



ENVIRONMENTAL  
PROTECTION

00 MAY 25 AM 10:30

*Environmental & Water Resources Engineering  
Groundwater Consultants*

May 22, 2000

Larry Seto  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

**Well Installation and Quarterly Groundwater Monitoring Report  
Matheson Trucking  
2500 Poplar Street, Oakland, California  
Fuel Leak Case No. 1306**

Dear Mr. Seto:

The enclosed report documents the following activities at the subject property:

- Preparation and permitting for borings and wells,
- Collection and analysis of soil samples from two borings,
- Installation of monitoring wells MW-3 and MW-4,
- Search and repair of existing monitoring well MW-1, and
- Collection and analysis of groundwater samples from four monitoring wells.

If you have any questions, please call me at 510/620-0891.

Sincerely,

**Hageman-Aguiar, Inc.**

**Kenneth B. Alexander, RG, CH  
Principal Hydrogeologist**

cc: Brett Davis/Matheson Trucking, Elk Grove, California



HAGEMAN-AGUIAR, INC.

*Environmental & Water Resources Engineering  
Groundwater Consultants*

**WELL INSTALLATION AND  
QUARTERLY GROUNDWATER MONITORING REPORT**

(Sampled May 1, 2000)

**MATHESON TRUCKING**

2500 Poplar Street  
Oakland, California

**May 22, 2000**

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**ATTACHMENT A** – Correspondence and Permits

**ATTACHMENT B** – Boring Logs and DWR 188 Well Completion Reports

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## I. INTRODUCTION

The site location is the Matheson Trucking facility located at 2500 Poplar Street in Oakland, California (Figure 1). The site is situated on the southern side of 26<sup>th</sup> Street between Poplar and Union Streets in Oakland. The current layout of the property, along with the location of the previous tank excavations, is shown in Figure 2. The site has been historically operated as a truck maintenance, fueling, and dispatch facility.

This report describes monitoring well installation and groundwater monitoring activities completed in April and May 2000 at 2500 Poplar Street, Oakland, CA. The work was performed in accordance with our workplan, dated February 22, 2000. The Alameda County Environmental Health Services (ACEHS) approved the workplan in their letter of March 2, 2000 (Attachment A).

### Background

On August 2, 1994, CNC Services of Antioch, California removed three underground storage tanks (USTs) in two excavations at the site. The tanks consisted of one 1,000-gallon single-wall steel tank (Union Street excavation) and two 4,000-gallon single-wall steel tanks (Poplar Street excavation) (Figure 2). 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 USTs had ever been used by Matheson Trucking since they became occupants of the property in 1972. It is assumed that the tanks had contained either gasoline or diesel fuel. Gasoline and diesel were found to be present in the native soil beneath the 4,000-gallon tanks at concentrations of 1,360 mg/kg (ppm) and 44 mg/kg, respectively. Gasoline and diesel were found to be present in the native soil beneath the 1,000-gallon tank at concentrations of 550 mg/kg and 22 mg/kg, respectively.

On January 29, 1996, Hageman-Aguiar, Inc. installed two shallow groundwater-monitoring wells, MW-1 and MW-2, in the vicinity of the former tank excavations (Figure 2). Monitoring well construction details are summarized in Table 1. These monitoring wells were sampled on a quarterly basis from February 1996 to September 1997. Gasoline and diesel constituents were not detected during the last two sampling events.

On September 27, 1999, Eureka Builders of Carson City, Nevada City removed four USTs from a common excavation at the site (Figure 2). The tanks consisted of one 7,000-gallon diesel UST, one 4,000-gallon diesel UST, one 4,000-gallon gasoline UST and one 550-gallon waste oil UST. The tank excavation was over-excavated to 17 feet below ground surface. Laboratory analysis of a groundwater sample collected from within the tank excavation revealed gasoline, benzene, diesel, and motor oil at concentrations of 890 µg/L (ppb), 2.2 µg/L, 3,900 µg/L and 1,600 µg/L, respectively.

### **Purpose and Scope**

The purpose of this investigation was to evaluate the extent of residual groundwater contamination that may have emanated from the underground storage tanks removed in 1999. For this investigation, Hageman-Aguiar, Inc. drilled two borings, collected soil and groundwater samples, and installed two additional shallow groundwater monitoring wells at the site. In addition, we collected groundwater samples from the two existing monitoring wells.

Our scope of work included the following:

- We drilled two borings at 2500 Poplar Street. Soil samples were collected during drilling and analyzed for petroleum constituents.
- We completed the two borings as 2-inch SCH 40 PVC monitoring wells MW-3 and MW-4. We developed the new wells.
- We located monitoring well MW-1, which had been inadvertently buried during repaving at the site. We repaired the well and installed a new well vault.

- We measured water levels in the two new wells and two existing monitoring wells. We surveyed the measuring point elevations on the new wells.
- We collected groundwater samples from the two new wells and two existing monitoring wells. Groundwater samples were analyzed for petroleum constituents.
- We evaluated the hydrogeologic and analytical data.

## II. FIELD WORK: INSTALLATION OF MONITORING WELLS

On April 18 2000, two borings (for installation of the wells) were drilled using 8-inch outside diameter hollow-stem augers to a depth of approximately 15 feet. Gregg Drilling & Sampling (Martinez, CA) provided drilling services. The borings were completed as monitoring wells MW-3 and MW-4.

Prior to initiating the field work, we performed the following activities:

- A workplan, dated February 22, 2000, was prepared describing the proposed field work. The ACEHS approved the workplan.
- Monitoring well construction permits were obtained from the Alameda County Public Works Agency (Attachment A).
- A private utility locator was retained to identify subsurface utilities at the proposed boring locations.
- Underground Service Alert (USA) was notified to check for buried utilities at the proposed boring locations.

### Equipment Decontamination

Prior to drilling, all drilling equipment, including augers, drill stem, and split barrel samplers, were steam cleaned. All steam cleaning was conducted by Gregg Drilling at their steam-cleaning facility in Martinez, CA. 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.

### Soil Sampling and Analysis

During drilling, soil samples were collected on approximate 5-foot centers by driving a 2-inch split-spoon sampler fitted with three 2-inch by 6-inch long brass liners (California Modified



Sampler). Both ends of the liners selected for chemical analysis were sealed with Teflon film and plastic end caps. The end caps were sealed onto the brass liner with duct tape. All samples were immediately placed on crushed ice and transported under chain-of-custody to the laboratory upon completion of the field work.

Samples were classified in the field in accordance with ASTM D2488-93 (Standard Practice for Description and Identification of Soils, Visual-Manual Procedure). The soil was classified by Kenneth B. Alexander, California Certified Hydrogeologist #512. Soil was also examined for chemical odor and chemical staining. The samples were screened in the field with an organic vapor meter (Thermo Environmental Instruments, Model 580B, equipped with a 10.2 eV photoionization detector, and calibrated to 100-ppm v/v isobutylene). Boring logs are provided in Attachment B. Well locations are shown on Figure 2.

### **Subsurface Conditions**

Subsurface conditions encountered in the borings typically consisted of:

- Lean Clay and Fat Clay, beginning at the ground surface and extending to a depth of approximately 13.5 to 14.5 feet.
- Silt or Sandy Silt, beginning at a depth of 13.5 to 14.5 feet and extending to at least 15 feet (the maximum depth explored).

Groundwater was observed at approximately 14.5 feet below ground level during drilling. After well installation, the depth to groundwater was measured at a depth of approximately 7 feet.

### **Well Installation and Development**

The two borings were completed as monitoring wells to a depth of approximately 15 feet using 2-inch SCH 40 PVC. Each well was screened between depths of 5 to 15 feet (0.010" slots). The

annular space was packed with #2-/16 Monterey sand to about one foot above the top of the screened section. Approximately 1 foot of wetted bentonite pellets was placed upon the sand pack, followed by a neat cement grout seal to the ground surface. The top of the PVC casing was protected by a below-grade, traffic-rated well vault. Well completion data are summarized in Table 1. Copies of the Well Completion Reports (DWR-188) are included in Attachment B.

The wells were developed on April 21 and 24, 2000. During development of the wells, groundwater and silt were removed from each well casing using a PVC bailer. The well development logs are included in Attachment C.

### **Elevation Survey**

On May 3, 2000, Hageman-Aguiar, Inc. surveyed the measuring point elevations of the two new monitoring wells (Attachment D). Elevations were surveyed relative to previously-surveyed elevations for the existing wells. The elevations are based on Mean Sea Level datum.

### **Waste Generation**

During drilling, approximately 0.5 cubic yards of soil cuttings were generated and contained in two steel drums. Analytical results have been submitted to BFI. Upon final approval, the soil will be transported by North American Dirt Solutions (Campbell, CA).

All water removed from the wells during development was drummed and stored onsite. The wastewater is periodically picked up by a licensed waste hauler and transported under manifest to an appropriate recycling and disposal facility.

**Monitoring Well MW-1 Search and Repair**

During a site visit in September 1999, Hageman-Aguiar, Inc. observed that monitoring well MW-1 had been inadvertently buried during repaving at the site.

On April 24, 2000, Hageman-Aguiar, Inc. located well MW-1 using a backhoe to "pothole" the general location. We inspected the well and found it in good condition. We then extended the well casing to just below the new pavement surface. We installed a new traffic-rated well vault to protect the wellhead.

### III. FIELD WORK: GROUNDWATER SAMPLING

#### Monitoring Well Sampling

On May 1, 2000, Hageman-Aguiar, Inc. sampled four onsite groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4). The locations of the wells are shown in Figure 2. Prior to sampling, several casing volumes of water were removed from each well. Field conductivity, temperature, and pH were monitored during purging. Purging continued until these parameters stabilized. Groundwater samples were subsequently collected using new, disposable sampling bailers. The water samples were placed inside appropriate 40-ml VOA vials free of any headspace. The samples were immediately placed on crushed ice, then transported under chain-of-custody to the laboratory at the end of the workday.

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) observation of any floating product, sheen, or odor prior to purging, using a clear Teflon bailer, (3) pH, (4) temperature, and (5) specific conductance. Copies of the well sampling logs are included in Attachment C.

#### Wastewater Generation

All water and other liquid waste removed from the wells during purging was drummed and stored onsite. The water and liquid waste is periodically picked up by a licensed waste hauler and transported under manifest to an appropriate recycling and disposal facility.

## IV. RESULTS OF WATER LEVEL MEASUREMENTS

### Groundwater Flow Direction and Hydraulic Gradient

On May 1, 2000, Hageman-Aguiar, Inc. measured water level in the four monitoring wells (Table 2). Figure 3 presents a contour map for the groundwater beneath the site. As shown in Figure 3, the water level data indicate that groundwater flow in May 2000 was toward the north-northwest direction.

The calculated hydraulic gradient for May 2000 was approximately 0.007 feet/foot (about 37 feet per mile).

### Floating Product

Measurements of floating product were performed prior to water level measurements on May 1, 2000. No floating product was observed.

