



ENVIRONMENTAL  
PROTECTION  
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*Underground Contamination Investigations, Groundwater Consultants, Environmental Engineering*

**REPORT OF  
SUBSURFACE INVESTIGATION**

**MATHESON TRUCKING  
2500 Poplar Street  
Oakland, CA**

**March 18, 1996**

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## I. INTRODUCTION

The site location is the Matheson Trucking facility located at 2500 Poplar Street in Oakland, California. The location of the site is shown in Figure 1.

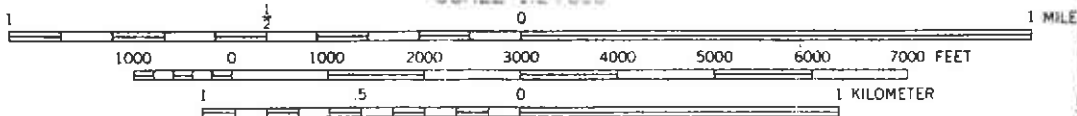
### Previous Tank Removals

A map of the site showing the layout of the facility, along with the locations of the previous underground tank excavations are shown in Figure 2.

On August 2, 1994, three underground storage tanks were removed from the site by CNC Services of Antioch, California. The tanks consisted of one 1,000-gallon single-wall steel tank and two 4,000-gallon single-wall steel tanks. According to information presented in the Underground Tank Closure Plan, filed with the Alameda County Division of Hazardous Materials in July 1994, none of the three underground storage tanks had ever been used by Matheson since they became occupants of the property in 1972. It is assumed that the tanks had contained either Gasoline or Diesel fuel.

Larry James of the Oakland Fire Prevention Bureau and Jennifer Eberle of the Alameda County Environmental Health Department were present at the site during the tank removal project. At the time of the underground tank removals, CNC Services performed the required soil sampling activities.

At the time of removal, Diesel and Gasoline were found to be present in the native soil beneath the 4,000-gallon tank nearest to Poplar Street at concentrations of 44 mg/Kg (ppm)



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

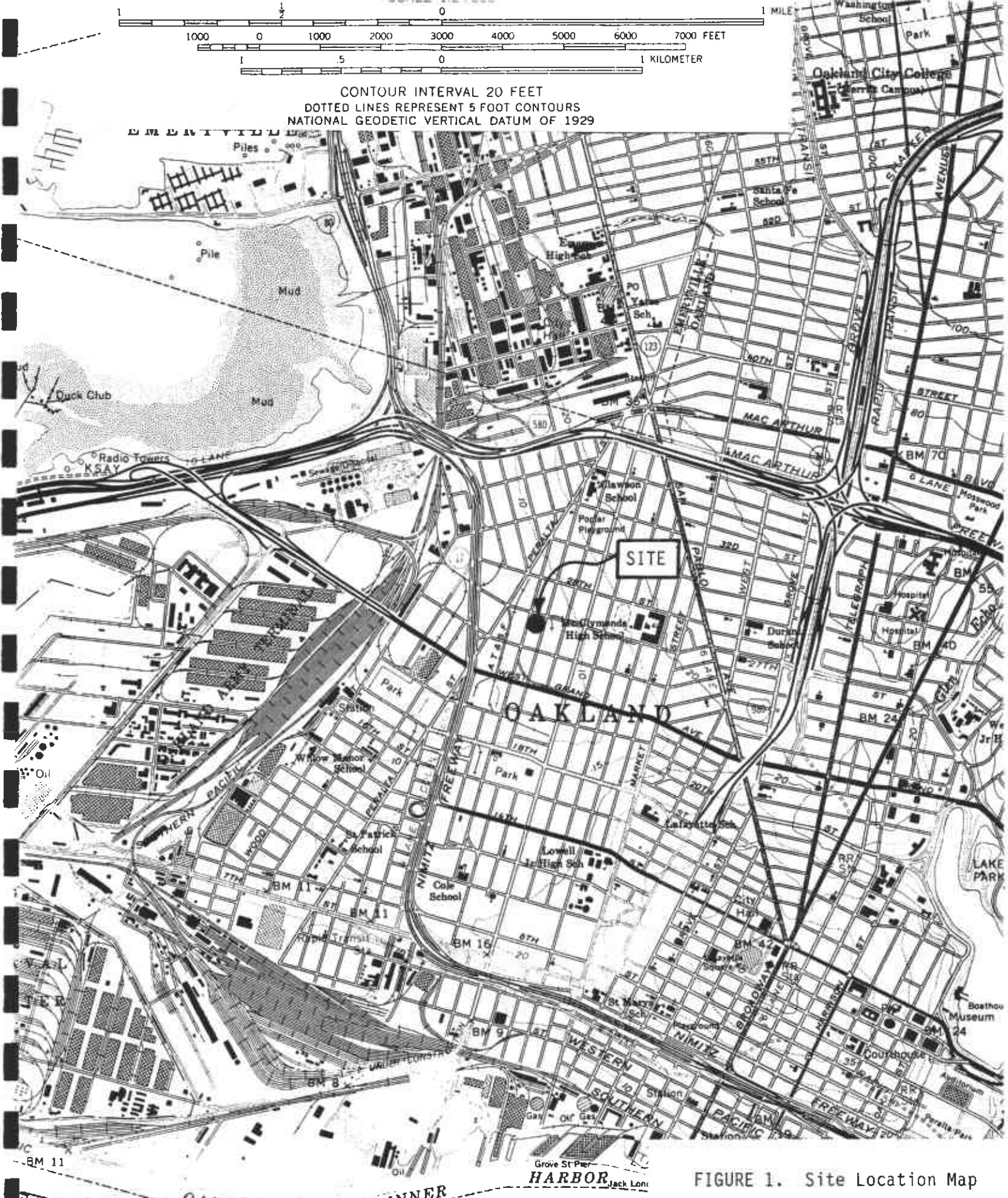
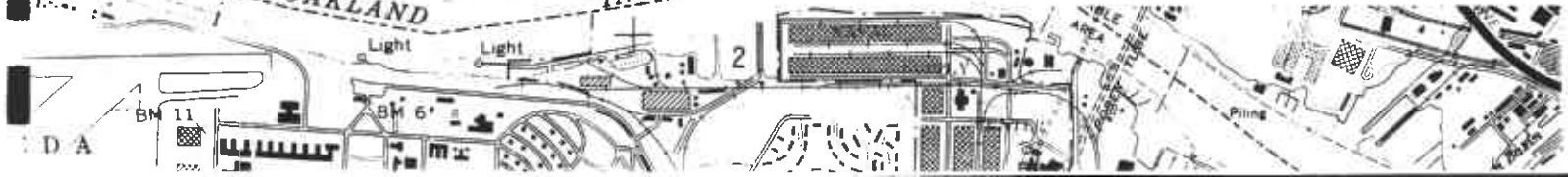
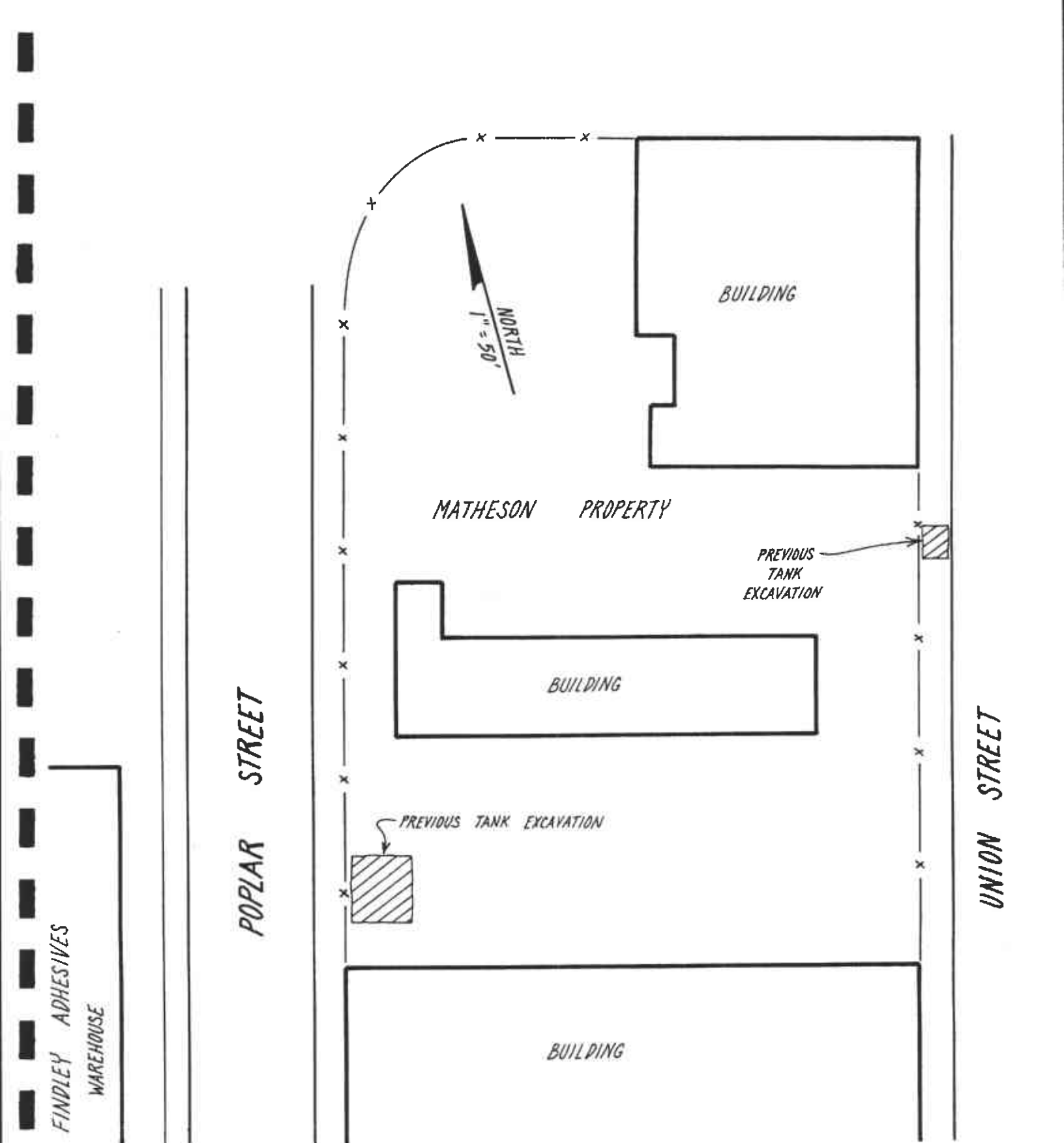


