



ENVIRONMENTAL
PROTECTION
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Underground Contamination Investigations, Groundwater Consultants, Environmental Engineering

April 24, 1995

GROUNDWATER SAMPLING REPORT

(sampled April 20, 1995)

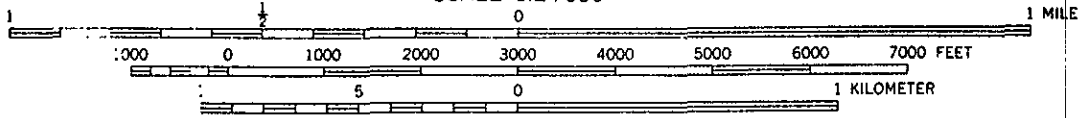
**RODDING-CLEANING SERVICE
2585 Nicholson Street
San Leandro, CA**

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 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

SCALE 1:24 000



CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

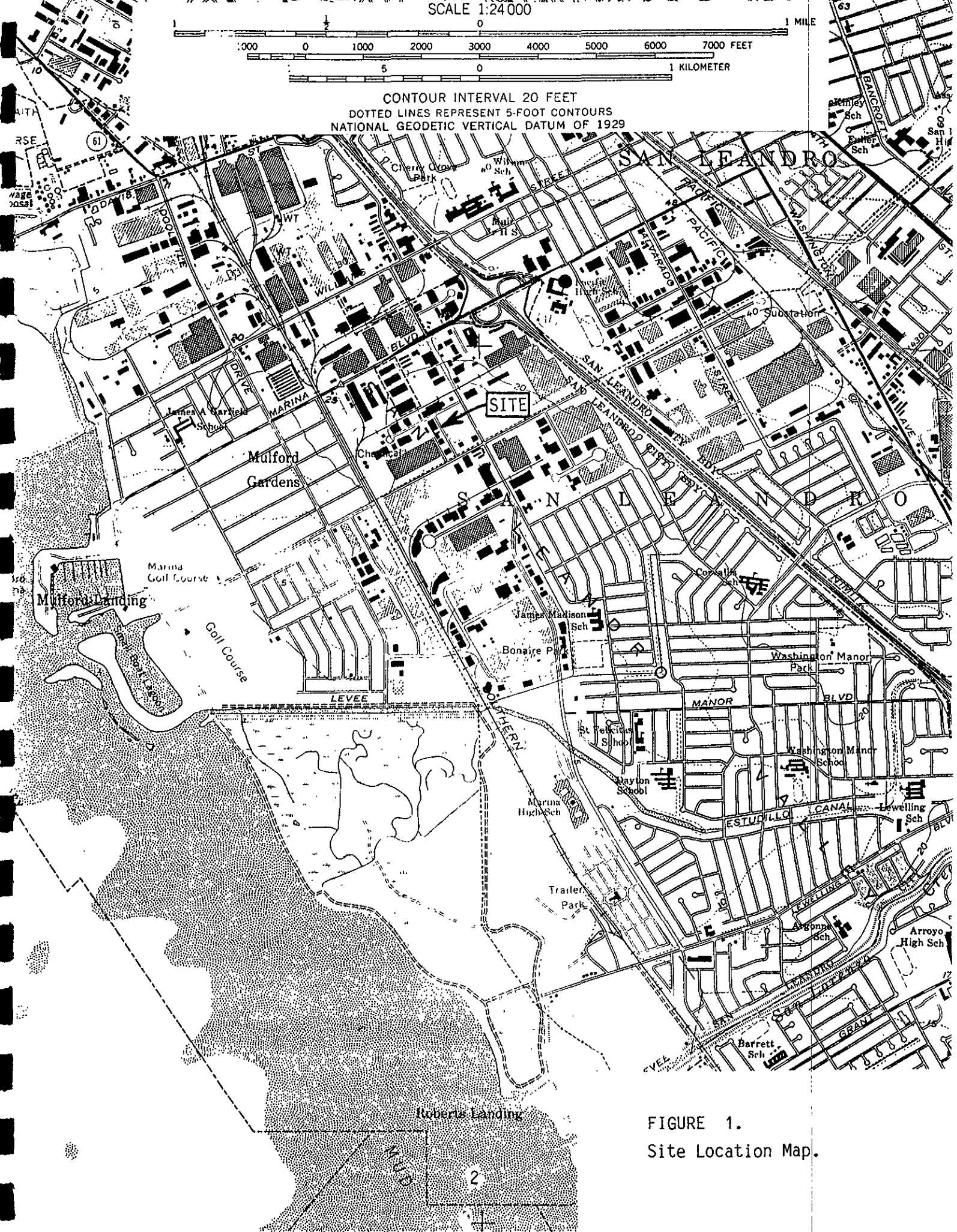


FIGURE 1.
Site Location Map.