## V. ANALYTICAL RESULTS

### Laboratory Analysis

All analyses were performed by Entech Analytical Labs, Inc., of Sunnyvale, California, a California State Department of Health Services-certified laboratory. All samples were analyzed in accordance with U.S. EPA recommended procedures.

All soil and groundwater samples were analyzed for:

- Total Petroleum Hydrocarbons as Gasoline (modified EPA Method 8015)
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA Method 8020)
- Methyl Tertiary Butyl Ether (MTBE) (EPA Method 8260)
- Total Petroleum Hydrocarbons as Diesel (modified EPA Method 8015)
- Total Petroleum Hydrocarbons as Motor Oil (modified EPA Method 8015)

In addition, the soil samples were also analyzed for:

- Volatile Organic Compounds (EPA Method 8240)
- Cadmium, Chromium, Lead, Nickel, and Zinc (EPA Method 6010B)

### Analytical Results: Soil

Tables 3 and 4 present the analytical results for the soil samples collected on April 18, 2000. Copies of the laboratory reports and chain-of-custody records are provided in Attachment E.

In general, the soil analytical results are unremarkable. As shown in Table 3, petroleum constituents were not detected in either of the soil samples, except for motor oil (at a concentration of 220 mg/kg) in the sample from the boring for well MW-3.

**Analytical Results: Groundwater**

Table 5 presents the analytical results for the groundwater samples collected on May 1, 2000. Copies of the laboratory reports and chain-of-custody records are provided in Attachment F.

In general, the groundwater analytical results are unremarkable. As shown in Table 5, petroleum constituents were not detected in any of the groundwater samples, except for diesel (at a maximum concentration of 320 µg/L) in the samples from wells MW-1 and MW-4.

## VI. DATA ANALYSIS AND RECOMMENDATIONS

The results of the soil sampling revealed a relatively low concentration of motor oil in one of the soil samples. Diesel, gasoline, BTEX, and MTBE were not detected in either of the soil samples. The detection of motor oil in one of the soil samples is not indicative of a significant tank release, nor does the measured soil concentration represent a significant risk to human health or the environment.

The results of the groundwater sampling revealed relatively low concentrations of diesel in monitoring wells MW-1 and MW-4. Gasoline, BTEX, and MTBE were not detected in any of the groundwater samples. No petroleum constituents were detected in downgradient monitoring well MW-3. Groundwater analytical results are shown graphically on Figure 4.

The detection of diesel in two of the groundwater samples is not indicative of a significant tank release, nor do the measured groundwater concentrations represent a significant risk to human health or the environment. We believe that contaminant migration is limited due to the very low permeability of the clay and silt encountered beneath the site. The detected motor oil and diesel will attenuate with time, primarily due to intrinsic biodegradation.

On the basis of the foregoing, we do not believe the detected petroleum hydrocarbons represent a significant risk to human health or the environment and we do not believe that further investigation or remediation is warranted. We recommend that groundwater monitoring be performed quarterly for one year. If, at that time, the analytical results do not show evidence of petroleum contamination, we will recommend the site for regulatory closure.

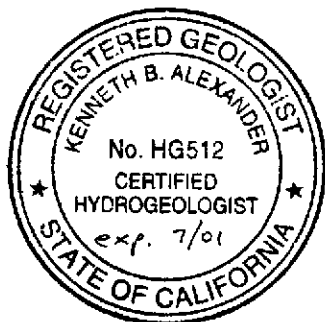


**WELL INSTALLATION AND QUARTERLY GROUNDWATER  
MONITORING REPORT**

Matheson Trucking

2500 Poplar Street, Oakland, California

May 22, 2000



*K.B. Alexander*

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**Kenneth B. Alexander, RG, CH  
Principal Hydrogeologist  
Hageman-Aguiar, Inc.**

**#HG 512**

**TABLE 1.**  
**Monitoring Well Completion Data**  
**Matheson Trucking, 2500 Poplar Street, Oakland, California**

Well Number:	MW-1	MW-2	MW-3	MW-4
Date of Installation	January 29, 1996	January 29, 1996	April 18, 2000	April 18, 2000
Installed By	Hageman- Aguiar, Inc.	Hageman- Aguiar, Inc.	Hageman- Aguiar, Inc.	Hageman- Aguiar, Inc.
Installation Method	HSA	HSA	HSA	HSA
Boring Diameter (inches)	8	8	8	8
Measuring Point Description	Top of PVC casing	Top of PVC casing	Top of PVC casing	Top of PVC casing
Measuring Point Elev. (feet)	9.19	8.03	8.82	8.80
Approximate Seal Depth (feet)	2.5	2.5	4	4
Total Depth (feet)	15	15	15	15
Casing Diameter (inches)	2	2	2	2
Screened Interval (ft) – depth	3 to 15	3 to 15	5 to 15	5 to 15
	elevation 6.2 to –5.8	elevation 5.0 to –7.0	elevation 3.8 to –6.2	elevation 3.8 to –6.2
Sand Pack Interval (ft) – depth	2.5 to 15	2.5 to 15	4 to 15	4 to 15
	elevation 6.7 to –5.8	elevation 5.5 to –7.0	elevation 4.8 to –6.2	elevation 4.8 to –6.2
Screen Specifications	SCH 40 PVC, 0.010-in slots	SCH 40 PVC, 0.010-in slots	SCH 40 PVC, 0.010-in slots	SCH 40 PVC, 0.010-in slots

General Notes

- (a) Elevations referenced to Mean Sea Level.
- (b) Depths measured relative to ground surface.
- (c) HSA = Hollow-stem augers.

TABLE 2.

Groundwater Elevation Measurements – May 1, 2000  
Matheson Trucking, 2500 Poplar Street, Oakland, California

Well Number	Measuring Point Elevation (feet)	Depth to Water (feet)	Product Thickness (feet)	Elevation Adjustment (feet)	Groundwater Elevation (feet, MSL)
MW-1	9.19	6.30	none	0.00	2.89
MW-2	8.03	5.09	none	0.00	2.94
MW-3	8.82	7.25	none	0.00	1.57
MW-4	8.80	7.02	none	0.00	1.78

General Notes

- (a) Measuring point is top of PVC casing.
- (b) Elevations referenced to top of casing elevation of former Findley Adhesives well MW-2 at 2433 Poplar Street. MW-2 TOC elevation is 8.03 feet above Mean Sea Level.

TABLE 3.

Soil Analytical Results for April 18, 2000 – Organic Compounds  
 Matheson Trucking, 2500 Poplar Street, Oakland, California

Boring No.	Sample Depth (feet)	TPH as Diesel (mg/kg)	TPH as Motor Oil (mg/kg)	TPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Volatile Organic Compounds (mg/kg)
MW-3	8 to 8.5	<10	220	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<5 to <20
MW-4	8 to 8.5	<1	<13	<1	<0.005	<0.005	<0.005	<0.005	<0.005	–

EPA Method No.	Modified 8015	Modified 8015	Modified 8015	8020	8020	8020	8020	8020	8260B	8240
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General Notes

- (a) "<" = Parameter below laboratory method reporting limit. "–" = Not analyzed.
- (b) Depths measured relative to ground surface.

**TABLE 4.**

**Soil Analytical Results for April 18, 2000 – Metals  
Matheson Trucking, 2500 Poplar Street, Oakland, California**

<b>Boring No.</b>	<b>Sample Depth (feet)</b>	<b>Total Cadmium (mg/kg)</b>	<b>Total Chromium (mg/kg)</b>	<b>Total Lead (mg/kg)</b>	<b>Total Nickel (mg/kg)</b>	<b>Total Zinc (mg/kg)</b>
<b>MW-3</b>	8 to 8.5	<5	36	40	20	70
<b>MW-4</b>	8 to 8.5	–	–	<1	–	–

<b>EPA Method No.</b>	6010B	6010B	6010B	6010B	6010B
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General Notes

- (a) "<" = Parameter below laboratory method reporting limit. "–" = Not analyzed.
- (b) Depths measured relative to ground surface.

TABLE 5.

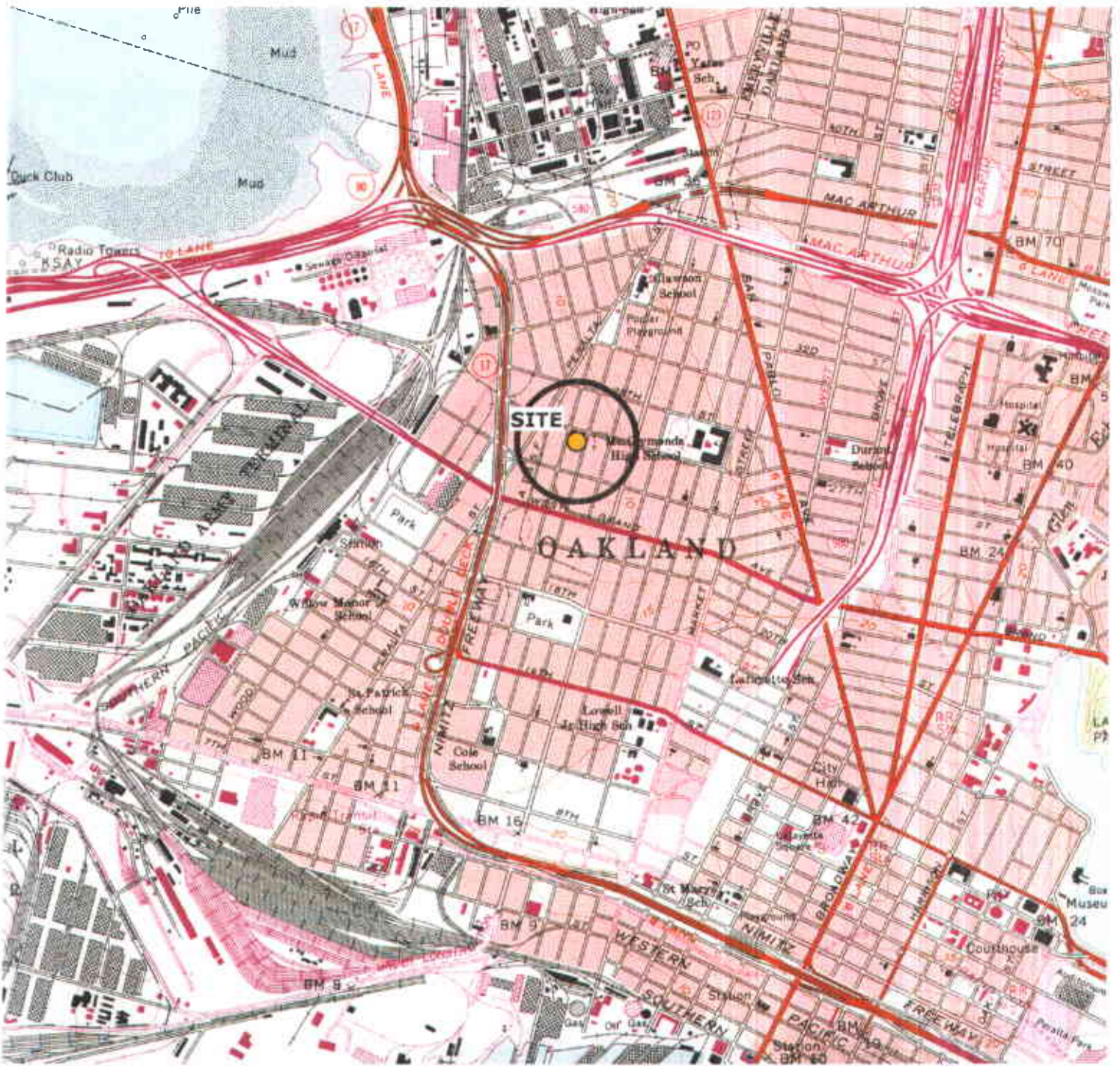
Groundwater Analytical Results – May 1, 2000  
 Matheson Trucking, 2500 Poplar Street, Oakland, California