FIGURE 1. Site Location Map





FINDLEY ADHESIVES  
WAREHOUSE

POPLAR STREET

UNION STREET

FIGURE 2.  
SITE MAP.

and 1,360 mg/Kg (ppm), respectively.

Diesel and Gasoline were found to be present in the native soil beneath the 1,000-gallon tank, located along Union Street, at concentrations of 22 mg/Kg (ppm) and 550 mg/Kg (ppm), respectively.

#### **Purpose of Subsurface Investigation**

The purpose of the subsurface investigation as described in this report was to install and sample two on-site shallow groundwater monitoring wells in compliance with a request by the Alameda County Health Department. All work was conducted in accordance with the "Proposed Workplan for Subsurface Investigation", by Hageman-Aguiar, Inc., dated April 12, 1996, with amendments to the proposed well locations, as outlined in the September 14, 1995, letter to Jennifer Eberle.

## II. SITE DESCRIPTION

### Hydrogeologic Setting

A portion of a USGS topographic map showing surface features and local surface water drainage in the vicinity of the site can be seen in Figure 1. As shown on this map, this portion of West Oakland has a surface elevation of approximately 10 feet MSL. The site is approximately 1.25 miles east of the Oakland Outer Harbor, 1.75 miles north of the Oakland Inner Harbor, and approximately 6.0 miles west of the Berkeley Hills.

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). The near surface soils are described as younger alluvium, mainly stream and channel deposits interbedded with beach and dune sand, and marine terrace deposits (Geologic Map of California, San Francisco Sheet, State of California Division of Mines and Geology, 1980). The majority of shallow groundwater movement occurs in the thin sand and gravel layers and/or "stringers". Bedrock is likely to occur at a depth of greater than 50 feet beneath the site.

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 Berkeley Hills (area of groundwater recharge) and move westerly toward San Francisco Bay (area of discharge). However, the localized shallow groundwater flow directions measured at other nearby sites have consistently been to the east, southeast, or the south. The placement of the two on-



site shallow groundwater monitoring wells was based upon the shallow groundwater flow direction previously measured by ERM West, Inc., at the Findley Adhesives property located across Poplar Street (see Figure 2).

### Site Description

A map of the site is shown in Figure 2. This map shows the layout of the facility, along with the location of the previous tank excavations. At the present time, the majority of the site is unpaved, with the ground surface consisting of native soil and imported gravel. At the time of the well installations, the former tank excavation location adjacent to Poplar Street remained open. The former tank location adjacent to Union Street has been backfilled and paved over with a concrete sidewalk.

### III. FIELD WORK

#### Monitoring Well Installations

The locations of the monitoring wells are shown in Figure 3. The locations were selected based upon 1) the expected shallow groundwater flow direction, and 2) the known locations of soil contamination on-site.

On January 29, 1996, the two shallow groundwater monitoring wells MW-1 and MW-2 were installed on the site. Each well was installed with a truck-mounted drill rig using 8-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 to a depth of approximately 15 feet below ground surface. 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.

Wells MW-1 and MW-2 were each cased with 12 feet of 2-inch PVC slotted screen pipe (0.01" slots) and completed to a depth of approximately 15 feet below the ground surface. The annular space of each well was packed with #2/16 Monterey sand to approximately two feet above the top of the screened section. Approximately one-half foot of wetted bentonite pellets were placed upon each sand pack, followed by a neat cement grout seal up to the ground surface. Each well was fitted with a water-tight locking cap and a water-tight steel traffic lid.

FINDLEY ADHESIVES  
WAREHOUSE

POPLAR STREET

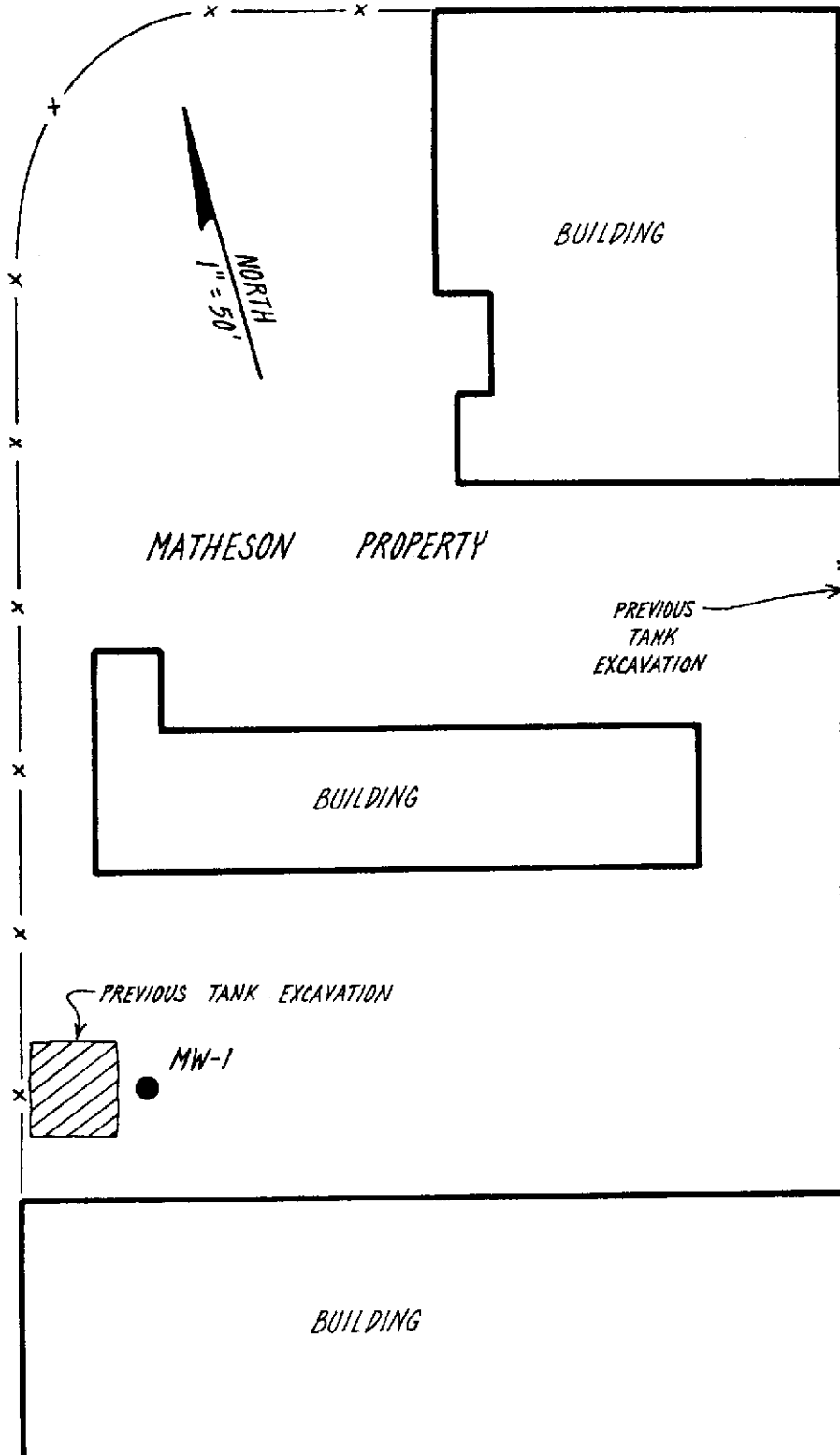


FIGURE 3.  
Monitoring Well Locations.