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).

Based upon the tank removal analytical results, a soil and groundwater investigation was conducted by Hageman-Aguiar, Inc. The scope of work undertaken by Hageman-Aguiar, Inc., included: 1) a soil sampling program in order to determine the lateral extent of subsurface soil contamination surrounding the locations of the former underground storage tanks, and 2) the installation of one shallow groundwater monitoring at the perceived down-gradient location. The results of the investigation were presented in a report by Hageman-Aguiar, Inc., dated July 29, 1992.

This most recent groundwater sampling conducted on April 20, 1995, represents the ninth "round" of shallow groundwater monitoring at the site following the initial subsurface investigation.

Monitoring Well Sampling

On April 20, 1995, groundwater samples were collected from the one on-site monitoring well. The location of the monitoring well is shown in Figure 2 (site map). Prior to groundwater sampling, the well was purged by bailing several 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 sample was placed inside appropriate 40 mL VOA vials and 1-liter amber bottles free of any headspace. The samples were immediately

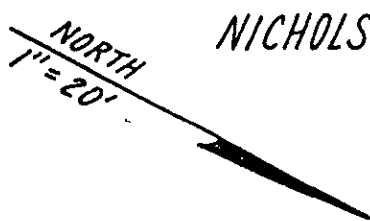
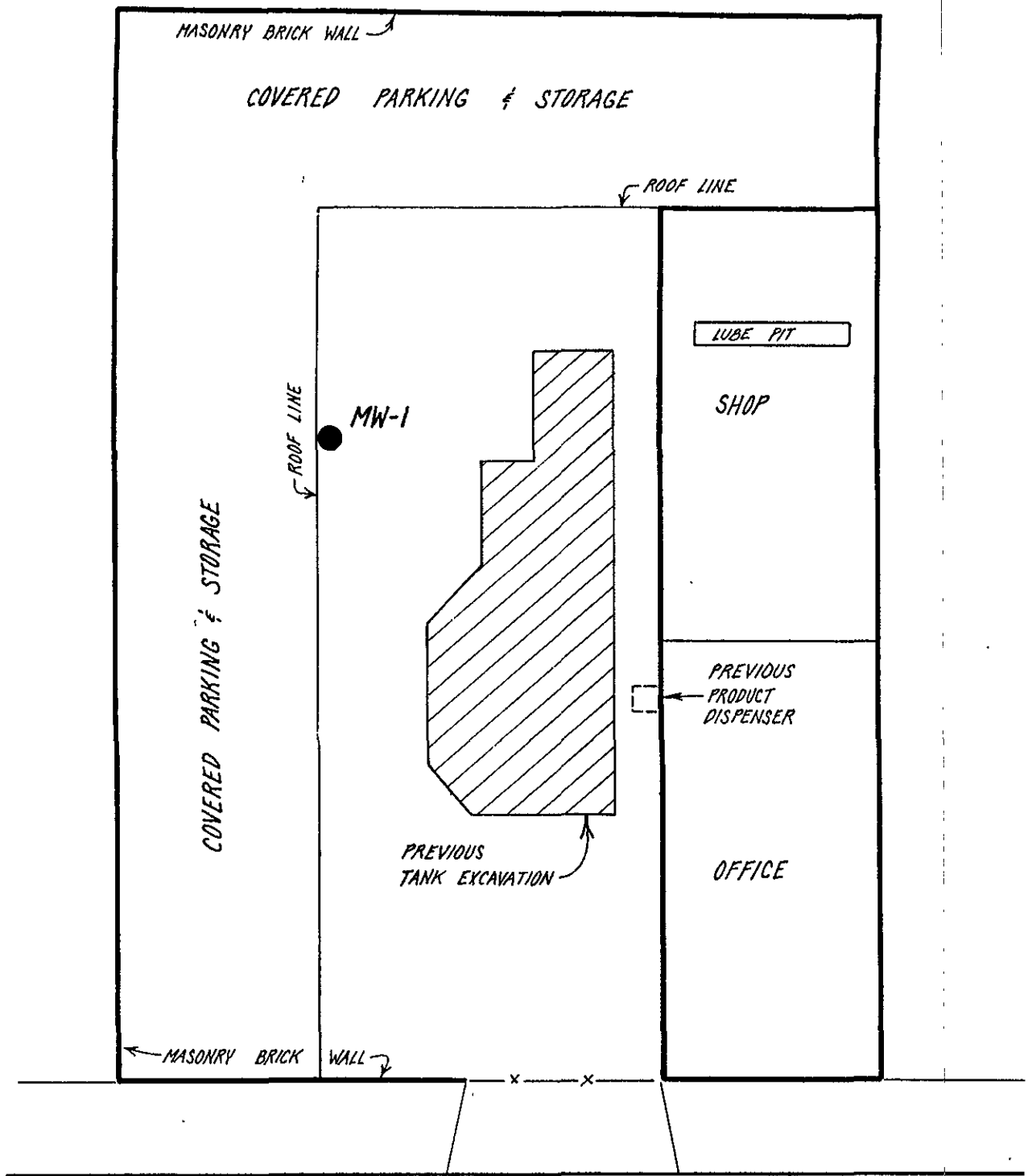


