	8020	8020	8020	3550 / 8015


 David Duong
 Laboratory Director

PEL # 9205023 (1 of 3)

INV # 22810

CHAIRMAN'S REPORT

pg 1 of 3

Per Gary Aguiar
301
10 AM 5/18/92

PROJECT NAME AND ADDRESS: <u>RODDING CLEANING SERVICES</u> <u>SAN LEANDRO</u>					SAMPLER: (Signature) <u>[Signature]</u> HAGEMAN - AGUIAR, INC. 3732 Mt. Diablo Blvd., Suite 372 Lafayette, CA 94549 (415)284-1661 (415)284-1664 (FAX)		ANALYSIS REQUESTED <i>Gras / PTEX TEPH</i>				
CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	STATION LOCATION					REMARKS	
B1 4'	5/15/92	0755	X		SAN LEANDRO						(HOLD)
B1 6'	"	0800	X								
B2 4'	"	0810	X			X	X				
B2 6'	"	0815	X								
B3 4'	"	0825	X								
B3 6'	"	0830	X								
B4 4'	"	0840	X								
B4 6'	"	0845	X								
B5 4'	"	0855	X								
B5 6'	"	0900	X								
B6 4'	"	0910	X			X	X				
B6 6'	"	0915	X								
B7 4'	"	0930	X			X	X				
B7 6'	"	0935	X								
B8 4'	"	0955	X			X	X				
RELINQUISHED BY: (Signature) <u>[Signature]</u>					DATE <u>5-15-92</u> TIME <u>1530</u>		RECEIVED BY: (Signature)				DATE
RELINQUISHED BY: (Signature)					DATE		RECEIVED BY: (Signature)				TIME
RELINQUISHED BY: (Signature)					DATE		RECEIVED BY: (Signature)				DATE
RELINQUISHED BY: (Signature)					DATE		RECEIVED FOR LABORATORY BY: (Signature)				TIME

PEL # 9205023 (2 of 3)

INV # 22810

pg 2 of 3

CH... ..JRD

Per Gary Aguiar
10:30 AM 5/18/92

PROJECT NAME AND ADDRESS: <i>RODDING CLEANING SERVICES</i> <i>SAN LEANDRO</i>					SAMPLER: (Signature) <i>[Signature]</i> HAGEMAN - AGUIAR, INC. 3732 Mt. Diablo Blvd., Suite 372 Lafayette, CA 94549 (415)284-1661 (415)284-1664 (FAX)		ANALYSIS REQUESTED				
CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	STATION LOCATION	Gas/BTEX TEPH				REMARKS	
B8 6'	5-15-92	1000	X		<i>SAN LEANDRO</i>						<i>(HOLD)</i>
B9 4'	"	1010	X			X	X				
B9 6'	"	1015	X								
B10 4'	"	1030	X								
B10 6'	"	1040	X								
B11 4'	"	1050	X			X	X				
B11 6'	"	1055	X								
B12 4'	"	1110	X								
B12 6'	"	1115	X								
B13 4'	"	1150	X								
B13 6'	"	1200	X								
B14 4'	"	1210	X								
B14 6'	"	1215	X								
B15 4'	"	1225	X								
B15 6'	"	1230	X								
RELINQUISHED BY: (Signature) <i>[Signature]</i>					DATE 5-15-92	RECEIVED BY: (Signature)					DATE
RELINQUISHED BY: (Signature)					TIME 1530	RECEIVED BY: (Signature)					TIME
RELINQUISHED BY: (Signature)					DATE	RECEIVED BY: (Signature)					DATE
RELINQUISHED BY: (Signature)					TIME	RECEIVED FOR LABORATORY BY: (Signature)					TIME