Well construction diagrams for the monitoring wells are included in Attachment A. Also included in Attachment A is a copy of the well installation permit issued by the Alameda County Zone 7 Water Agency.

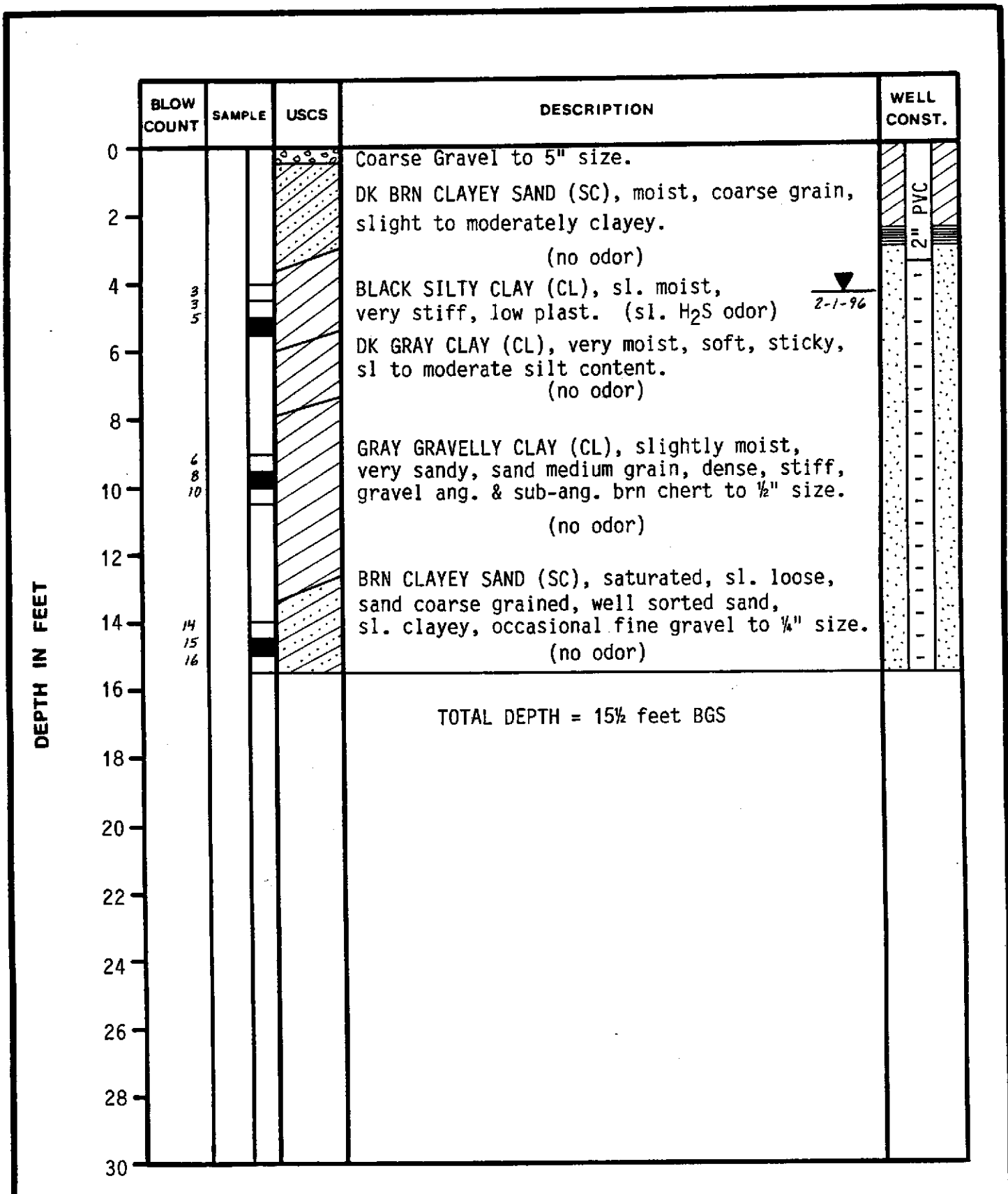
### Boring Logs

All of the monitoring well borings were logged in the field by Gary Aguiar, Registered Civil Engineer #34262. The boring logs for the two monitoring wells are shown as Figures 4 and 5.

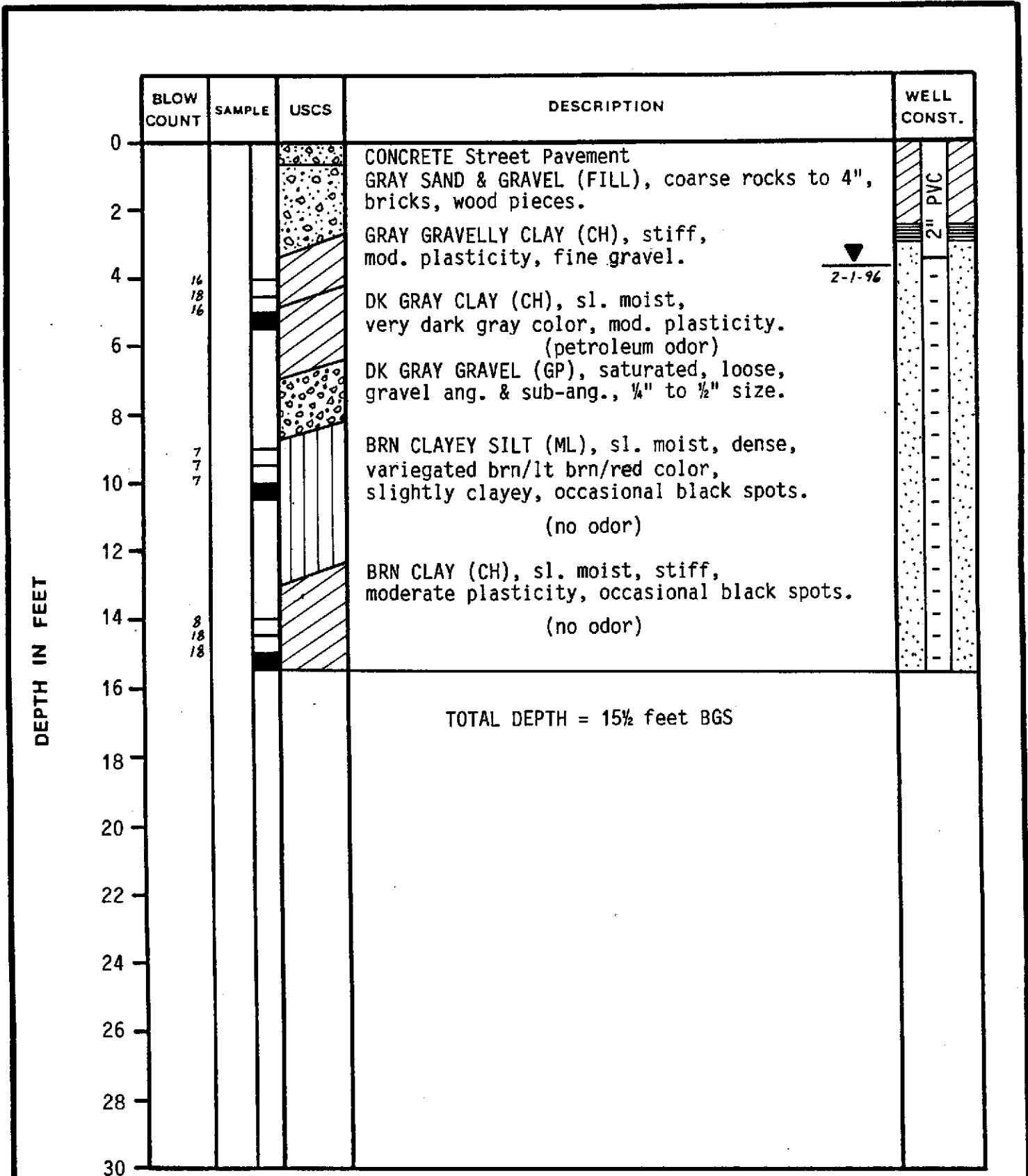
During the installation of groundwater monitoring wells MW-1 and MW-2 the soils encountered consisted primarily of fine-grained soils (silts and clays), with sand and gravel layers (stringers) occurring more frequently with depth. The zone of saturation appeared to coincide with the occurrence of these layers of sand & gravel interbedded within the clayey soils. As indicated on the boring logs, the static shallow groundwater table beneath the site ranged between approximately 4.5 and 5.5 below ground surface.