Well Number	TPH as Diesel (µg/L)	TPH as Motor Oil (µg/L)	TPH as Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	76	<250	<50	<0.5	<0.5	<0.5	<0.5	<5
MW-2	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<5
MW-3	<50	<250	<50	<0.5	<0.5	<0.5	<0.5	<5
MW-4	<b>320</b>	<250	<50	<0.5	<0.5	<0.5	<0.5	<5

Drinking Water Criteria	100 (T&O)	none	5 (T&O)	1 (MCL)	150 (MCL)	700 (MCL)	1,750 (MCL)	13 (MCL)
EPA Method No.	Modified 8015	Modified 8015	Modified 8015	8020	8020	8020	8020	8260B

General Notes

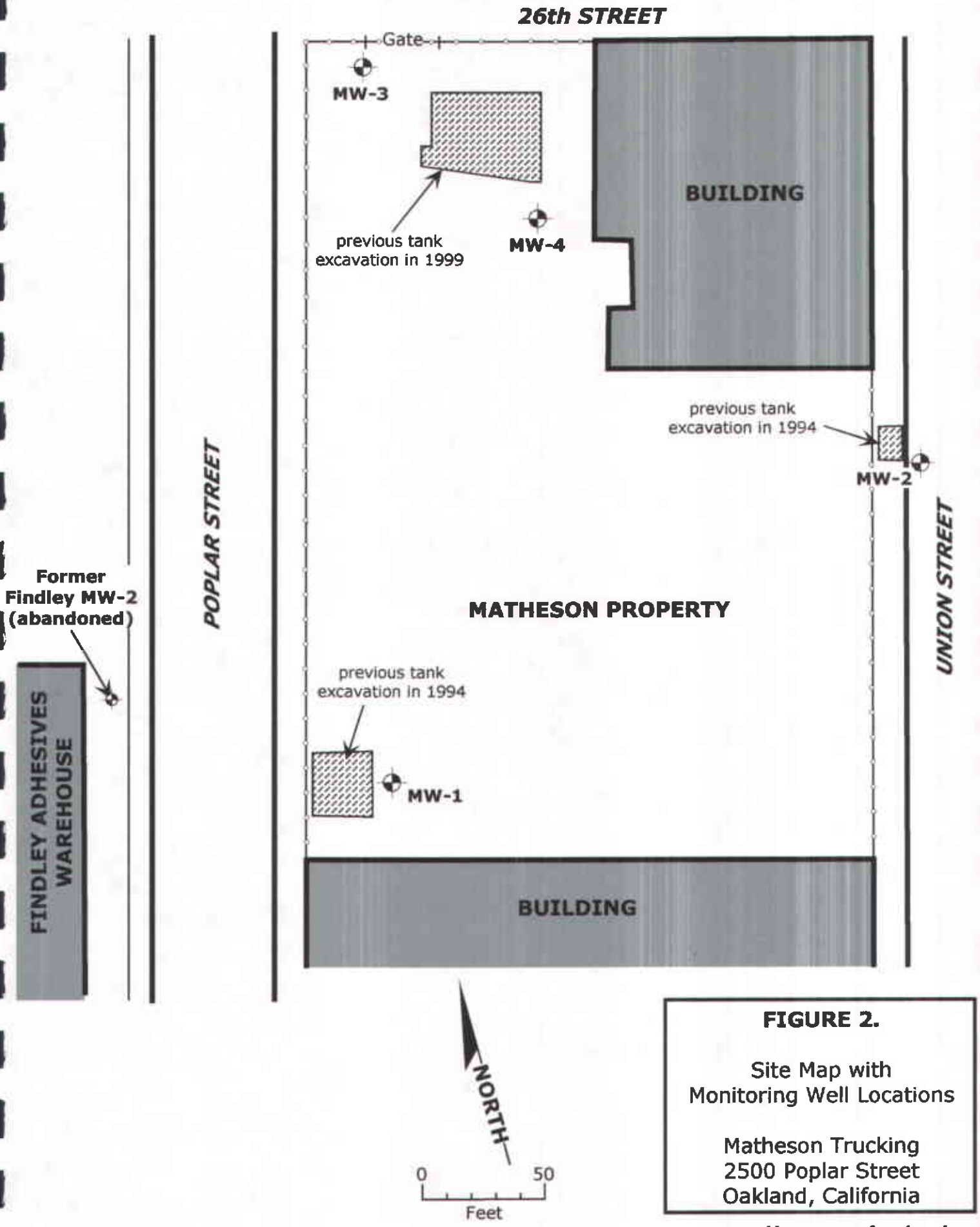
- (a) "<" = parameter below laboratory method reporting limit.
- (b) Drinking water criteria is for comparison purposes only. Source: Jon B. Marshack, *A Compilation of Water Quality Goals*, Central Valley Regional Water Quality Control Board, Sacramento, CA, March 1998. T&O = Taste and Odor threshold. MCL = California Primary Maximum Contaminant Level. Concentrations exceeding the drinking water criteria in **bold**.



Basemap: USGS 7.5-minute topographic quadrangle, Oakland West, Calif., Photorevised 1980.

**FIGURE 1.**  
 Location Map  
 Matheson Trucking  
 2500 Poplar Street  
 Oakland, California

*Hageman-Aguiar, Inc.*



**FIGURE 2.**

Site Map with  
Monitoring Well Locations

Matheson Trucking  
2500 Poplar Street  
Oakland, California

*Hageman-Aguilar, Inc.*



26th STREET

Gate

MW-3  
(1.57)

previous tank  
excavation in 1999

MW-4  
(1.78)

BUILDING

previous tank  
excavation in 1994

MW-2  
(2.94)

MATHESON PROPERTY

previous tank  
excavation in 1994

MW-1  
(2.89)

BUILDING

POPLAR STREET

UNION STREET

Former  
Findley MW-2  
(abandoned)