INV # 22810

CHAIN OF CUSTODY RECORD

Pg 3 of 3
per Gary Aguiar
10³⁸ AM 5/18/92

PROJECT NAME AND ADDRESS: <i>RODDING CLEANING SERVICES</i> <i>SAN LEANDRO</i>					SAMPLER: (Signature) <i>[Signature]</i>		ANALYSIS REQUESTED <i>Gas/APEX</i> <i>TEPH</i>				
					HAGEMAN - AGUIAR, INC. 3732 Mt. Diablo Blvd., Suite 372 Lafayette, CA 94549 (415)284-1661 (415)284-1664 (FAX)						
CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	STATION LOCATION					REMARKS	
<i>B16 4'</i>	<i>5-15-92</i>	<i>1240</i>	<i>X</i>		<i>SAN LEANDRO</i>						<i>(Hold)</i>
<i>B16 6'</i>	<i>11</i>	<i>1245</i>	<i>X</i>								
<i>B17 4'</i>	<i>11</i>	<i>1205</i>	<i>X</i>								
<i>B17 6'</i>	<i>11</i>	<i>1220</i>	<i>X</i>								
<i>B18 4'</i>	<i>11</i>	<i>1225</i>	<i>X</i>								
<i>B18 6'</i>	<i>11</i>	<i>1240</i>	<i>X</i>								
<i>B19 4'</i>	<i>11</i>	<i>1400</i>	<i>X</i>				<i>X</i>	<i>X</i>			
<i>B19 6'</i>	<i>11</i>	<i>1415</i>	<i>X</i>								
<i>SP 1</i>	<i>11</i>	<i>1440</i>	<i>X</i>								
<i>SP 2</i>	<i>11</i>	<i>1450</i>	<i>X</i>								
<i>SP 3</i>	<i>11</i>	<i>1500</i>	<i>X</i>								
RELINQUISHED BY: (Signature) <i>[Signature]</i>					DATE <i>5-15-92</i>	RECEIVED BY: (Signature)				DATE	
					TIME <i>1530</i>					TIME	
RELINQUISHED BY: (Signature)					DATE	RECEIVED BY: (Signature)				DATE	
					TIME					TIME	
RELINQUISHED BY: (Signature)					DATE	RECEIVED BY: (Signature)				DATE	
					TIME					TIME	
RELINQUISHED BY: (Signature)					DATE	RECEIVED FOR LABORATORY BY: (Signature)				DATE	
					TIME					TIME	

ATTACHMENT D

**WELL PERMIT
WELL CONSTRUCTION DIAGRAM**

ORIGINAL
File with DWR

Page 1 of 1

Owner's Well No. MW-1

Date Work Began 6-2-92

Local Permit Agency Zone-7, Alameda County Flood Control

Permit No. 92280

STATE OF CALIFORNIA
WELL COMPLETION REPORT

Refer to Instruction Pamphlet

No. 403280

DWR USE ONLY - DO NOT FILL IN

STATE WELL NO./STATION NO.

LATITUDE LONGITUDE

APN/TRS/OTHER

GEOLOGIC LOG

WELL OWNER

ORIENTATION (∠) _____ VERTICAL _____ HORIZONTAL _____ ANGLE _____ (SPECIFY)

Name Rodding-Cleaning Service

Mailing Address 2585 Nicholson Street

San Leandro, CA 94577

CITY _____ STATE _____ ZIP _____

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

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DEPTH FROM SURFACE

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE

DEPTH TO FIRST WATER _____ (Ft.) BELOW SURFACE

DEPTH FROM SURFACE

WELL LOCATION

Address 2585 Nicholson Street

City San Leandro

County Alameda

APN Book _____ Page _____ Parcel _____

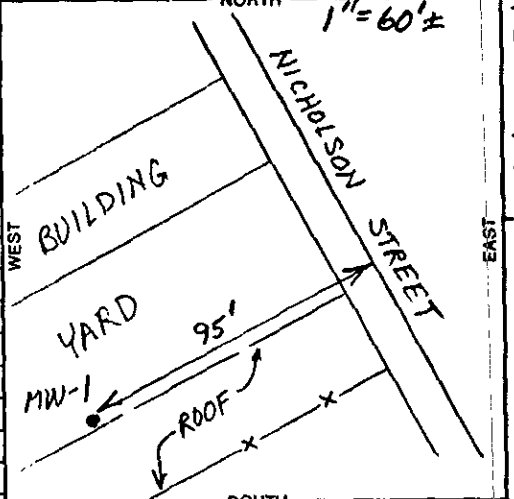
Township _____ Range _____ Section _____

Latitude _____ Longitude _____

DEG. MIN. SEC. NORTH

DEG. MIN. SEC. WEST

LOCATION SKETCH



Illustrate or Describe Distance of Well from Landmarks such as Roads, Buildings, Fences, Rivers, etc. PLEASE BE ACCURATE & COMPLETE.