### Monitoring Well Development and Sampling

On February 1, 1996, the newly installed monitoring wells MW-1 and MW-2 were developed. During the development of each well, groundwater was pumped using a PVC bailer. During the well development, each well was periodically surged using a hand-operated surge block in an attempt to remove silt and thereby achieve good well development. Copies of the monitoring well development logs are included as Attachment B.



|                        |                  |  |  |                 |
|------------------------|------------------|--|--|-----------------|
| HAGEMAN - AGUIAR, INC. |                  | LOG OF BORING MW-1<br>MATHESON TRUCKING<br>2500 Poplar Street, Oakland, California |  | FIGURE<br><br>4 |
| DATE                   | January 29, 1996 | PROJECT NO.  |  |                 |
| TOC ELEVATION          | 8.16'            | EQUIPMENT 8" Hollow Stem Auger   |  |                 |



|                        |                  |  |                      |                 |
|------------------------|------------------|--|----------------------|-----------------|
| HAGEMAN - AGUIAR, INC. |                  | LOG OF BORING MW-2<br>MATHESON TRUCKING<br>2500 Poplar Street, Oakland, California |                      | FIGURE<br><br>5 |
| DATE                   | January 29, 1996 | PROJECT NO.  |                      |                 |
| TOC ELEVATION          | 8.03'            | EQUIPMENT  | 8" Hollow Stem Auger |                 |

Prior to initial groundwater sampling on February 2, 1996, each well was purged by bailing approximately 10 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 disposable 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 at the end of the work day.

At the time each 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 well sampling logs are included as Attachment B.

#### Equipment Decontamination

Prior to the drilling of the monitoring well boring, all drilling equipment, including augers, drill stem, and split barrel samplers, was steam-cleaned. All steam-cleaning was conducted by Gregg Drilling at their permitted steam-cleaning

facility located in Martinez, California. All split-barrel samplers, brass tubes, and other sampling equipment were decontaminated by washing in a water and TSP solution, followed by a double water rinse.

#### Waste Generation

All drill cuttings were added to the on-site stockpile of soil that was excavated during the previous tank removal activities. All water removed from the wells during development and purging was drummed and stored on-site.

The ultimate disposal of the drill cuttings and the wastewater is the responsibility of the property owner and is beyond the scope of work described in this report.



#### IV. RESULTS OF WATER LEVEL MEASUREMENTS

##### Well Survey

The top-of-casing elevations for each of wells MW-1 and MW-2 were surveyed by Hageman-Aguiar, Inc. on January 29, 1996. The surveyed casing elevations are based upon the top-of-casing elevation of the off-site Findley Adhesives well MW-2, as previously surveyed by ERM West, Inc. The results of the survey are presented in Attachment C.

##### Shallow Groundwater Flow Direction

The shallow water table elevations were measured on February 1, 1996. These measurements are shown in Table 1. As indicated in Table 1, water level measurements were collected from off-site well FINDLEY MW-2 in order to provide a total of three elevation data points for the Matheson Trucking site. Figure 6 presents a contour map for the shallow groundwater table beneath the site. As shown in this figure, the shallow groundwater beneath the site appears to flow in a southerly direction.

##### Shallow Water Table Hydraulic Gradient

Figure 6 presents the contour map for the shallow groundwater table beneath the site. As shown in this figure, the shallow groundwater table beneath the site exhibits a calculated hydraulic gradient of  $dH/dL = 1'/34' = 0.022$ .

**TABLE 1.**

**Shallow Water Table Elevations  
February 1, 1996**

| <b>Well</b>         | <b>Top of Casing Elevation (feet)</b> | <b>Depth to Water (feet)</b> | <b>Water Table Elevation (feet)</b> |
|---------------------|---------------------------------------|------------------------------|-------------------------------------|
| <b>MW-1</b>         | <b>8.16</b>                           | <b>5.48</b>                  | <b>2.68</b>                         |
| <b>MW-2</b>         | <b>8.03</b>                           | <b>4.51</b>                  | <b>3.52</b>                         |
| <b>FINDLEY MW-2</b> | <b>7.51</b>                           | <b>3.07</b>                  | <b>4.44</b>                         |

Datum is FINDLEY MW-2 Top-of-Casing, set at 7.51 feet MSL by ERM West, Inc.

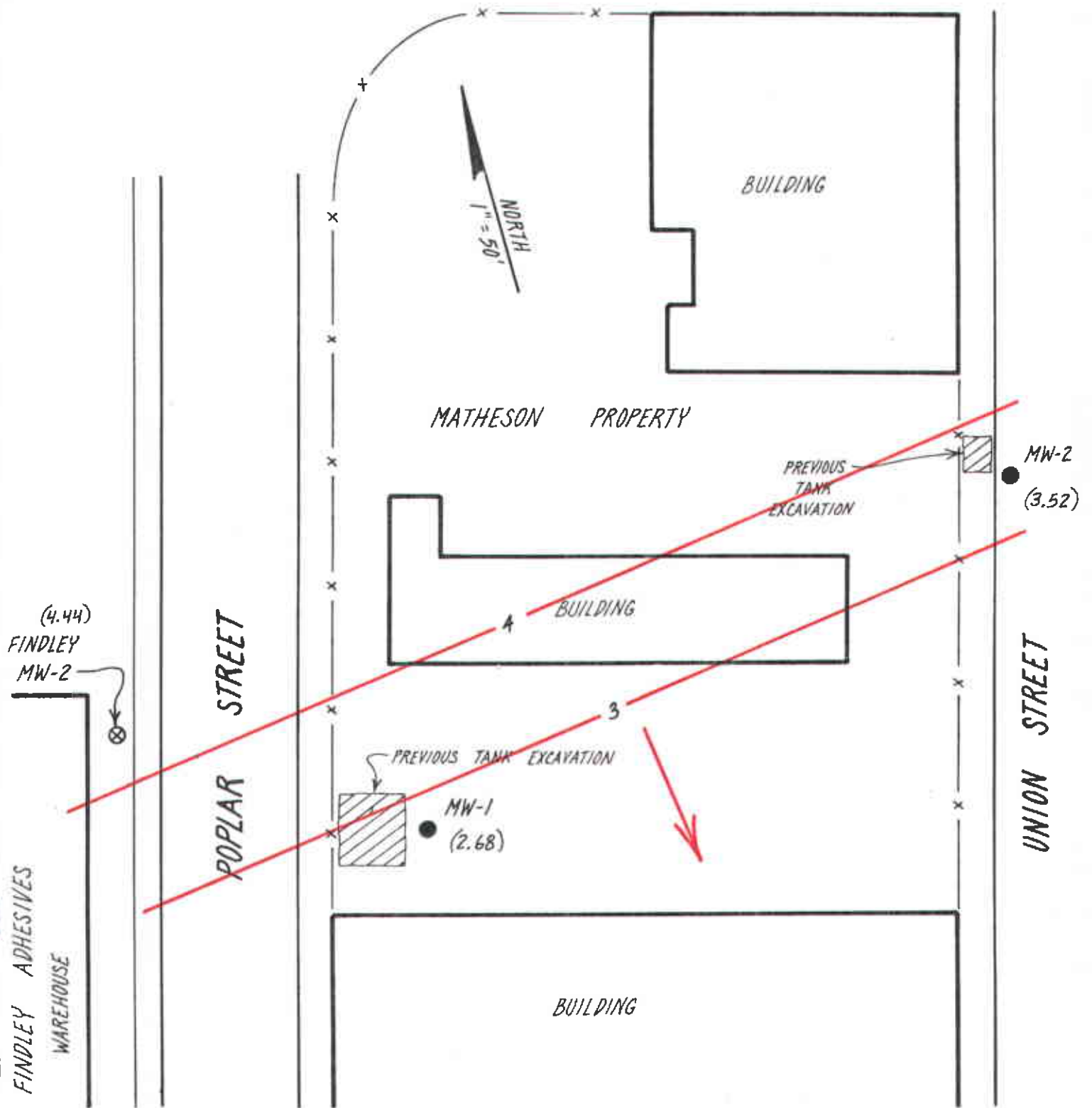


FIGURE 6.  
 Shallow Groundwater Table Contour  
 Map, measured on February 1, 1996.

## V. ANALYTICAL RESULTS

### Laboratory Analysis

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

Soil samples were analyzed for:

- 1) total petroleum hydrocarbons as Gasoline (EPA method 8015),
- 2) Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA method 8020),
- 3) total extractable petroleum hydrocarbons as Diesel (EPA Method 8015).