FINDLEY ADHESIVES  
WAREHOUSE

GROUNDWATER FLOW  
DIRECTION

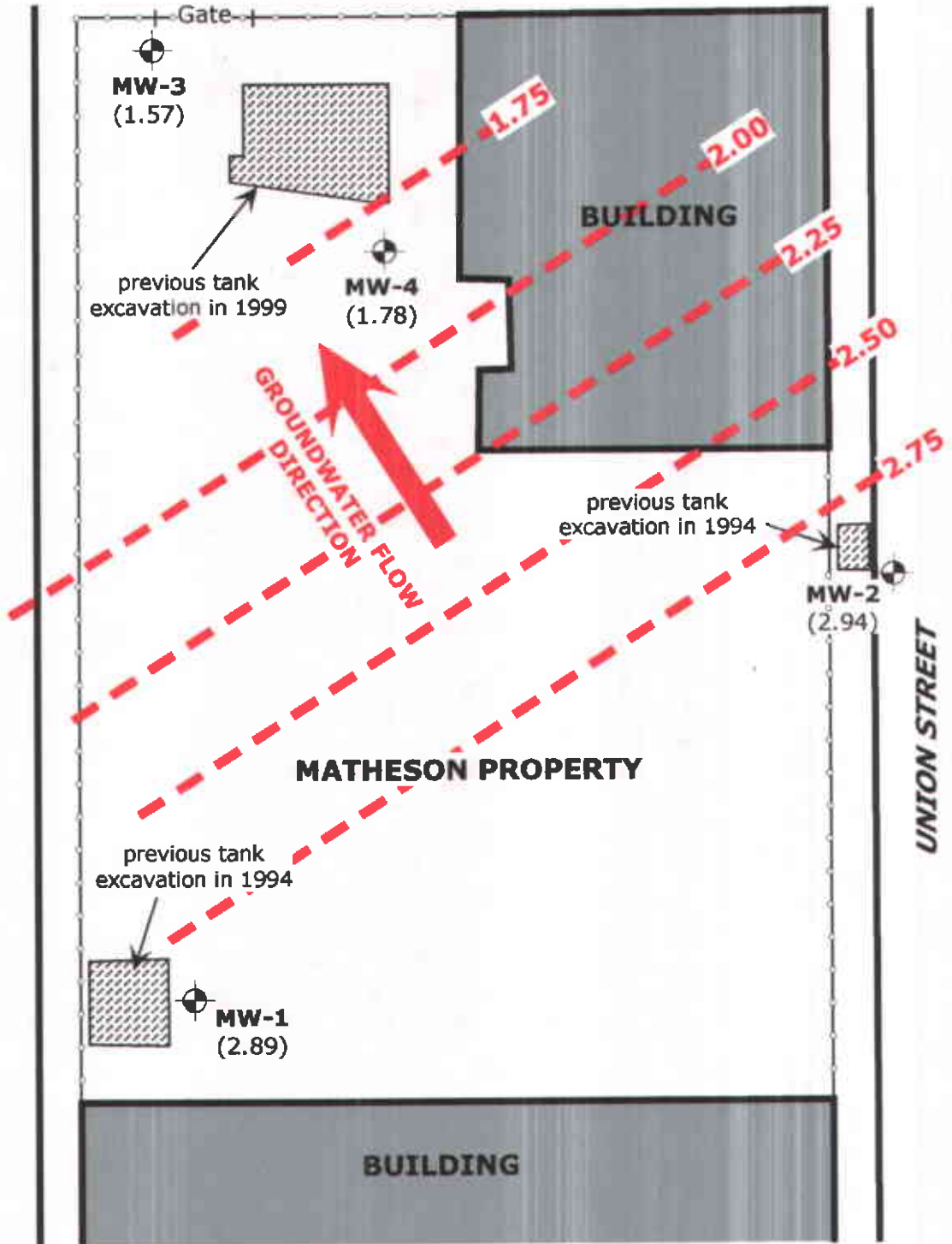
**FIGURE 3.**

Groundwater Elevations  
on May 1, 2000

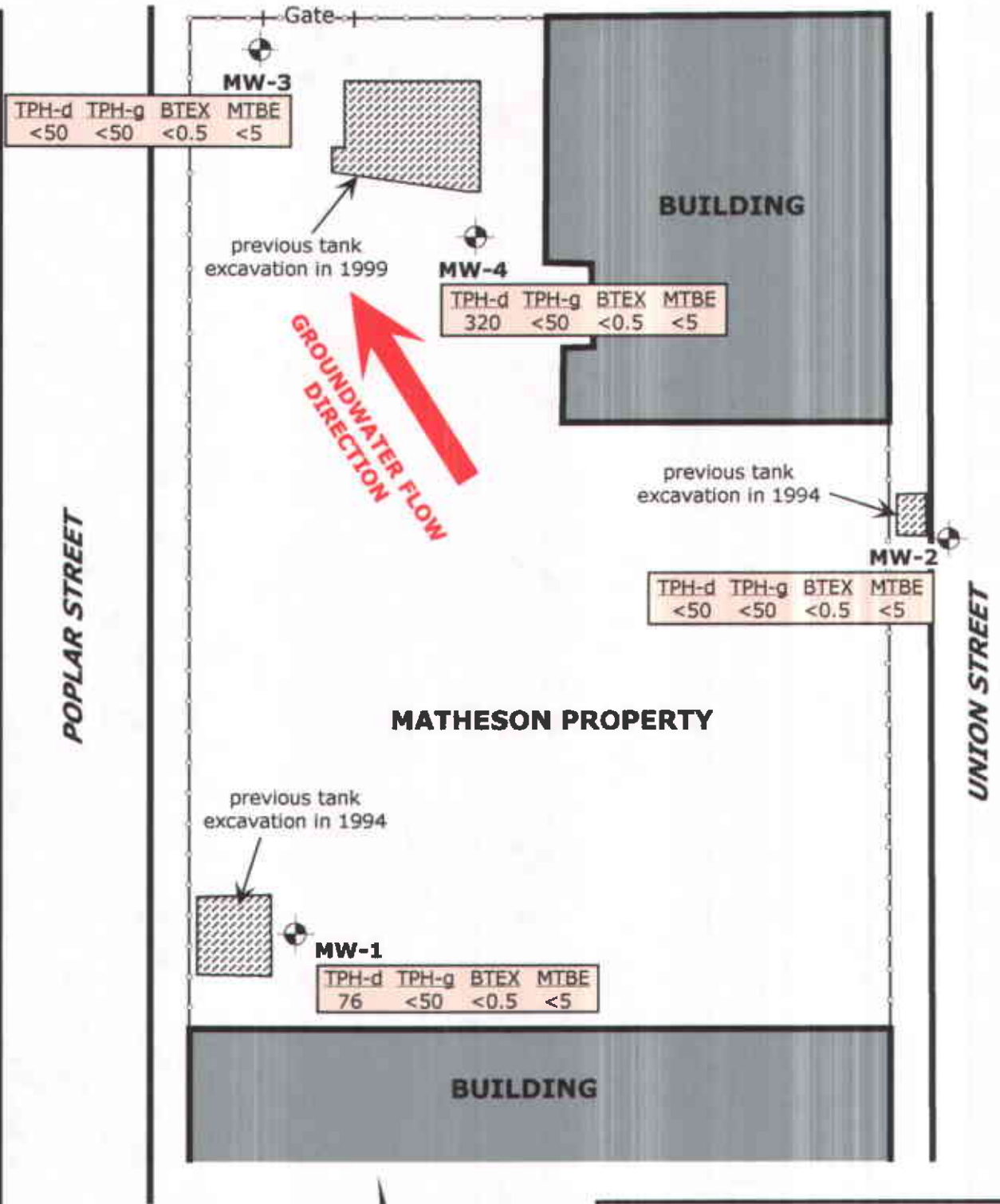
Matheson Trucking  
2500 Poplar Street  
Oakland, California

*Hageman-Aguiar, Inc.*

Note: Groundwater elevations are in units of feet above Mean Sea Level.



26th STREET



Notes:

- (1) Units are ug/L (ppb)
- (2) TPH-d = Diesel
- (3) TPH-g = Gasoline
- (4) BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes
- (5) MTBE = MTBE by EPA Method 8260



**FIGURE 4.**  
Groundwater Analytical Results  
for May 1, 2000

Matheson Trucking  
2500 Poplar Street  
Oakland, California

**ATTACHMENT A**

**Correspondence and Permits**

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94501-8577  
(510) 567-6770  
(510) 337-9335 (FAX)

March 2, 2000

Ms. Laurie Johnson  
Matheson  
PO Box 970  
Elk Grove, CA 95759  
STID 1306

RE: Matheson Trucking, 2500 Poplar Street, Oakland, CA 94607

Dear Ms. Johnson:

I have reviewed the Proposed Workplan for Monitoring Well Installation dated February 22, 2000 that was prepared by Hageman-Aguilar, Inc. It is acceptable.

All soil cuttings, water and liquid waste generated during the implementation of this workplan should be disposed of within 30 day after the receipt of the laboratory analysis. This requirement is also for all excavated soil and groundwater generated during the underground tank removal in September 1999. Please send a copy of the disposal receipt or manifest to this office.

If you have any questions, please contact me at (510) 567-6774.

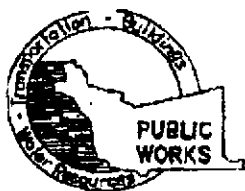
Sincerely,



Larry Seto  
Sr. Hazardous Materials Specialist

Cc: Ken Alexander, Hageman-Aguilar, 11100 San Pablo Avenue, Suite 200-A,  
El Cerrito, CA 94530

File



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION  
399 ELMHURST ST. HAYWARD, CA. 94544  
PHONE (510) 670-5594 FAX (510) 782-1939

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2500 Poplar Street, Oakland, CA  
(see attached map)

California Coordinates Source \_\_\_\_\_ ft. Accuracy ± \_\_\_\_\_ ft.  
CCN \_\_\_\_\_ ft. CCE \_\_\_\_\_ ft.  
APN 005-438-012-01

CLIENT  
Name Matheson Trucking  
Address PO Box 970 Phone 800/455-7678  
City Elk Grove, CA Zip 95759

APPLICANT  
Name Kenneth B. Alexander, RG, CH  
Hageman-Aguilar, Inc. Fax 510/620-0894  
Address 11100 San Pablo Ave., #200A Phone 510/620-0891  
City El Cerrito, CA Zip 94530

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

PROPOSED WATER SUPPLY WELL USE  
New Domestic  Replacement Domestic   
Municipal  Irrigation   
Industrial  Other \_\_\_\_\_

DRILLING METHOD:  
Mud Rotary  Air Rotary  Auger   
Cable  Other

DRILLER'S LICENSE NO. C57 #485165 (Gregg Drilling & Testing)

WELL PROJECTS  
Drill Hole Diameter 8 in. Maximum \_\_\_\_\_  
Casing Diameter 2 in. Depth 14.5 ft.  
Surface Seal Depth 3 ft. Number 2

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

ESTIMATED STARTING DATE April 17, 2000  
ESTIMATED COMPLETION DATE April 18, 2000

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

APPLICANT'S SIGNATURE K.B. Alex DATE March 30, 2000

FOR OFFICE USE

PERMIT NUMBER W00-155  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

PERMIT CONDITIONS

Circled Permit Requirements Apply

- A. GENERAL**
  - 1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
  - 2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Well Completion Reports.
  - 3. Permit is void if project not begun within 90 days of approval date.
- B. WATER SUPPLY WELLS**
  - 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.
- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
  - 1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  - 2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
- D. 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.
- E. CATHODIC**  
Fill hole above anode zone with concrete placed by tremie.
- F. WELL DESTRUCTION**  
See attached.
- G. SPECIAL CONDITIONS**

APPROVED Frank Codd DATE 4/4/00

**ATTACHMENT B**

**Boring Logs and DWR 188 Well Completion Reports**



# HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A  
El Cerrito, CA 94530

(510)620-0891 (510)620-0894 (fax)

# FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-3**

TOTAL DEPTH: **15'**

## PROJECT INFORMATION

PROJECT: **Matheson Trucking**  
 JOB NO.: **0151**  
 SITE LOCATION: **2500 Poplar Street**  
**Oakland, CA**  
 LOGGED BY: **Kenneth B. Alexander, RG, CH**  
 DATE DRILLED: **4-18-00**

## DRILLING INFORMATION

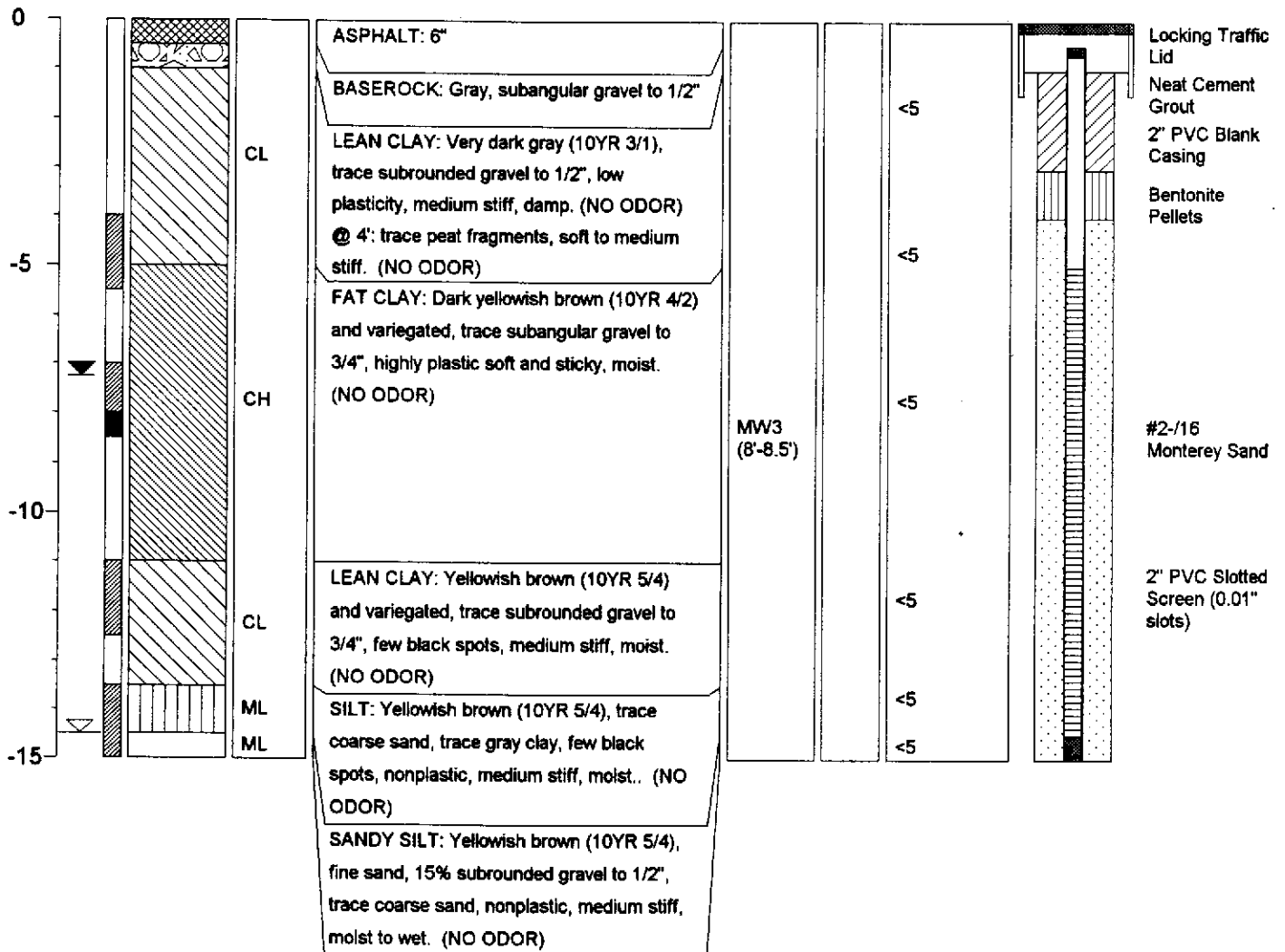
DRILLING CO.: **Gregg Drilling & Testing**  
**Martinez, CA**  
 RIG TYPE: **Rhino**  
 METHOD OF DRILLING: **8" Hollow Stem Augers**  
 SAMPLING METHODS: **2" split barrel sampler**  
 HAMMER WT./DROP: **none**