ACTIVITY (∠)

NEW WELL

MODIFICATION/REPAIR

— Deepen

— Other (Specify)

DESTROY (Describe Procedures and Materials Under "GEOLOGIC LOG")

PLANNED USE(S) (∠)

MONITORING

WATER SUPPLY

— Domestic

— Public

— Irrigation

— Industrial

— "TEST WELL"

— CATHODIC PROTECTION

— OTHER (Specify)

TOTAL DEPTH OF BORING 20.5 (Feet)

TOTAL DEPTH OF COMPLETED WELL 19 (Feet)

DRILLING METHOD Hollow Stem Auger FLUID _____

WATER LEVEL & YIELD OF COMPLETED WELL

DEPTH OF STATIC WATER LEVEL 6.6 (Ft.) & DATE MEASURED 6-8-92

ESTIMATED YIELD* _____ (GPM) & TEST TYPE _____

TEST LENGTH _____ (Hrs.) TOTAL DRAWDOWN _____ (Ft.)

* May not be representative of a well's long-term yield.

DEPTH FROM SURFACE Ft. to Ft.	BORE-HOLE DIA. (Inches)	CASING(S)						ANNULAR MATERIAL					
		TYPE (∠)				MATERIAL / GRADE	INTERNAL DIAMETER (Inches)	GAUGE OR WALL THICKNESS	SLOT SIZE IF ANY (Inches)	TYPE			
		BLANK	SCREEN	CONDUIT	FILL PIPE								
0 to 4	12	X				PVC	6	sch-40		X			
4 to 19	12		X			PVC	6	sch-40 0.02"			X		#3 Monterey Sand

ATTACHMENTS (∠)

- Geologic Log
- Well Construction Diagram
- Geophysical Log(s)
- Soil/Water Chemical Analyses
- Other _____

ATTACH ADDITIONAL INFORMATION, IF IT EXISTS.

CERTIFICATION STATEMENT

I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief.

NAME Gary Aguiar, Hageman-Aguiar, Inc.
(PERSON, FIRM, OR CORPORATION) (TYPED OR PRINTED)

ADDRESS 3732 Mt Diablo Blvd, Suite 372, Lafayette, CA 94549

Signed Gary Aguiar DATE SIGNED 7/16/92

STATE CA ZIP 94549
GREGG DRILLING
485165
C-57 LICENSE NUMBER



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

(510) 484-2600

2 June 1992

Hageman Aguiar, Inc.
3732 Mt. Diablo Boulevard, Suite 372
Lafayette, CA 94549

Gentlemen:

Enclosed is drilling permit 92280 for a monitoring well construction project at 2585 Nicholson Street in San Leandro for Rodding-Cleaning Service.

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,

Craig A. Mayfield

Craig A. Mayfield
Water Resources Engineer

WH:mm
Enc.



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Rodding-Cleaning Service
2585 Nicholson Street
San Leandro, CA 94577-4276

PERMIT NUMBER 92280
LOCATION NUMBER _____

CLIENT
Name Rodding-Cleaning Service
Address 2585 Nicholson Street Phone (510)357-8875
City San Leandro Zip 94577-4276

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name Hageman Aguiar, Inc. (Gary Aguiar)
3732 Mt Diablo Blvd
Address Suite 372 Phone (510)284-1661
City Lafayette, CA Zip 94549

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

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

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE
Domestic _____ Industrial _____ Other _____
Municipal _____ Irrigation _____

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

DRILLING METHOD:
Mud Rotary _____ Air Rotary _____ Auger X
Cable _____ Other _____