FIGURE 2.
Site Map.

placed on Blue Ice, then transported under chain-of-custody to the laboratory at 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.

A copy of the well sampling log is included as Attachment A.

Free Product Thickness

Table 1 presents the results of free-floating product thickness measurements collected since June 8, 1992. Table 1 shows that free-floating product was present in the well casing during this sampling episode at a measured thickness of 2".

Water Level Measurement

The shallow groundwater elevation in MW-1 was measured as 5.76 feet below ground surface on April 20, 1995.

TABLE 1.

**Product Thickness
(Inches)**

WELL	Date of Measurement								
	6-8-92	11-9-92	4-23-93	7-28-93	12-10-93	3-14-94	6-30-94	9-14-94	12-14-94
MW-1	0	0	1.9	0.4	0	0.1	0.36	0.24	0.48

WELL	Date of Measurement								
	4-20-95								
MW-1	2.0								

Laboratory Analysis

All analyses were conducted by a California State DOHS certified laboratory in accordance with EPA recommended procedures. All groundwater samples were analyzed for 1) Total Petroleum Hydrocarbons as Gasoline (EPA method 8015), 2) Total Petroleum Hydrocarbons as Diesel (EPA method 8015), 3) Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) (EPA method 602), 4) Motor Oil (EPA method 8015), 5) Kerosene (EPA method 8015), and 6) Stoddard Solvent (EPA method 8015).

Laboratory Results

Table 2 presents the results of the laboratory analysis for TPH as Gasoline, TPH as Diesel, Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), and TEPH as Kerosene, Motor Oil, and Stoddard Solvent of the groundwater sample collected from monitoring well MW-1. As shown in this table, laboratory analysis of the shallow groundwater sample indicated the presence of dissolved Gasoline and Diesel at concentrations of 74,000 $\mu\text{g/L}$ (ppb) and 3,700 $\mu\text{g/L}$ (ppb), respectively for this most recent round of sampling.

In addition, Benzene, Toluene, Ethylbenzene and Total Xylenes were detected in the shallow groundwater sample collected from well MW-1 at concentrations of 320 $\mu\text{g/L}$ (ppb), 350 $\mu\text{g/L}$ (ppb), 350 $\mu\text{g/L}$ (ppb) and 940 $\mu\text{g/L}$ (ppb), respectively.

Stoddard Solvent was also present in the groundwater sample collected from well MW-1 at a concentration of 570 $\mu\text{g/L}$ (ppb).

A copy of the laboratory certificate for the water sample analysis is included as Attachment B.

TABLE 2.

Shallow Groundwater Sampling Results

Well	Date	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	TPH as Kerosene (ug/L)	TPH as Diesel (ug/L)	TPH as Stoddard Solvent (ug/L)	TPH as Motor Oil (mg/L)
MW-1	06-08-92	10,000	110	81	62	280	---	ND	---	---
	11-09-92	9,800	23	14	22	96	---	ND	---	---
	04-23-93	18,000	42	47	50	190	ND	560	370	ND
	07-28-93	27,000	40	45	63	190	ND	ND	ND	ND
	12-10-93	7,800	13	16	20	77	ND	3,800	ND	ND
	03-14-94	280,000	970	880	620	1,700	ND	620	3,300	ND
	06-30-94	8,500	23	13	8.5	19	ND	ND	ND	ND
	09-14-94	2,400	5.3	2.6	2.5	6.0	ND	52	ND	ND
	12-14-94	4,800	32	32	16	50	ND	1,300	1,000	ND
	→ 04-20-95	74,000	320	350	350	940	ND	3,700	570	ND
Detection Limit		50	0.5	0.5	0.5	0.5	50	50	50	0.5

