HAGEMAN-AGUIAR, INC.
*Underground Contamination Investigations, Groundwater Consultants, Environmental Engineering*

March 22, 1994

**GROUNDWATER SAMPLING REPORT**

(sampled March 14, 1994)

**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



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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) 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, 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 March 14, 1994, represents the fifth "round" of shallow groundwater monitoring at the site following the initial subsurface investigation.

**Monitoring Well Sampling**

On March 14, 1994, 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 approximately 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

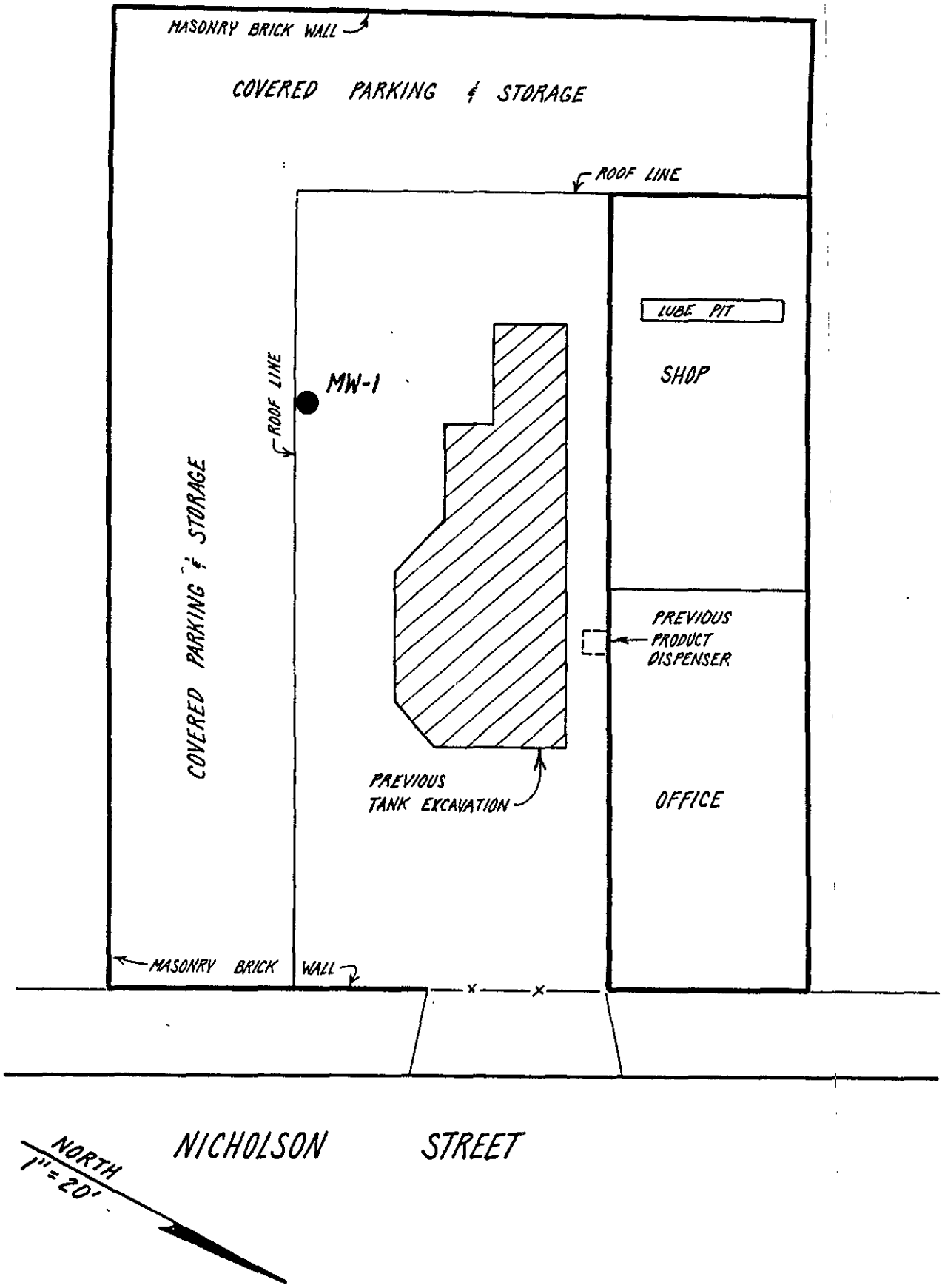



FIGURE 2.
Site Map.

immediately placed on crushed 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 last sampling episode.

**Water Level Measurement**

The shallow groundwater elevation in MW-1 was measured as 6.20 feet below ground surface on March 14, 1994.

**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

## 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 | | | | |
| MW-1 | 0 | 0 | 1.9 | 0.4 | 0 | 1.2 | | | | |

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-gas, TPH-diesel, BTEX, 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 fuel at concentrations of 280,000 µg/L (ppb) and 620 µg/L (ppb), respectively, in the shallow groundwater sample 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 970 µg/L (ppb), 880 µg/L (ppb), 620 µg/L (ppb) and 1,700 µg/L (ppb), respectively.

Stoddard Solvent was detected in the shallow groundwater sample collected from well MW-1 at a concentration of 3,300 µg/L (ppb).

As shown in Table 2, no detectable concentration of Motor Oil or Kerosene was found in the shallow groundwater sample.