Groundwater samples were analyzed for:

- 1) total petroleum hydrocarbons as Gasoline (EPA method 8015),
- 2) Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA method 602),
- 3) total extractable petroleum hydrocarbons as Diesel (EPA Method 8015).

**Analytical Results: Soil**

Table 2 presents the results of the laboratory analysis for soil samples collected during the monitoring well installations. Copies of the laboratory certificates for the soil sample analyses are included in Attachment D.

As shown in Table 2, Gasoline was detected in the 5-foot soil sample collected from boring MW-2 at a concentration of 51 mg/Kg (ppm). In addition, Benzene was detected in this sample at a concentration of 29  $\mu$ g/kg (ppb).

As shown in Table 2, Diesel was detected in all soil samples collected from borings MW-1 and MW-2 at concentrations of up to 16 mg/kg (ppm).

**TABLE 2.****Soil Sampling Results**

| <b>Boring</b>          | <b>Depth<br/>(feet)</b> | <b>TPH as<br/>Gasoline<br/>(mg/kg)</b> | <b>TPH as<br/>Diesel<br/>(mg/kg)</b> | <b>Benzene<br/>(ug/kg)</b> | <b>Toluene<br/>(ug/kg)</b> | <b>Ethyl-<br/>benzene<br/>(ug/kg)</b> | <b>Total<br/>Xylenes<br/>(ug/kg)</b> |
|------------------------|-------------------------|--|--------------------------------------|----------------------------|----------------------------|---------------------------------------|--------------------------------------|
| <b>MW-1</b>            | 05                      | ND                                     | <b>8.6</b>                           | ND                         | ND                         | ND                                    | ND                                   |
|                        | 10                      | ND                                     | <b>5.6</b>                           | ND                         | ND                         | ND                                    | ND                                   |
|                        | 15                      | ND                                     | <b>7.8</b>                           | ND                         | ND                         | ND                                    | ND                                   |
| <b>MW-2</b>            | 05                      | <b>51</b>                              | <b>16</b>                            | <b>29</b>                  | <b>31</b>                  | <b>83</b>                             | <b>170</b>                           |
|                        | 10                      | ND                                     | <b>7.2</b>                           | ND                         | ND                         | ND                                    | ND                                   |
|                        | 15                      | ND                                     | <b>6.2</b>                           | ND                         | ND                         | ND                                    | ND                                   |
| <b>Detection Limit</b> |                         | 1.0                                    | 1.0                                  | 5.0                        | 5.0                        | 5.0                                   | 5.0                                  |

ND = not detected

**Analytical Results: Groundwater**

Table 3 presents the results of the laboratory analysis of groundwater samples collected from monitoring wells MW-1 and MW-2. Copies of the laboratory certificates for the water sample analyses are included in Attachment E.

As shown in Table 3, Gasoline was detected in the shallow groundwater samples collected from wells MW-1 and MW-2 at concentrations of 120  $\mu\text{g/L}$  (ppb) and 230  $\mu\text{g/L}$  (ppb), respectively.

In addition, Benzene was detected in the shallow groundwater sample collected from well MW-2 at a concentration of 0.6  $\mu\text{g/L}$  (ppb). Benzene was not detected in the shallow groundwater sample collected from well MW-1.

As shown in Table 3, Diesel was detected in the shallow groundwater samples collected from wells MW-1 and MW-2 at concentrations of 140  $\mu\text{g/L}$  (ppb) and 350  $\mu\text{g/L}$  (ppb), respectively.

**TABLE 3.**

**Shallow Groundwater Sampling Results**

| <b>Well</b>            | <b>Date</b> | <b>TPH<br/>as<br/>Diesel<br/>(ug/L)</b> | <b>TPH<br/>as<br/>Gasoline<br/>(ug/L)</b> | <b>Benzene<br/>(ug/L)</b> | <b>Toluene<br/>(ug/L)</b> | <b>Ethyl-<br/>benzene<br/>(ug/L)</b> | <b>Total<br/>Xylenes<br/>(ug/L)</b> |
|------------------------|-------------|---|---|---------------------------|---------------------------|--------------------------------------|-------------------------------------|
| <b>MW-1</b>            | 02-02-96    | 140                                     | 120                                       | ND                        | 1.5                       | 0.5                                  | 5.5                                 |
| <b>MW-2</b>            | 02-02-96    | 350                                     | 230                                       | 0.6                       | 0.9                       | 1.2                                  | 3.0                                 |
| <b>Detection Limit</b> |             | 50                                      | 50  | 0.5                       | 0.5                       | 0.5                                  | 0.5                                 |

ND = not detected



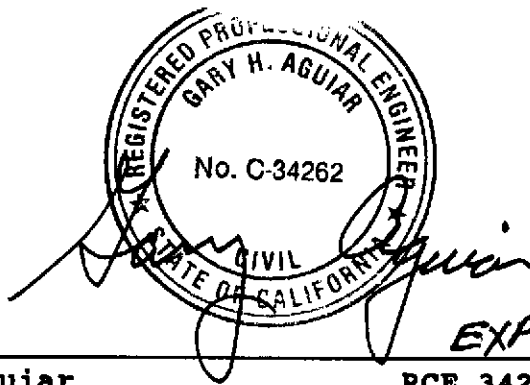
## VI. SUMMARY

- 1) Shallow groundwater is present beneath the site at approximately 4.5 to 5.5 feet below ground surface.
- 2) The soils beneath the site consist primarily of fine-grained soils (silts and clays), with shallow groundwater occurring within layers of sand & gravel interbedded within the clayey soils.
- 3) The shallow groundwater beneath the site appears to flow in a southerly direction, with a calculated hydraulic gradient of  $dH/dL = 1'/45' = 0.022$ .
- 4) Gasoline was detected in the 5-foot soil sample collected from boring MW-2 at a concentration of 51 mg/Kg (ppm). In addition, Benzene was detected in this sample at a concentration of 29  $\mu\text{g}/\text{kg}$  (ppb).
- 5) Diesel was detected in all soil samples collected from borings MW-1 and MW-2 at concentrations of up to 16 mg/kg (ppm).
- 6) Gasoline was detected in the shallow groundwater samples collected from wells MW-1 and MW-2 at concentrations of 120  $\mu\text{g}/\text{L}$  (ppb) and 230  $\mu\text{g}/\text{L}$  (ppb), respectively.
- 7) Benzene was detected in the shallow groundwater sample collected from well MW-2 at a concentration of 0.6  $\mu\text{g}/\text{L}$  (ppb). Benzene was not detected in the shallow groundwater sample collected from well MW-1.

- 8) Diesel was detected in the shallow groundwater samples collected from wells MW-1 and MW-2 at concentrations of 140  $\mu\text{g/L}$  (ppb) and 350  $\mu\text{g/L}$  (ppb), respectively.

REPORT OF SOIL AND GROUNDWATER INVESTIGATION  
MATHESON TRUCKING  
2500 Poplar Street, Oakland, CA.

March 18, 1996



*EXP. 9-30-99*

Gary Aguiar

RCE 34262

**ATTACHMENT A**

**Well Permits  
Well Construction Diagrams  
DWR Reports**



# 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 R.B Matheson Holdings  
2500 Poplar St.  
Oakland CA

PERMIT NUMBER 95850  
LOCATION NUMBER \_\_\_\_\_

### CLIENT

Name R.B. Matheson Holdings  
Address P.O.Box 970 Voice (916) 685-2330  
City Elk Grove, CA Zip 95795

### PERMIT CONDITIONS

Circled Permit Requirements Apply

### APPLICANT

Name Hageman-Aguiar, Inc.  
Address 3732 Mt. Diablo Blvd Voice (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          | <u>X</u> | 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 Sampling Data  
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 \_\_\_\_\_  
Cable \_\_\_\_\_ Other Hollow Stem

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

DRILLER'S LICENSE NO. C-57 #485165

E. WELL DESTRUCTION. See attached.

### WELL PROJECTS

|                     |              |         |               |
|---------------------|--------------|---------|---------------|
| Drill Hole Diameter | <u>8</u> in. | Maximum |               |
| Casing Diameter     | <u>2</u> in. | Depth   | <u>20</u> ft. |
| Surface Seal Depth  | <u>5</u> ft. | Number  | <u>2</u>      |

### GEOTECHNICAL PROJECTS

Number of Borings \_\_\_\_\_ Maximum  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