NOTES:  
**sunny, mild**

☒ Water level during drilling  
 ☒ Water level in completed well

Page 1 of 1

DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	PID (ppm)	WELL COMPLETION
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# HAGEMAN-AGUIAR, INC.

11100 San Pablo Ave, Suite 200-A  
 El Cerrito, CA 94530  
 (510)620-0891 (510)620-0894 (fax)

# FIELD BOREHOLE LOG

BOREHOLE NO.: **MW-4**

TOTAL DEPTH: **15'**

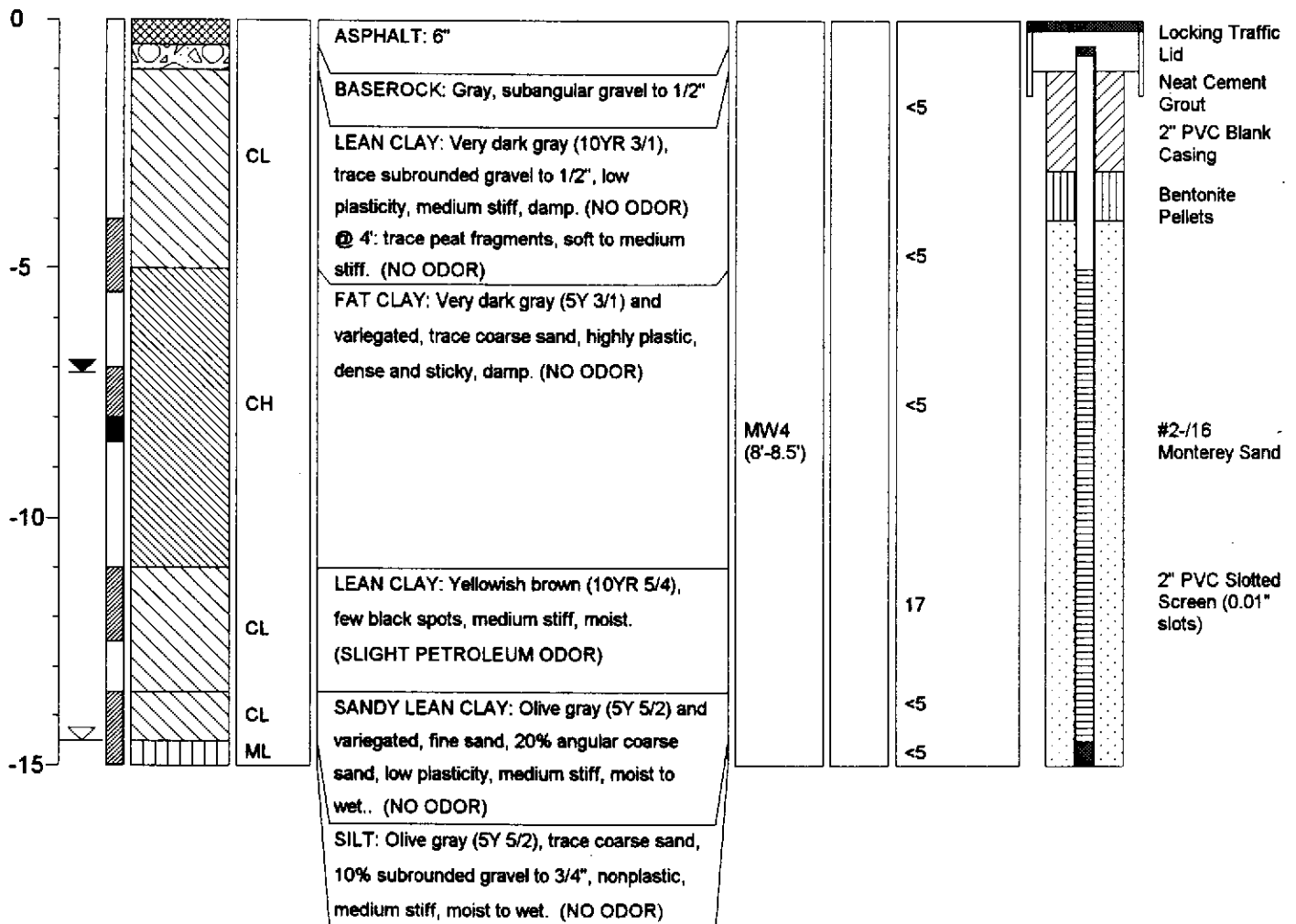
PROJECT INFORMATION		DRILLING INFORMATION	
PROJECT:	Matheson Trucking	DRILLING CO.:	Gregg Drilling & Testing
JOB NO.:	0151		Martinez, CA
SITE LOCATION:	2500 Poplar Street Oakland, CA	RIG TYPE:	Rhino
LOGGED BY:	Kenneth B. Alexander, RG, CH	METHOD OF DRILLING:	8" Hollow Stem Augers
DATE DRILLED:	4-18-00	SAMPLING METHODS:	2" split barrel sampler
		HAMMER WT./DROP:	none

NOTES: **sunny, mild**

∞ Water level during drilling  
 ∞ Water level in completed well

Page 1 of 1

DEPTH (feet)	sample	SOIL SYMBOLS	USCS	SOIL DESCRIPTION	SAMPLE NUMBER	Blows (per 6")	PID (ppm)	WELL COMPLETION
--------------	--------	--------------	------	------------------	---------------	----------------	-----------	-----------------







HAGEMAN-AGUIAR, INC.

*Environmental & Water Resources Engineering  
Groundwater Consultants*

May 17, 2000

Frank L. Codd  
Alameda County Public Works Agency  
399 Elmhurst Street  
Hayward, CA 94544

**Submittal of DWR 188 Reports  
ACPWA Permit Number W00-155  
Matheson Trucking  
2500 Poplar Street, Oakland, California**

Dear Mr. Codd:

Attached are the completed Water Well Driller Reports (DWR 188) for new monitoring wells MW-3 and MW-4 at the subject property.

I understand that the County will forward copies of the attached reports to the California Department of Water Resources in Sacramento, CA.

If you have any questions, please call me at 510/620-0891.

Sincerely,

**Hageman-Aguiar, Inc.**

**Kenneth B. Alexander, RG, CH  
Principal Hydrogeologist**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**ATTACHMENT C**

**Well Development and Sampling Logs**

## WELL DEVELOPMENT LOG

Project/No. \_\_\_\_\_ Page 1 of 4  
 Site Location Matheson - Oakland Date 04/21/2000  
 Well No. MW-4 Time Began 14:35  
 Weather Sunny, 60°-70°, breeze Completed 15:40

### EVACUATION DATA

Description of Measuring Point (MP) T.O.C.  
 Total Sounded Depth of Well Below MP 14.80' ± 0.27'  
 - Depth to Water Below MP 8.43' Diameter of Casing 2"  
 = Water Column in Well 6.64'  
 Gallons in Casing 1.12 + Annular Space \_\_\_\_\_ = Total Gallons \_\_\_\_\_  
(30% porosity)  
 Gallons Pumped During Development 6  
 Evacuation Method PVC Bailer

### DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor None  
 Appearance Silty water - No sheen

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
<u>14:40</u>	<u>Surged</u>	<u>5 minutes</u>	_____	_____	_____
<u>14:42</u>	<u>2</u>	<u>18.0</u>	<u>1268</u>	<u>6.98</u>	<u>Tan high</u>
<u>14:44</u>	<u>Surged</u>	<u>2 minutes</u>	_____	_____	_____
<u>14:46</u>	<u>4</u>	<u>17.9</u>	<u>1809</u>	<u>7.10</u>	<u>Tan dewatered Very high</u>
<u>14:56</u>	<u>Allowed to recharge 10 minutes - insufficient water</u>				
<u>15:37</u>	<u>Surged</u>	<u>2 minutes</u>	_____	_____	_____
<u>15:40</u>	<u>6</u>	<u>17.7</u>	<u>1914</u>	<u>7.14</u>	<u>Tan dewatered Very high</u>

Development unfinished.  
 Field Personnel \_\_\_\_\_

## WELL DEVELOPMENT LOG

Project/No. \_\_\_\_\_

Page 2 of 4

Site Location Matheson - Oakland

Date 04/21/2000

Well No. MAW-3

Time Began 15:13

Weather Sunny, 60°-70°

Completed 15:46

### EVACUATION DATA

Description of Measuring Point (MP) T.O.C.

Total Sounded Depth of Well Below MP 14.76' ± 0.27'

- Depth to Water Below MP 6.59'

Diameter  
of Casing 2"

= Water Column in Well 8.44'

Gallons in Casing 1.43 + Annular Space \_\_\_\_\_ = Total Gallons \_\_\_\_\_  
(30% porosity)

Gallons Pumped During Development 6

Evacuation Method PVC Bailer

### DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor Faint hydrocarbon

Appearance silty water - no sheen

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
<u>15:18</u>	<u>Surged 5</u>	<u>minutes</u>	_____	_____	_____
<u>15:20</u>	<u>2</u>	<u>18.4</u>	<u>1503</u>	<u>7.07</u>	<u>Tan med</u>
<u>15:23</u>	<u>Surged 2</u>	<u>minutes</u>	_____	_____	_____
<u>15:25</u>	<u>4</u>	<u>17.8</u>	<u>1843</u>	<u>7.54</u>	<u>dewatered Tan high</u>
<u>15:46</u>	<u>Allowed to recharge</u>	<u>20</u>	<u>minutes</u>	_____	_____
<u>15:48</u>	<u>Surged 2</u>	<u>minutes</u>	_____	_____	_____
<u>15:51</u>	<u>6</u>	<u>17.7</u>	<u>1748</u>	<u>7.36</u>	<u>dewatered Tan high</u>

Development UNFINISHED

Field Personnel \_\_\_\_\_

**WELL DEVELOPMENT LOG**

Project/No. \_\_\_\_\_

Page 3 of 4

Site Location Matheson - Oakland

Date 04/24/2000

Well No. MW-3

Time Began 09:01

Weather Sunny, 65°-75°

Completed 09:37

**EVACUATION DATA**

Description of Measuring Point (MP) T.O.C.