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

**TABLE 2.**

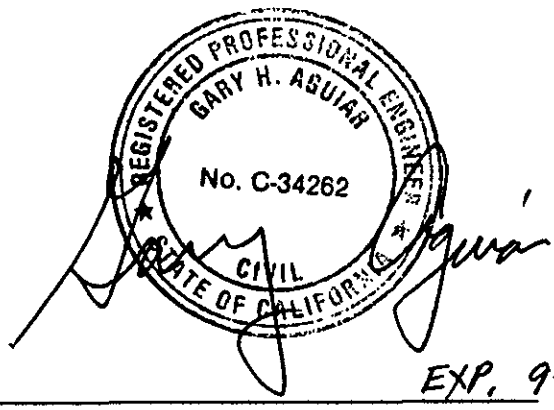
**Shallow Groundwater Sampling Results**

| Well | Date | TPH as Gasoline (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | TPH as Diesel (ug/L) | Kerosene (ug/L) | Motor Oil (mg/L) | Stoddard Solvent (ug/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 | 560 | ND | ND | 370 |
| | 07-28-93 | 27,000 | 40 | 45 | 63 | 190 | ND | ND | ND | ND |
| | 12-10-93 | 7,800 | 13 | 16 | 20 | 77 | 3,800 | ND | ND | ND |
| | 03-14-94 | 280,000 | 970 | 880 | 620 | 1,700 | 620 | ND | ND | 3,300 |
| Detection Limit | | 100 | 5.0 | 5.0 | 5.0 | 5.0 | 50 | 50 | 0.5 | 100 |

ND = not detected

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

March 14, 1994




EXP. 9-30-95

**Gary Aguiar** **RCE 34262**

3/14/94

**Gerard F. Aarons** **Geologist**

# ATTACHMENT A

## WELL SAMPLING LOGS

# WELL SAMPLING LOG

Project/No. ROSSING CLEANING  Page 1 of 1

Site Location SAN LEANDRO

Date 3/14/94

Well No. MW 1

Time Began 1250
Completed 1320

Weather CLEAR / 70°F

## EVACUATION DATA

Description of Measuring Point (MP) WELL BOX AT GRADE

Total Sounded Depth of Well Below MP 18.74

- Depth to Water Below MP 6.20

Diameter of Casing 6"

= Water Column in Well 12.54

Gallons in Casing 16.3 + Annular Space (30% porosity) (X3) = Total Gallons 55

Gallons Pumped Prior to Sampling 55

Evacuation Method PVC BAILER

## SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: 0.10' PRODUCT
(thickness to 0.1 inch, if any)

| | | | | |
|---|---|---|---|---|
| Time | 1250 | 1300 | 1314 | |
| Gals Removed | 20 | 40 | 55 | |
| Temperature | 16.0 | 17.5 | 17.0 | |
| Conductivity | 340 | 350 | 420 | |
| pH | 7.2 | 7.1 | 7.1 | |
| Color / Odor | CLR/HC | CLR/HC | GRY/HC | |
| Turbidity | LOW | LOW | MED | |

JR

Comments: NONE

# ATTACHMENT B

## ANALYTICAL RESULTS: GROUNDWATER

# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

March 21, 1994 PEL # 9403058

HAGEMAN - AGUIAR, INC.

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

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

Date sampled: Mar 14, 1994 Date submitted: Mar 17, 1994
Date extracted: Mar 18-19, 1994 Date analyzed: Mar 18-19, 1994

RESULTS:

| SAMPLE I.D. | Kerosene (ug/L) | Gasoline (ug/L) | Diesel (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl Benzene (ug/L) | Total Xylenes (ug/L) | Motor Oil (mg/L) | Stoddard Solvent (ug/L) |
|---|---|---|---|---|---|---|---|---|---|
| MW 1 | N.D. | 280000 | 620 | 970 | 880 | 620 | 1700 | N.D. | 3300 |
| Blank | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| Spiked Recovery | --- | 92.3% | 97.8% | 97.0% | 112.3% | 101.4% | 109.1% | --- | --- |
| Detection limit | 50 | 100 | 50 | 5.0 | 5.0 | 5.0 | 5.0 | 0.5 | 100 |
| Method of Analysis | 3510/ 8015 | 5030 / 8015 | 3510 / 8015 | 602 | 602 | 602 | 602 | 3510/ 8015 | 3510/ 8015 |

David Duong
Laboratory Director

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

PEL # 9403058

# CHAIN OF CUSTODY RECORD

INV # 24578

PROJECT NAME AND ADDRESS:
RODDINE CLEANING
SAN LEANDRO, CA

SAMPLER: (Signature) [signature]

**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 | TPH Gas/BTXE | TEPH | REMARKS |
|---|---|---|---|---|---|---|---|---|
| MW 1 | 3-14-94 | 1320 | | X | MONITOR WELL | X | X | NORM TAT |

| | | | |
|---|---|---|---|
| RELINQUISHED BY: (Signature) [signature] | DATE 3-17-94 TIME 0800 | RECEIVED BY: (Signature) | DATE TIME |
| RELINQUISHED BY: (Signature) | DATE TIME | RECEIVED BY: (Signature) | DATE TIME |
| RELINQUISHED BY: (Signature) | DATE TIME | RECEIVED BY: (Signature) | DATE TIME |
| RELINQUISHED BY: (Signature) | DATE TIME | RECEIVED FOR LABORATORY BY: (Signature) [signature] | DATE 3/17/94 TIME 8:00 AM |