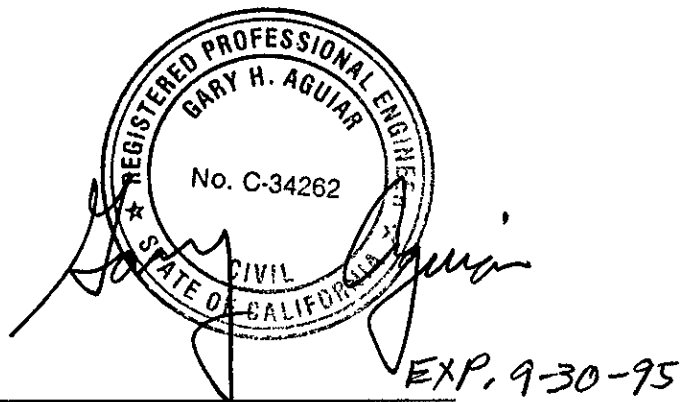
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DTW
5.7'

ND = not detected

QUARTERLY GROUNDWATER SAMPLING REPORT
RODDING-CLEANING SERVICE
2585 Nicholson Street, San Leandro, CA

April 24, 1995



Gary Aguiar

RCE 34262

Gerard F. Aarons 4-24-95
Gerard F. Aarons Geologist

ATTACHMENT A

WELL SAMPLING LOGS

WELL SAMPLING LOG

Project/No. Rodding Cleaning Page 1 of 1
 Site Location San Leandro Date 4/20/95
 Well No. MW-1 Time Began _____
 Weather Sunny Mid 60° Completed _____

EVACUATION DATA

Description of Measuring Point (MP) Well Box @ Grade
 Total Sounded Depth of Well Below MP 18.49
 - Depth to Water Below MP 5.76 Diameter of Casing 6"
 = Water Column in Well 12.73
 Gallons in Casing 10 + Annular Space (x5) = Total Gallons 50
(30% porosity)
 Gallons Pumped Prior to Sampling 60
 Evacuation Method PVC Bailer

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: 2" Free Product, Very Dark Brown, Gas Odor
 (thickness to 0.1 inch, if any)

	<u>11:15</u>	<u>11:25</u>	<u>11:30</u>	<u>11:35</u>	<u>11:42</u>	<u>11:48</u>
Time	<u>11:15</u>	<u>11:25</u>	<u>11:30</u>	<u>11:35</u>	<u>11:42</u>	<u>11:48</u>
Gals Removed	<u>5</u>	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>	<u>60</u>
Temperature	<u>59.6</u>	<u>58.6</u>	<u>58.0</u>	<u>58.7</u>	<u>58.5</u>	<u>58.6</u>
Conductivity	<u>1170</u>	<u>1080</u>	<u>1070</u>	<u>1100</u>	<u>1040</u>	<u>1080</u>
pH	<u>6.78</u>	<u>6.94</u>	<u>6.94</u>	<u>6.96</u>	<u>6.86</u>	<u>7.01</u>
Color / Odor	<u>Dark Brown Free Product Gray Black Liquid</u>	<u>Dark Brown Free Product Gray Black Liquid</u>	<u>Dark Brown Free Product Gray Black Liquid</u>	<u>Dark Brown Free Product Gray Black Liquid</u>	<u>Dark Brown Free Product Gray Black Liquid</u>	<u>Dark Brown Free Product Gray Black Liquid</u>
Turbidity	<u>Med</u>	<u>Med</u>	<u>Med</u>	<u>Med</u>	<u>Med</u>	<u>Med</u>

Comments: Each 5 gallon bucket had a gasoline odor.
The well had excellent recharge.

ATTACHMENT B

ANALYTICAL RESULTS: GROUNDWATER



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

April 24, 1995

PEL # 9504055

HAGEMAN - AGUIAR, INC.

Attn: Mark Hainsworth

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

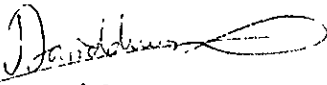
Project name: Rodding Cleaning
Project location: San Leandro, CA.

Date sampled: Apr 20, 1995
Date extracted: Apr 21-22, 1995

Date submitted: Apr 21, 1995
Date analyzed: Apr 21-22, 1995

RESULTS:

SAMPLE I.D.	Kerosene (ug/L)	Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)	Motor Oil (mg/L)	Stoddard Solvent (ug/L)
MW-1	N.D.	74000	3700	320	350	350	940	N.D.	570
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	---	89.0%	81.2%	84.1%	86.5%	81.8%	83.4%	---	---
Detection limit	50	50	50	0.5	0.5	0.5	0.5	0.5	50
Method of Analysis	3510 / 8015	5030 / 8015	3510 / 8015	602	602	602	602	3510 / 8015	3510 / 8015


 David Duong
 Laboratory Director