Total Sounded Depth of Well Below MP 14.76' to 10.27'

- Depth to Water Below MP 7.08'

Diameter  
of Casing 2"

= Water Column in Well 7.95'

Gallons in Casing 1.34 + Annular Space \_\_\_\_\_ = Total Gallons \_\_\_\_\_  
(30% porosity)

Gallons Pumped During Development 5.5

Evacuation Method PVC Bailer

**DEVELOPMENT / FIELD PARAMETERS**

Color Tan Odor NONE

Appearance Silty Water - NO Sheen

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
<u>09:06</u>	<u>Surged</u>	<u>5 minutes</u>			
<u>09:08</u>	<u>2</u>	<u>18.0</u>	<u>893</u>	<u>6.94</u>	<u>Tan Very high</u>
<u>09:11</u>	<u>4</u>	<u>18.0</u>	<u>1148</u>	<u>7.31</u>	<u>dewatered Tan high</u>
<u>09:32</u>	<u>Allowed to recharge 20 minutes</u>				
<u>09:34</u>	<u>Surged</u>	<u>2 minutes</u>			
<u>09:37</u>	<u>5.5</u>	<u>17.8</u>	<u>1117</u>	<u>7.43</u>	<u>dewatered Tan very high</u>

Field Personnel \_\_\_\_\_

WELL DEVELOPMENT LOG

Project/No. \_\_\_\_\_

Page 4 of 4

Site Location Matheson - Oakland

Date 04/24/2000

Well No. MW-4

Time Began 10:05

Weather Sunny, 65°-75°

Completed 10:16

EVACUATION DATA

Description of Measuring Point (MP) T.O.C.

Total Sounded Depth of Well Below MP 15.02' + 0.27'

- Depth to Water Below MP 6.23'

Diameter of Casing 2"

= Water Column in Well 9.06'

Gallons in Casing 1.53 + Annular Space \_\_\_\_\_ = Total Gallons \_\_\_\_\_  
(30% porosity)

Gallons Pumped During Development 4

Evacuation Method PVC Bailer

DEVELOPMENT / FIELD PARAMETERS

Color Tan Odor None

Appearance Silty Water - No Sheen

Time	Gallons	Temperature	Conductivity	pH	Clarity / Silt Content
<u>10:11</u>	<u>Surged</u>	<u>5 minutes</u>			
<u>10:13</u>	<u>2</u>	<u>17.6</u>	<u>1734</u>	<u>7.06</u>	<u>Very high Tan</u>
<u>10:16</u>	<u>4</u>	<u>17.8</u>	<u>1809</u>	<u>7.04</u>	<u>Tan dewatered Very high</u>

Field Personnel \_\_\_\_\_





# WELL SAMPLING LOG

Site Location Matheson-Oakland  
 Well Number MW-1  
 Weather High clouds, 60°-70°  
 Sampling Personnel R Wilson

Page 1 of 4  
 Date 05/01/2000  
 Time Began 15:44  
 Completed 15:56

## EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	<u>15.44' + 0.27'</u>	Sample Collected
- Depth to Water Below MP	<u>6.30'</u>	Volatile Organics (VOA's)
= Water Column in Well	<u>9.41'</u>	1 Liter Amber Glass
x Casing Diameter Multiplier	<u>0.169</u> 2"	Polyethylene (plastic)
= Gallons in Casing	<u>1.59</u>	Other
Gallons Pumped Prior to Sampling	<u>7.5</u>	Samples Filtered

Evacuation Method:	Sample Method:
PVC Bailer <u>X</u>	Evacuation Bailer <u>X</u>
Acrylic Bailer _____	Disposable Bailer _____
Pump _____	Pump _____
Other _____	Direct _____

## SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear  
 (thickness to 0.01 foot, if any)

Time	<u>15:47</u>	<u>15:49</u>	<u>15:51</u>	<u>15:54</u>	<u>15:56</u>
Gals Removed	<u>1.5</u>	<u>3</u>	<u>4.5</u>	<u>6</u>	<u>7.5</u>
Temperature	<u>17.7</u>	<u>17.5</u>	<u>17.5</u>	<u>17.4</u>	<u>17.4</u>
Conductivity	<u>1057</u>	<u>1230</u>	<u>1306</u>	<u>1372</u>	<u>1417</u>
pH	<u>6.69</u>	<u>6.72</u>	<u>6.75</u>	<u>6.81</u>	<u>6.83</u>
Color / Odor	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>
Turbidity	<u>med</u>	<u>med</u>	<u>med</u>	<u>med</u>	<u>med</u>
Other	_____	_____	_____	_____	_____

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

# WELL SAMPLING LOG

Site Location Matheson - Oakland  
 Well Number MW-2  
 Weather High clouds, 60°-70°  
 Sampling Personnel R Wilson

Page 2 of 4  
 Date 05/01/2000  
 Time Began 16:24  
 Completed 16:33

## EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	<u>13.97' + 0.27'</u>	Sample Collected
- Depth to Water Below MP	<u>5.09'</u>	Volatile Organics (VOA's)
= Water Column in Well	<u>9.15'</u>	1 Liter Amber Glass
x Casing Diameter Multiplier	<u>0.169</u> 2"	Polyethylene (plastic)
= Gallons in Casing	<u>1.55</u>	Other
Gallons Pumped Prior to Sampling	<u>6</u>	Samples Filtered
		<u>NO</u>

Evacuation Method:	Sample Method:
PVC Bailer <u>X</u>	Evacuation Bailer <u>X</u>
Acrylic Bailer _____	Disposable Bailer _____
Pump _____	Pump _____
Other _____	Direct _____

## SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear  
 (thickness to 0.01 foot, if any)

Time	<u>16:26</u>	<u>16:28</u>	<u>16:31</u>	<u>16:33</u>	
Gals Removed	<u>1.5</u>	<u>3</u>	<u>4.5</u>	<u>6</u>	
Temperature	<u>19.2</u>	<u>19.2</u>	<u>19.1</u>	<u>19.1</u>	
Conductivity	<u>1068</u>	<u>1056</u>	<u>1019</u>	<u>1018</u>	
pH	<u>7.00</u>	<u>6.94</u>	<u>6.94</u>	<u>6.95</u>	
Color / Odor	<u>Gray</u>	<u>Gray</u>	<u>Tan</u>	<u>Tan</u>	
Turbidity	<u>med</u>	<u>med</u>	<u>med</u>	<u>med</u>	
Other	_____	_____	_____	_____	

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

# WELL SAMPLING LOG

Site Location Matheson - Oakland

Page 3 of 4

Well Number MW-3

Date 05/01/2000

Weather High Clouds, 60°-70°

Time Began 16:57

Sampling Personnel R Wilson

Completed 17:13

## EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	<u>14.85' + 0.27'</u>	Sample Collected
- Depth to Water Below MP	<u>7.25'</u>	Volatile Organics (VOA's) <u>3</u>
= Water Column in Well	<u>7.87'</u>	1 Liter Amber Glass <u>2</u>
x Casing Diameter Multiplier	<u>0.169</u> 2"	Polyethylene (plastic) _____
= Gallons in Casing	<u>1.33</u>	Other _____
Gallons Pumped Prior to Sampling	<u>2.5</u>	Samples Filtered <u>no</u>

Evacuation Method:	Sample Method:
PVC Bailer <u>X</u>	Evacuation Bailer <u>X</u>
Acrylic Bailer _____	Disposable Bailer _____
Pump _____	Pump _____
Other _____	Direct _____

## SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, clear  
(thickness to 0.01 foot, if any)

	Time	17:01	17:03	Sample 17:13	
Gals Removed	<u>1</u>	<u>2</u>	<u>2.5</u>	<u>2.5</u>	
Temperature	<u>18.1</u>	<u>18.1</u>	<u>18.0</u>	<u>17.8</u>	
Conductivity	<u>1200</u>	<u>1256</u>	<u>1278</u>	<u>1231</u>	
pH	<u>7.00</u>	<u>7.08</u>	<u>7.16</u>	<u>7.29</u>	
Color / Odor	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>	
Turbidity	<u>med</u>	<u>high</u>	<u>high</u>	<u>high</u>	
Other			<u>dewatered</u>		

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

# WELL SAMPLING LOG

Site Location Matheson - Oakland  
 Well Number MW-4  
 Weather High clouds, 60°-70°  
 Sampling Personnel R Wilson

Page 4 of 4  
 Date 05/01/2000  
 Time Began: \_\_\_\_\_  
 Completed \_\_\_\_\_

## EVACUATION DATA

Description of Measuring Point (MP): T.O.C.

Total Sounded Depth of Well Below MP	<u>15.02' + 0.27'</u>	Sample Collected
- Depth to Water Below MP	<u>7.02'</u>	Volatle Organics (VOA's) <u>3</u>
= Water Column in Well	<u>8.27'</u>	1 Liter Amber Glass <u>2</u>
x Casing Diameter Multiplier	<u>0.169</u> 2"	Polyethylene (plastic) _____
= Gallons in Casing	<u>1.40</u>	Other _____
Gallons Pumped Prior to Sampling	<u>2.5</u>	Samples Filtered <u>NO</u>

Evacuation Method:	Sample Method:
PVC Bailer <u>X</u>	Evacuation Bailer <u>X</u>
Acrylic Bailer _____	Disposable Bailer _____
Pump _____	Pump _____
Other _____	Direct _____

## SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None, Clear  
 (thickness to 0.01 foot, if any)

	17:37	17:39	17:41	sample 17:51	
Gals Removed	<u>1</u>	<u>2</u>	<u>2.5</u>	<u>2.5</u>	_____
Temperature	<u>17.9</u>	<u>17.9</u>	<u>17.8</u>	<u>17.8</u>	_____
Conductivity	<u>1737</u>	<u>1842</u>	<u>1897</u>	<u>1899</u>	_____
pH	<u>7.13</u>	<u>7.07</u>	<u>7.05</u>	<u>7.03</u>	_____
Color / Odor	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>	<u>Tan</u>	_____
Turbidity	<u>high</u>	<u>high</u>	<u>high</u>	<u>high</u>	_____
Other	_____	_____	<u>dewatered</u>	_____	_____

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

**ATTACHMENT D**

**Survey Data**

(127)

MAY 3, 2000  
GARY AGUIAR  
RANDAL WILSON

SOKKIA C3<sub>2</sub> AUTO LEVEL  
TOPD ROD  
SUNNY, CLEAR, WARM

MATHESON TRUCKING  
2500 POPLAR STREET  
OAKLAND, CA

MONITORING WELL ELEVATIONS

STN	BS	HI	FS	ELEV
MW-2				8.03
	6.38	14.41		
TP-1			4.77	9.64
	6.18	15.82		
MW-1			6.63	9.19
MW-4			7.02	8.80
MW-3			7.00	8.82
TP-2			6.19	9.63
	4.81	14.44		
MW-2			6.41	8.03

WELL MW-2,

TOP OF PLASTIC CASING, SET AT 8.03' MSL  
FROM PREVIOUS SURVEY (2-2-95)

TOP OF PLASTIC CASING, WELL MW-1

TOP OF PLASTIC CASING, WELL MW-4

TOP OF PLASTIC CASING, WELL MW-3

BENCHMARK, WELL MW-2

BASED ON TOC ELEVATION OF  
FORMER FINDLEY ADHESIVES WELL MW-2  
AT 2433 POPLAR ST,  
SET AT 8.03' MSL BY ERM WEST, INC.