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

DRILLER'S LICENSE NO. Gregg Drilling 485165

E. WELL DESTRUCTION. See attached.

WELL PROJECTS
Drill Hole Diameter 12 in. Maximum _____
Casing Diameter 6 in. Depth 20 ft.
Surface Seal Depth 4 ft. Number 1

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

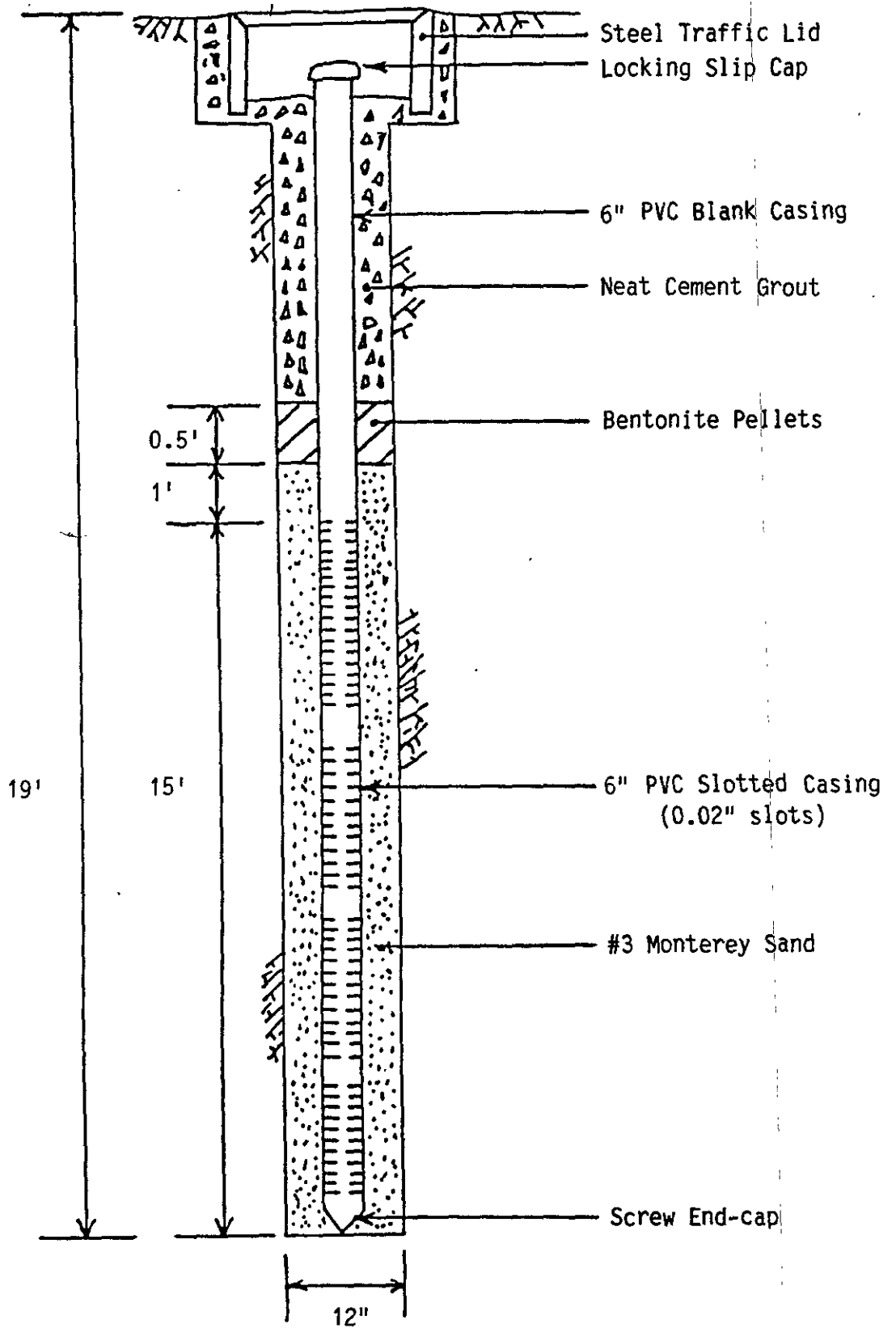
ESTIMATED STARTING DATE June 2, 1992
ESTIMATED COMPLETION DATE June 2, 1992