ESTIMATED STARTING DATE December 28, 1995

ESTIMATED COMPLETION DATE December 28, 1995

Approved \_\_\_\_\_

Wyman Hong  
Wyman Hong

Date 18 Dec 95

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

APPLICANT'S  
SIGNATURE

Gary Aguiar Date 12/14/95

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

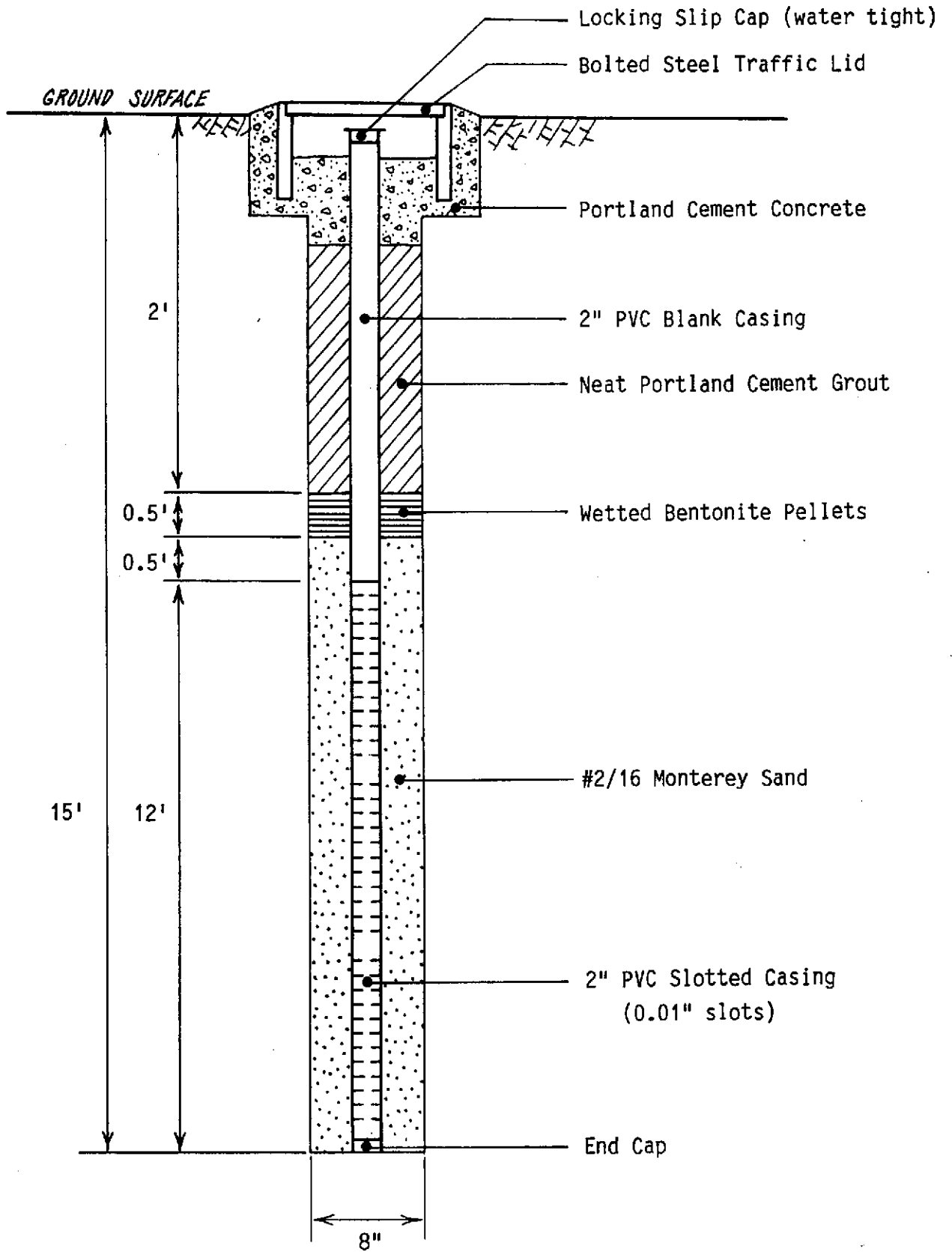
**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

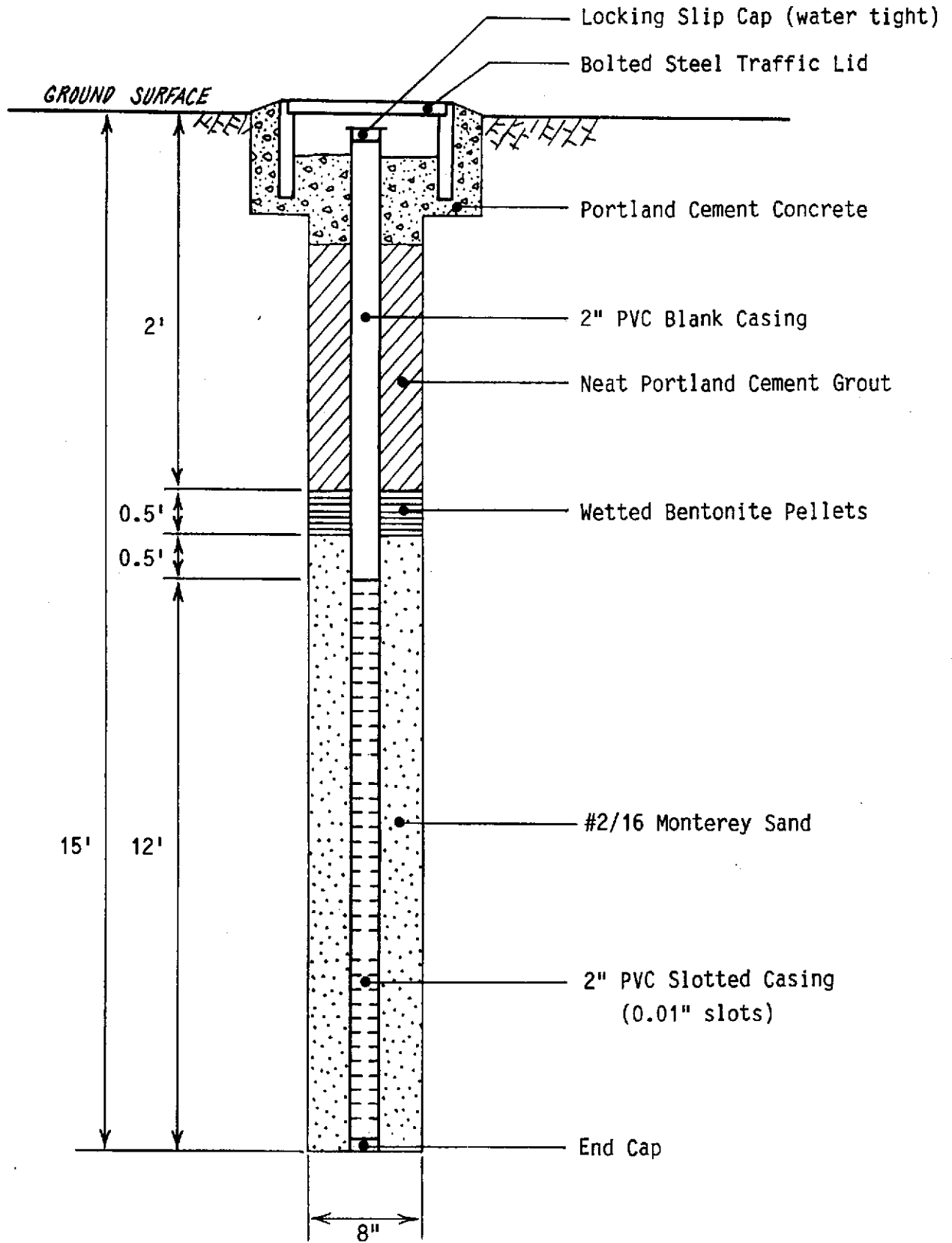
**REMOVED**

MONITORING WELL MW-1





MONITORING WELL MW-2



MONITORING WELL

Job Site 2500 POPLAR ST

Parcel# 005 - 0439-012-01

Appl# ENM195128

Descr one monitoring well on union st

Filed 12/26/95

Work Type MONITORING WELL

Insurance Required? YES Carrier FIRESMANS FUND INSURANCE Expires 09/01/96

Applent Phone# Lic# --License Classes--

Owner RB MATHESON

Contractor

Arch/Engr

Agent HAGEMAN AGUIAR INC X : 501 264-1661

Public Addr 3732 MT DIABLO BL,S 370, LAFAYETTE, CA. 94549

\$500.00 TOTAL FEES PAID AT FILING

\$0.00 TOTAL FEES PAID AT ISSUANCE

\$0.00 Applic

\$0.00 Permit

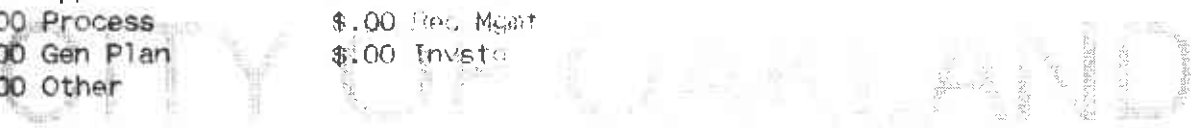
\$0.00 Process

\$0.00 Reg. Maint

\$0.00 Gen Plan

\$0.00 Invest

\$500.00 Other



**ATTACHMENT B**

**Well Sampling Logs**

## WELL DEVELOPMENT LOG

Project/No. Matheson Trucking Page 1 of 2  
 Site Location Oakland CA Date 2/1/96  
 Well No. MW-1 Time Began \_\_\_\_\_  
 Weather Cloudy Mid 50's Completed \_\_\_\_\_