**ATTACHMENT E**

**Soil Analytical Results**

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

April 26, 2000

Randal Wilson  
Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530

**Order:** 20097

**Date Collected:** 4/18/00

**Project Name:** Matheson Trucking

**Date Received:** 4/19/00

**Project Number:**

**P.O. Number:**

**Project Notes:**

On April 19, 2000, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Solid	BTEX	EPA 8020
	Gas/BTEX/MTBE	EPA 8015 MOD. (Purgeable)
	TPH as Diesel	EPA 8020
	TPH as Gasoline	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil	EPA 8015 MOD. (Purgeable)
		EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,



Michelle L. Anderson  
Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguilar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 4/26/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID:	20097	Lab Sample ID:	20097-001	Client Sample ID:	MW3 (8'-8.5')					
Sample Time:	8:45 AM	Sample Date:	4/18/00	Matrix:	Solid					
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		10	1	10	mg/Kg	4/21/00	4/24/00	DS000414	EPA 8015 MOD. (Extractable)
					Surrogate Hexacosane			Surrogate Recovery 137		Control Limits (%) 65 - 135
Comment: Surrogate recovery out of control limits due to sample dilution										
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	220		10	13	130	mg/Kg	4/21/00	4/24/00	DS000414	EPA 8015 MOD. (Extractable)
					Surrogate Hexacosane			Surrogate Recovery 137		Control Limits (%) 65 - 135
Comment: Surrogate recovery out of control limits due to sample dilution										
Order ID:	20097	Lab Sample ID:	20097-002	Client Sample ID:	MW4 (8'-8.5')					
Sample Time:	10:00 AM	Sample Date:	4/18/00	Matrix:	Solid					
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	4/21/00	4/22/00	DS000414	EPA 8015 MOD. (Extractable)
					Surrogate Hexacosane			Surrogate Recovery 101		Control Limits (%) 65 - 135
Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	4/21/00	4/22/00	DS000414	EPA 8015 MOD. (Extractable)
					Surrogate Hexacosane			Surrogate Recovery 101		Control Limits (%) 65 - 135

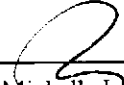
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 4/26/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-001

Client Sample ID: MW3 (8'-8.5')

Sample Time: 8:45 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.005	0.005	mg/Kg		4/20/00	SGC4000420	EPA 8020
Toluene	ND		1	0.005	0.005	mg/Kg		4/20/00	SGC4000420	EPA 8020
Ethyl Benzene	ND		1	0.005	0.005	mg/Kg		4/20/00	SGC4000420	EPA 8020
Xylenes, Total	ND		1	0.005	0.005	mg/Kg		4/20/00	SGC4000420	EPA 8020
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			117			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	1	1	mg/Kg		4/20/00	SGC4000420	EPA 8015 MOD. (Purgeable)
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			123			65 - 135	

DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983



# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 02, 2000

Rándal Wilson  
Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530

**Order:** 20097

**Date Collected:** 4/18/00

**Project Name:** Matheson Trucking

**Date Received:** 4/19/00

**Project Number:**

**P.O. Number:**

**Project Notes:**

On April 19, 2000, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Solid	MTBE by EPA 8260B	EPA 8260B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,



Michelle L. Anderson  
Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/2/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-001

Client Sample ID: MW3 (8'-8.5')

Sample Time: 8:45 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene				84				65 - 135
	Dibromofluoromethane				105				65 - 135
	Toluene-d8				99				65 - 135


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 1 of 2

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.

11100 San Pablo Avenue, Suite 200-A

El Cerrito, CA 94530

Attn: Randal Wilson

Date: 5/2/00

Date Received: 4/19/00

Project Name: Matheson Trucking

Project Number:

P.O. Number:

Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-002

Client Sample ID: MW4 (8'-8.5')

Sample Time: 10:00 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8260B
	Surrogate			Surrogate Recovery			Control Limits (%)		
	4-Bromofluorobenzene			90			65 - 135		
	Dibromofluoromethane			104			65 - 135		
	Toluene-d8			98			65 - 135		

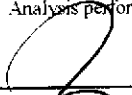
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 2 of 2

Environmental Analysis Since 1983



# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 05, 2000

Randal Wilson

Hageman-Aguiar, Inc.

11100 San Pablo Avenue, Suite 200-A

El Cerrito, CA 94530

**Order:** 20097

**Date Collected:** 4/18/00

**Project Name:** Matheson Trucking

**Date Received:** 4/19/00

**Project Number:**

**P.O. Number:**

**Project Notes:**

On April 19, 2000, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Solid	Lead	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,



Michelle L. Anderson  
Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/5/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-002

Client Sample ID: MW4 (8'-8.5')

Sample Time: 10:00 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	ND	1	1	1	mg/Kg	5/4/00	5/4/00	SM000503	EPA 6010B

DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 1 of 1

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 16, 2000

Randal Wilson  
Hageman-Aguilar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530

**Order:** 20097

**Date Collected:** 4/18/00

**Project Name:** Matheson Trucking

**Date Received:** 4/19/00

**Project Number:**

**P.O. Number:**

**Project Notes:**

On April 19, 2000, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Solid	EPA 8240	EPA 8240
	LUFT Metals	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,



Michelle L. Anderson  
Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/11/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-001

Client Sample ID: MW3 (8'-8.5')

Sample Time: 8:45 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,1,1-Trichloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,1,2-Trichloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,1-Dichloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,1-Dichloroethene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,2,3-Trichloropropane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,2-Dibromoethane (EDB)	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,2-Dichlorobenzene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,2-Dichloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,2-Dichloropropane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,3-Dichlorobenzene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
1,4-Dichlorobenzene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
2-Butanone (MEK)	ND		1	20	20	µg/Kg	4/28/00	SMS000427	EPA 8240
2-Hexanone	ND		1	20	20	µg/Kg	4/28/00	SMS000427	EPA 8240
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/Kg	4/28/00	SMS000427	EPA 8240
Acetone	ND		1	20	20	µg/Kg	4/28/00	SMS000427	EPA 8240
Allyl Chloride	ND		1	20	20	µg/Kg	4/28/00	SMS000427	EPA 8240
Benzene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Benzyl Chloride	ND		1	20	20	µg/Kg	4/28/00	SMS000427	EPA 8240
Bromodichloromethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Bromoform	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Bromomethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Carbon Disulfide	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Carbon Tetrachloride	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Chlorobenzene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Chloroethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Chloroform	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Chloromethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
cis-1,2-Dichloroethene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
cis-1,3-Dichloropropene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Dibromochloromethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Dichlorodifluoromethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Ethyl Benzene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Iodomethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 1 of 2

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/11/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-001

Client Sample ID: MW3 (8'-8.5')

Sample Time: 8:45 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methylene Chloride	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Styrene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Tetrachloroethene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Toluene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
trans-1,2-Dichloroethene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
trans-1,3-Dichloropropene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Trichloroethene	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Trichlorofluoromethane	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Vinyl Acetate	ND		1	10	10	µg/Kg	4/28/00	SMS000427	EPA 8240
Vinyl Chloride	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240
Nylenes, Total	ND		1	5	5	µg/Kg	4/28/00	SMS000427	EPA 8240

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	84	65 - 135
Dibromofluoromethane	105	65 - 135
Toluene-d8	99	65 - 135

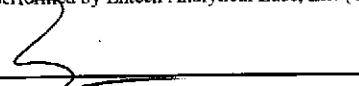
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 2 of 2

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/16/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-001

Client Sample ID: MW3 (8'-8.5')

Sample Time: 8:45 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Cadmium	ND	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Chromium	36	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Lead	40	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Nickel	20	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Zinc	70	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 1 of 1

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E  
Sunnyvale, CA 94086

**QUALITY CONTROL RESULTS SUMMARY**

Volatile Organic Compounds  
Laboratory Control Sample

QC Batch #: SMS000427  
Matrix: Solid  
Units: µg/kg

Date analyzed: 04/27/00  
Spiked Sample: Blank Spike

PARAMETER	Method #	SA	SR	SP	SP	SPD	SPD	RPD	QC LIMITS	
		µg/kg	µg/kg	µg/kg	%R	µg/kg	%R	RPD		
1,1-Dichloroethene	8240/8260	25	ND	21.2	<b>85</b>	21.3	<b>85</b>	0.5	25	65-135
Benzene	8240/8260	25	ND	26.3	<b>105</b>	26.6	<b>106</b>	1.1	25	65-135
Trichloroethene	8240/8260	25	ND	25.6	<b>102</b>	25.9	<b>103</b>	1.0	25	65-135
Toluene	8240/8260	25	ND	26.5	<b>106</b>	27.0	<b>108</b>	1.9	25	65-135
Chlorobenzene	8240/8260	25	ND	25.7	<b>103</b>	26.4	<b>106</b>	2.7	25	65-135
<i>Surrogates</i>										
Toluene -d8	8240/8260		97%	100%		103%				65-135
Dibromofluoromethane	8240/8260		95%	100%		101%				65-135
4-Bromofluorobenzene	8240/8260		92%	97%		99%				65-135
1,2 - Dichloroethane-d4	8240/8260		102%	107%		107%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

**ATTACHMENT F**

**Groundwater Analytical Results**



# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 09, 2000

Randal Wilson

Hageman-Aguiar, Inc.