Approved Wyman Hong Date 1 Jun 92
Wyman Hong

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

APPLICANT'S SIGNATURE Gary Aguiar Date 5/28/92

MONITORING WELL MW-1



ATTACHMENT E

WELL SAMPLING LOG

WELL DEVELOPMENT LOG

Project/No. RODDING CLEANING Page 1 of 1
Site Location 2585 NICHOLSON ST
SAN LEANDRO Date 6/4/92
Well No. MW 1 Time Began 0915
Weather CLEAR / 65°F Completed 1105

EVACUATION DATA

Description of Measuring Point (MP) WELL BOX AT GRADE
Total Sounded Depth of Well Below MP 18.60
Depth to Water Below MP 6.57 Diameter of Casing 6"
Water Column in Well 12.03
Gallons in Well 10 Gallons Pumped During Development 110
Evacuation Method AIRLIFT COMPRESSOR PUMP,
4" PVC HAND BAILER.

DEVELOPMENT / FIELD PARAMETERS

Color BRN/GRY Odor U. HC
Appearance LOW-TO MED. TURBIDITY

FIELD REPORT:

- A 1 GAL. BAILER WAS USED TO DISTURB THE WELL WATER AS MUCH AS POSSIBLE.
- 30 GAL PURGED BY AIRLIFT PUMP, PUMP WAS MOVED SLOWLY THROUGH THE SCREENED INTERVAL OF THE WELL TO ALLOW THE SAND PACK TO DESILTIFY AND SETTLE.
- THIS ALTERNATING PROCESS OF AGITATING THE WATER WITH A HAND BAILER AND PURGING THE FINE MATERIAL WAS REPEATED AT 60, 90, & 110 GALS

Field Personnel J. Smith 6/4/92

ATTACHMENT F

**ANALYTICAL RESULTS:
MONITORING WELL**



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

June 05, 1992

PEL # 920603

HAGEMAN - AGUIAR

Attn: Jeffrey Roth

Re: Two soil samples for Gasoline/BTEX and TEPH analyses.

Project name: Rodding Cleaning Services

Project location: 2585 Nicholson St.-San Leandro

Date sampled: June 02, 1992

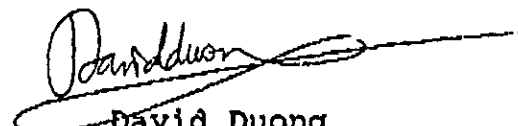
Date submitted: June 02, 1992

Date extracted: June 03-04, 1992

Date analyzed: June 03-04, 1992

RESULTS:

SAMPLE I.D.	Kerosene (mg/Kg)	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)	Motor Oil (mg/Kg)
MW-1-4'	N.D.	18	N.D.	200	180	22	760	N.D.
MW-1-6'	N.D.	11000	190	32000	59000	44000	17000	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	90.1%	92.2%	90.8%	89.8%	87.4%	83.2%	90.5%	----
Detection limit	1.0	1.0	1.0	5.0	5.0	5.0	5.0	10
Method of Analysis	3550 / 8015	5030 / 8015	3550 / 8015	8020	8020	8020	8020	3550 / 8015


David Duong
Laboratory Director



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

June 10, 1992

PEL # 920617

HAGEMAN - AGUIAR

Attn: Jeffrey Roth

Re: One water sample for Gasoline/BTEX and Diesel analyses.

Project name: Rodding Cleaning Services

Project location: San Leandro

Date sampled: June 08, 1992

Date submitted: June 08, 1992

Date extracted: June 08-09, 1992

Date analyzed: June 08-09, 1992

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
MW 1	10000	N.D.	110	81	62	280
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	94.8%	97.3%	101.1%	105.9%	100.2%	102.4%
Detection limit	50	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	3510 / 8015	602	602	602	602

David Duong
Laboratory Director