### EVACUATION DATA

Description of Measuring Point (MP) PVC Well Casing  
 Total Sounded Depth of Well Below MP 14.42  
 - Depth to Water Below MP 5.48 Diameter of Casing 2  
 = Water Column in Well 8.94  
 Gallons in Casing 1.5 + Annular Space  $\frac{(x4)}{(x10)}$  = Total Gallons  $\frac{(6)}{(15)}$   
(30% porosity)  
 Gallons Pumped During Development 15  
 Evacuation Method PVC Bailer

### DEVELOPMENT / FIELD PARAMETERS

Color Lt Brown Odor Slight Sweet Organic Odor  
 Appearance Very Turbid, High Silt Content

| Time                  | Gallons   | Temperature | Conductivity | pH          | Clarity / Silt Content                |
|-----------------------|-----------|-------------|--------------|-------------|---------------------------------------|
| <u>15:20</u>          | <u>5</u>  | <u>61.4</u> | <u>1550</u>  | <u>7.54</u> | <u>Zero Clarity High Silt Content</u> |
| <u>5 minute Surge</u> |           |             |              |             |                                       |
| <u>15:31</u>          | <u>10</u> | <u>62.4</u> | <u>1730</u>  | <u>7.68</u> | <u>Zero Clarity High Silt Content</u> |
| <u>5 minute</u>       |           |             |              |             |                                       |
| <u>15:45</u>          | <u>15</u> | <u>62.7</u> | <u>1570</u>  | <u>7.53</u> | <u>Zero Clarity High Silt Content</u> |

Field Personnel M. Hainsworth

## WELL DEVELOPMENT LOG

Project/No. Matheson Trucking Page 2 of 2  
 Site Location Oakland CA Date 2/1/96  
 Well No. MW-2 Time Began \_\_\_\_\_  
 Weather Cloudy Mid 50s Completed \_\_\_\_\_

### EVACUATION DATA

Description of Measuring Point (MP) (PVC well casing)  
 Total Sounded Depth of Well Below MP 14.04  
 - Depth to Water Below MP 4.51 Diameter of Casing 2  
 = Water Column in Well 9.53  
 Gallons in Casing 1.55 + Annular Space (14) (x10) = Total Gallons (6.2) (15.5)  
(30% porosity)  
 Gallons Pumped During Development 15  
 Evacuation Method PVC Bailor

### DEVELOPMENT / FIELD PARAMETERS

Color Brown Odor None  
 Appearance Very Turbid, Extremely Silty, No Odors

| Time                  | Gallons   | Temperature | Conductivity | pH          | Clarity / Silt Content                    |
|-----------------------|-----------|-------------|--------------|-------------|---|
| <u>14:24</u>          | <u>5</u>  | <u>66.7</u> | <u>1430</u>  | <u>7.82</u> | <u>Zero clarity<br/>High Silt Content</u> |
| <u>5 minute surge</u> |           |             |              |             |   |
| <u>14:35</u>          | <u>10</u> | <u>64.9</u> | <u>1330</u>  | <u>7.26</u> | <u>zero clarity<br/>High Silt Content</u> |
| <u>5 minute surge</u> |           |             |              |             |   |
| <u>14:46</u>          | <u>15</u> | <u>64.8</u> | <u>1180</u>  | <u>7.21</u> | <u>zero clarity<br/>High Silt Content</u> |

Field Personnel M. Harrisworth

### WELL SAMPLING LOG

Project/No. Matheson Trucking Page 1 of 2  
 Site Location Oakland CA Date 2/2/96  
 Well No. MW-1 Time Began \_\_\_\_\_  
 Weather Cloudy mid 50's Completed \_\_\_\_\_  
 Sampling Personnel M Hainsworth

### EVACUATION DATA

Description of Measuring Point (MP) PVC Well Casing  
 Total Sounded Depth of Well Below MP 14.42 Diameter of Casing 2"  
 - Depth to Water Below MP 5.42  
 = Water Column in Well 9.00  
 Gallons in Casing 1.5 + Annular Space (x10) = Total Gallons 15  
(30% porosity)  
 Gallons Pumped Prior to Sampling 15  
 Evacuation Method PVC Bailer

### SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None Detected, Slight Organic/Fuel Odor  
(thickness to 0.1 inch, if any)

|              | <u>11:45</u>                      | <u>11:52</u>                      | <u>11:59</u>                      | _____ |
|--------------|-----------------------------------|-----------------------------------|-----------------------------------|-------|
| Time         |                                   |                                   |                                   |       |
| Gals Removed | <u>5</u>                          | <u>10</u>                         | <u>15</u>                         | _____ |
| Temperature  | <u>62.0</u>                       | <u>62.5</u>                       | <u>61.9</u>                       | _____ |
| Conductivity | <u>1600</u>                       | <u>1570</u>                       | <u>1470</u>                       | _____ |
| pH           | <u>6.75</u>                       | <u>6.72</u>                       | <u>6.80</u>                       | _____ |
| Color / Odor | <u>Brown<br/>Slight Fuel Odor</u> | <u>Brown<br/>Slight Fuel Odor</u> | <u>Brown<br/>Slight Fuel Odor</u> | _____ |
| Turbidity    | <u>High</u>                       | <u>High</u>                       | <u>High</u>                       | _____ |

Comments: \_\_\_\_\_

**WELL SAMPLING LOG**

Project/No. Matheson Trucking Page 2 of 2  
 Site Location Oakland CA Date 2/2/96  
 Well No. MW-2 Time Began \_\_\_\_\_  
 Weather Cloudy Mid 50's Completed \_\_\_\_\_  
 Sampling Personnel M. Hainsworth

**EVACUATION DATA**

Description of Measuring Point (MP) PVC Casing  
 Total Sounded Depth of Well Below MP 13.88  
 - Depth to Water Below MP 4.61 Diameter of Casing 2"  
 = Water Column in Well 9.27  
 Gallons in Casing 1.5 + Annular Space (x4) = Total Gallons (6)  
 (30% porosity) (x10) (15)  
 Gallons Pumped Prior to Sampling 15  
 Evacuation Method PVC Bailor

**SAMPLING DATA / FIELD PARAMETERS**

Inspection for Free Product: None Detected, No Odor  
 (thickness to 0.1 inch, if any)

|              |                          |                          |                          |       |
|--------------|--------------------------|--------------------------|--------------------------|-------|
| Time         | <u>10:34</u>             | <u>10:40</u>             | <u>10:46</u>             | _____ |
| Gals Removed | <u>5</u>                 | <u>10</u>                | <u>15</u>                | _____ |
| Temperature  | <u>63.6</u>              | <u>64.8</u>              | <u>64.9</u>              | _____ |
| Conductivity | <u>1160</u>              | <u>1110</u>              | <u>1140</u>              | _____ |
| pH           | <u>6.97</u>              | <u>6.95</u>              | <u>6.93</u>              | _____ |
| Color / Odor | <u>Brown<br/>No Odor</u> | <u>Brown<br/>No Odor</u> | <u>Brown<br/>No Odor</u> | _____ |
| Turbidity    | <u>High</u>              | <u>High</u>              | <u>High</u>              | _____ |

Comments: \_\_\_\_\_

**ATTACHMENT C**

**Survey Data**



(74)

FEBRUARY 2, 1995

GARY AGUIAR

MARK HAINSWORTH

SOKKIA C<sub>3</sub> AUTO LEVEL

TOPO ROD

COOL, SUNNY

MATHESON TRUCKING

2500 POPLAR STREET

OAKLAND, CA

MONITORING WELL INSTALLATIONS

| STN | BS | HI | FS | ELEV |
|-----|----|----|----|------|
|-----|----|----|----|------|

FINDLEY  
MW-2

7.51

6.41 13.92

TP-1

5.38 8.54

5.60 14.14

MW-1

5.98 8.16

TP-2

5.77 8.37

5.35 13.72

MW-2

5.69 8.03

TP-3

5.10 8.62

5.27 13.89

FINDLEY

MW-2

6.37 7.52

(75)

TOP OF PLASTIC CASING,  
FINDLEY ADHESIVES WELL MW-2 (\*)

TOP OF PLASTIC CASING, WELL MW-1

TOP OF PLASTIC CASING, WELL MW-2

TOP OF PLASTIC CASING,  
FINDLEY ADHESIVES WELL MW-2 (\*)

(\*) PREVIOUSLY SURVEYED  
BY ERM WEST, INC.

TOC = 7.51 FEET MSL

**ATTACHMENT D**

**Analytical Results: Soil**



# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

January 31, 1996

PEL # 9601069

HAGEMAN - AGUIAR, INC.

Attn: Gary Aguiar

Re: Six soil samples for Gasoline/BTEX and Diesel analyses.

Project name: Matheson Trucking

Project location: 2500 Poplar St., - Oakland, CA.

Date sampled: Jan 29, 1996

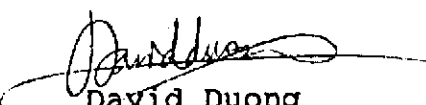
Date submitted: Jan 30, 1996

Date extracted: Jan 30-31, 1996

Date analyzed: Jan 30-31, 1996

## RESULTS:

| SAMPLE I.D.           | Gasoline<br>(mg/Kg) | Diesel<br>(mg/Kg) | Benzene<br>(ug/Kg) | Toluene<br>(ug/Kg) | Ethyl<br>Benzene<br>(ug/Kg) | Total<br>Xylene<br>(ug/Kg) |
|-----------------------|---------------------|-------------------|--------------------|--------------------|-----------------------------|----------------------------|
| MW-1 @ 5'             | N.D.                | 8.6               | N.D.               | N.D.               | N.D.                        | N.D.                       |
| MW-1 @ 10'            | N.D.                | 5.6               | N.D.               | N.D.               | N.D.                        | N.D.                       |
| MW-1 @ 15'            | N.D.                | 7.8               | N.D.               | N.D.               | N.D.                        | N.D.                       |
| MW-2 @ 5'             | 51                  | 16                | 29                 | 31                 | 83                          | 170                        |
| MW-2 @ 10'            | N.D.                | 7.2               | N.D.               | N.D.               | N.D.                        | N.D.                       |
| MW-2 @ 15'            | N.D.                | 6.2               | N.D.               | N.D.               | N.D.                        | N.D.                       |
| Blank                 | N.D.                | N.D.              | N.D.               | N.D.               | N.D.                        | N.D.                       |
| Spiked<br>Recovery    | 104.1%              | 87.0%             | 80.6%              | 101.9%             | 109.8%                      | 98.7%                      |
| Detection<br>limit    | 1.0                 | 1.0               | 5.0                | 5.0                | 5.0                         | 5.0                        |
| Method of<br>Analysis | 5030 /<br>8015      | 3550 /<br>8015    | 8020               | 8020               | 8020                        | 8020                       |

  
David Duong  
Laboratory Director

PEL # 9601069

INV # 26760

# CHAIN OF CUSTODY RECORD

|   |         |       |      |   |                         |   |   |  |  |                 |                 |          |
|---|---------|-------|------|---|-------------------------|---|---|--|--|-----------------|-----------------|----------|
| PROJECT NAME AND ADDRESS:<br><i>Matheson Trucking</i><br>2500 Poplar Street<br>Oakland CA |         |       |      | SAMPLER (Signature)<br><i>Wash Hainworth</i><br><b>HAGEMAN - AGUIAR, INC.</b><br>3732 Mt. Diablo Blvd., Suite 372<br>Lafayette, CA 94549<br>(415)284-1661 (415)284-1664 (FAX) |                         | ANALYSIS REQUESTED<br><i>TPH Gas/DIESEL</i>                             |   |  |  |                 |                 |          |
| CROSS REFERENCE NUMBER  | DATE    | TIME  | SOIL | WATER   | STATION LOCATION        |   |   |  |  |                 |                 |          |
| MW-1 @ 5'   | 1/29/96 | 8:12  | ✓    |   | Monitoring Well #1 @ 5' | X   | X |  |  |                 |                 | Norm TAT |
| MW-1 @ 10'  | 1/29/96 | 8:19  | ✓    |   | #1 @ 10'                | X   | X |  |  |                 |                 |          |
| MW-1 @ 15'  | 1/29/96 | 8:26  | ✓    |   | #1 @ 15'                | X   | X |  |  |                 |                 |          |
| MW-2 @ 5'   | 1/29/96 | 10:31 | ✓    |   | #2 @ 5'                 | X   | X |  |  |                 |                 |          |
| MW-2 @ 10'  | 1/29/96 | 11:09 | ✓    |   | #2 @ 10'                | X   | X |  |  |                 |                 |          |
| MW-2 @ 15'  | 1/29/96 | 11:11 | ✓    |   | #2 @ 15'                | X   | X |  |  |                 |                 |          |
| RELINQUISHED BY: (Signature)<br><i>Larry Aguiar</i>                                       |         |       |      | DATE<br>1/30/96   | TIME<br>0810            | 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)<br><i>Handwritten Signature</i> |   |  |  | DATE<br>1/30/96 | TIME<br>8:10 AM |          |

**ATTACHMENT E**

**Analytical Results: Groundwater**



# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

February 07, 1996

PEL # 9602006

HAGEMAN - AGUIAR, INC.

Attn: Mark Hainsworth

Re: Two water samples for Gasoline/BTEX and Diesel analyses.

Project name: Matheson Trucking

Project location: Poplar Ave., - Oakland, CA.

Date sampled: Feb 02, 1996

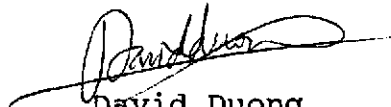
Date submitted: Feb 05, 1996

Date extracted: Feb 05-06, 1996

Date analyzed: Feb 05-06, 1996

## RESULTS:

| SAMPLE I.D.        | Gasoline (ug/L) | Diesel (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl Benzene (ug/L) | Total Xylene (ug/L) |
|--------------------|-----------------|---------------|----------------|----------------|----------------------|---------------------|
| MW-1               | 120             | 140           | N.D.           | 1.5            | 0.5                  | 5.5                 |
| MW-2               | 230             | 350           | 0.6            | 0.9            | 1.2                  | 3.0                 |
| Blank              | N.D.            | N.D.          | N.D.           | N.D.           | N.D.                 | N.D.                |
| Spiked Recovery    | 99.1%           | 107.2%        | 81.9%          | 82.3%          | 80.0%                | 84.2%               |
| Detection limit    | 50              | 50            | 0.5            | 0.5            | 0.5                  | 0.5                 |
| Method of Analysis | 5030 / 9015     | 3510 / 9015   | 602            | 602            | 602                  | 602                 |

  
David Duong  
Laboratory Director

PEL # 9602006

INV # 26771

### CHAIN OF CUSTODY RECORD

| PROJECT NAME AND ADDRESS:<br><i>Matheson Trucking</i><br><i>Poplar Ave</i><br><i>Oakland CA</i>                               |        |       |      |       | SAMPLER: (Signature)<br><i>Mark Heimworth</i> |  | ANALYSIS REQUESTED<br><div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg);">TPH Gas/BTEX</div> <div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg);">Diesel</div> </div> |  |  |  |   |  |
|---|--------|-------|------|-------|---|--|--|--|--|--|---|--|
| <b>HAGEMAN - AGUIAR, INC.</b><br>3732 Mt. Diablo Blvd., Suite 372<br>Lafayette, CA 94549<br>(415)284-1661 (415)284-1664 (FAX) |        |       |      |       |   |  |  |  |  |  |   |  |
| CROSS REFERENCE NUMBER  | DATE   | TIME  | SOIL | WATER | STATION LOCATION                              |  |  |  |  |  | REMARKS                                     |  |
| MW-1  | 2/2/96 | 12:10 |      | ✓     | Monitoring Well # 1                           | X  | X  |  |  |  |   |  |
| MW-2  | 2/2/96 | 10:54 |      | ✓     | Monitoring Well # 2                           | X  | X  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
|   |        |       |      |       |   |  |  |  |  |  |   |  |
| RELINQUISHED BY: (Signature)<br><i>Dance Aguiar</i>   |        |       |      |       | DATE <i>2/5/96</i><br>TIME <i>8:05</i>        | RECEIVED BY: (Signature)                                       |  |  |  |  | DATE<br>TIME                                |  |
| RELINQUISHED BY: (Signature)  |        |       |      |       | DATE<br>TIME                                  | RECEIVED BY: (Signature)                                       |  |  |  |  | DATE<br>TIME                                |  |
| RELINQUISHED BY: (Signature)  |        |       |      |       | DATE<br>TIME                                  | RECEIVED BY: (Signature)                                       |  |  |  |  | DATE<br>TIME                                |  |
| RELINQUISHED BY: (Signature)  |        |       |      |       | DATE<br>TIME                                  | RECEIVED FOR LABORATORY BY: (Signature)<br><i>Dance Aguiar</i> |  |  |  |  | DATE <i>02/06/96</i><br>TIME <i>8:10 AM</i> |  |