11100 San Pablo Avenue, Suite 200-A

El Cerrito, CA 94530

**Order:** 20276

**Date Collected:** 5/1/00

**Project Name:** Matheson-Oakland

**Date Received:** 5/2/00

**Project Number:**

**P.O. Number:**

**Project Notes:**

On May 02, 2000, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Liquid	Gas/BTEX/Diesel/Motor Oil	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	MTBE by EPA 8260B	EPA 8260B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

  
Michelle L. Anderson  
Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-001

Client Sample ID: MW-1

Sample Time: 3:56 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Nylenes, Total	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	99	65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L		5/4/00	WGC2000503	EPA 8015 MOD. (Purgeable)

Surrogate	Surrogate Recovery	Control Limits (%)
aaa-Trifluorotoluene	110	65 - 135

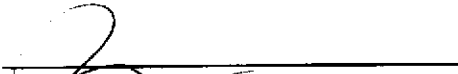
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director*Environmental Analysis Since 1983*

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/16/00  
Date Received: 4/19/00  
Project Name: Matheson Trucking  
Project Number:  
P.O. Number:  
Sampled By: Kenneth B. Alexander

## Certified Analytical Report

Order ID: 20097

Lab Sample ID: 20097-001

Client Sample ID: MW3 (8'-8.5')

Sample Time: 8:45 AM

Sample Date: 4/18/00

Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Cadmium	ND	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Chromium	36	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Lead	40	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Nickel	20	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B
Zinc	70	5	1	5	mg/Kg	5/16/00	5/16/00	SM000514	EPA 6010B


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Page 1 of 1

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E  
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds  
Laboratory Control Sample

QC Batch #: SMS000427  
Matrix: Solid  
Units: µg/kg

Date analyzed: 04/27/00  
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/kg	SR µg/kg	SP µg/kg	SP %R	SPD µg/kg	SPD %R	RPD	RPD	QC LIMITS
1,1-Dichloroethene	8240/8260	25	ND	21.2	85	21.3	85	0.5	25	65-135
Benzene	8240/8260	25	ND	26.3	105	26.6	106	1.1	25	65-135
Trichloroethene	8240/8260	25	ND	25.6	102	25.9	103	1.0	25	65-135
Toluene	8240/8260	25	ND	26.5	106	27.0	108	1.9	25	65-135
Chlorobenzene	8240/8260	25	ND	25.7	103	26.4	106	2.7	25	65-135
<i>Surrogates</i>										
Toluene -d8	8240/8260		97%	100%		103%				65-135
Dibromofluoromethane	8240/8260		95%	100%		101%				65-135
4-Bromofluorobenzene	8240/8260		92%	97%		99%				65-135
1,2 - Dichloroethane-d4	8240/8260		102%	107%		107%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E  
Sunnyvale, CA 94086

**QUALITY CONTROL RESULTS SUMMARY**  
Laboratory Control Spikes  
METHOD: EPA 6010

QC Batch #: SM000503  
Matrix: Solid  
Units: mg/kg

Date Analyzed: 05/10/00  
Date Digested: 05/04/00  
Digestion Method: EPA 3050  
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS	
										RPD	%R
Antimony	6010	<1.0	50.	0.0	47.	94	48.	96	2.1	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	49.	98	50.	100	2.1	25.0	75-125
Barium	6010	<1.0	50.	0.0	49.	99	50.	100	1.4	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	48.	95	49.	97	1.8	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	47.	93	47.	94	1.0	25.0	75-125
Chromium	6010	<1.0	50.	0.0	18.	36	49.	97	91.5	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	47.	95	48.	97	1.9	25.0	75-125
Copper	6010	<1.0	50.	0.0	47.	94	48.	97	3.1	25.0	75-125
Lead	6010	<1.0	50.	0.0	47.	94	48.	95	1.8	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	48.	96	48.	97	0.7	25.0	75-125
Nickel	6010	<1.0	50.	0.0	49.	98	49.	97	0.5	25.0	75-125
Selenium	6010	<1.0	50.	0.0	46.	92	47.	94	2.6	25.0	75-125
Silver	6010	<1.0	50.	0.0	44.	87	49.	97	10.9	25.0	75-125
Thallium	6010	<1.0	50.	0.0	46.	93	50.	100	7.9	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	48.	96	50.	100	4.3	25.0	75-125
Zinc	6010	<1.0	50.	0.0	46.	92	48.	96	4.4	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

## QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes  
METHOD: EPA 6010QC Batch #: SM000514  
Matrix: Solid  
Units: mg/kgDate Analyzed: 05/16/00  
Date Digested: 05/15/00  
Digestion Method: EPA 3050  
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS	
										RPD	%R
Antimony	6010	<1.0	50.	0.0	45.	89	47.	95	6.0	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	42.	85	44.	88	4.0	25.0	75-125
Barium	6010	<1.0	50.	0.0	50.	100	51.	101	1.0	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	47.	94	49.	98	3.9	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	44.	88	46.	92	4.7	25.0	75-125
Chromium	6010	<1.0	50.	0.0	48.	96	49.	98	2.5	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	47.	94	49.	97	3.2	25.0	75-125
Copper	6010	<1.0	50.	0.0	47.	94	48.	97	2.5	25.0	75-125
Lead	6010	<1.0	50.	0.0	46.	92	49.	97	5.3	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	48.	97	50.	99	2.7	25.0	75-125
Nickel	6010	<1.0	50.	0.0	47.	95	49.	98	3.4	25.0	75-125
Selenium	6010	<1.0	50.	0.0	44.	88	46.	92	4.1	25.0	75-125
Silver	6010	<1.0	50.	0.0	39.	77	49.	99	24.4	25.0	75-125
Thallium	6010	<1.0	50.	0.0	47.	94	48.	95	1.7	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	48.	96	49.	98	1.8	25.0	75-125
Zinc	6010	<1.0	50.	0.0	45.	89	47.	94	4.9	25.0	75-125

## Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

**QUALITY CONTROL RESULTS SUMMARY**

Laboratory Control Spikes

QC Batch #: DS000414

Matrix: Solid

Units: mg/Kg

Date analyzed: 04/21/00

Date extracted: 04/21/00

Quality Control Sample: Blank Spike

PARAMETER	Method #	MB	SA	SR	SP	SP	SPD	SPD	RPD	QC LIMITS	
		mg/Kg	mg/Kg	mg/Kg	mg/Kg	%R	mg/Kg	%R	RPD	%R	
Diesel	8015M	<1.0	25	ND	23	91	23	92	1.0	30	50-150

Hexacosane

94%

97%

94%

65-135

Calculated Recovery Outside of Control Limits:

Definition of Terms:

- MB: Method Blank
- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography  
Laboratory Control Sample

QC Batch #: SGC4000420  
Matrix: Solid  
Units: µg/kg

Date Analyzed: 04/20/00  
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/kg	SA µg/kg	SR µg/kg	SP µg/kg	SP % R	SPD µg/kg	SPD %R	% RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<5.0	4.7	ND	4.8	101	5.2	109	7.6	25	80-120
Toluene	8020	<5.0	29	ND	29	100	29	100	0.0	25	80-120
Ethyl Benzene	8020	<5.0	5.6	ND	5.4	97	5.6	101	3.7	25	80-120
Xylenes	8020	<5.0	32	ND	32	100	33	101	0.9	25	80-120
Gasoline	8015	<1000	469	ND	499	107	468	100	6.4	25	75-115
aaa-TFT(S.S.)-FID	8015			115%	109%		106%				65-135
aaa-TFT(S.S.)-PID	8020			110%	110%		103%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated



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Sunnyvale, CA 94086

**QUALITY CONTROL RESULTS SUMMARY**

METHOD: Gas Chromatography  
Laboratory Control Sample

QC Batch #: SGC4000419A  
Matrix: Solid  
Units: µg/kg

Date Analyzed: 04/19/00  
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/kg	SA µg/kg	SR µg/kg	SP µg/kg	SP % R	SPD µg/kg	SPD %R	% RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<5.0	4.3	ND	5.0	<b>116</b>	5.0	<b>116</b>	0.0	25	80-120
Toluene	8020	<5.0	31	ND	27	<b>86</b>	32	<b>102</b>	16.9	25	80-120
Ethyl Benzene	8020	<5.0	6.1	ND	5.0	<b>82</b>	6.0	<b>98</b>	18.2	25	80-120
Xylenes	8020	<5.0	35	ND	30	<b>86</b>	35	<b>101</b>	15.4	25	80-120
Gasoline	8015	<1000	500	ND	450	<b>90</b>	477	<b>95</b>	5.8	25	75-115
aaa-TFT(S.S.)-FID	8015			113%	104%		106%				65-135
aaa-TFT(S.S.)-PID	8020			104%	101%		106%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated





**ATTACHMENT F**

**Groundwater Analytical Results**

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 09, 2000

Randal Wilson  
Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530

**Order:** 20276

**Date Collected:** 5/1/00

**Project Name:** Matheson-Oakland

**Date Received:** 5/2/00

**Project Number:**

**P.O. Number:**

**Project Notes:**

On May 02, 2000, samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Liquid	Gas/BTEX/Diesel/Motor Oil	EPA 8015 MOD. (Extractable)
		EPA 8015 MOD. (Purgeable)
		EPA 8020
	MTBE by EPA 8260B	EPA 8260B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

  
Michelle L. Anderson  
Lab Director

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguir, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-001

Client Sample ID: MW-1

Sample Time: 3:56 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Nylenes, Total	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Surrogate							Surrogate Recovery		Control Limits (%)	
aaa-Trifluorotoluene							99		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L		5/4/00	WGC2000503	EPA 8015 MOD. (Purgeable)
Surrogate							Surrogate Recovery		Control Limits (%)	
aaa-Trifluorotoluene							110		65 - 135	


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-002

Client Sample ID: MW-2

Sample Time: 4:33 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L		5/9/00	WGC2000509	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L		5/9/00	WGC2000509	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L		5/9/00	WGC2000509	EPA 8020
Nylenes, Total	ND		1	0.5	0.5	µg/L		5/9/00	WGC2000509	EPA 8020
Surrogate							Surrogate Recovery		Control Limits (%)	
aaa-Trifluorotoluene							99		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L		5/9/00	WGC2000509	EPA 8015 MOD. (Purgeable)
Surrogate							Surrogate Recovery		Control Limits (%)	
aaa-Trifluorotoluene							109		65 - 135	

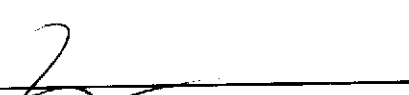
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director*Environmental Analysis Since 1983*

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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-003

Client Sample ID: MW-3

Sample Time: 5:13 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
Nylenes, Total	ND		1	0.5	0.5	µg/L		5/4/00	WGC2000503	EPA 8020
			<b>Surrogate</b>				<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene				98		65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L		5/4/00	WGC2000503	EPA 8015 MOD. (Purgeable)
			<b>Surrogate</b>				<b>Surrogate Recovery</b>		<b>Control Limits (%)</b>	
			aaa-Trifluorotoluene				110		65 - 135	


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983



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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-004

Client Sample ID: MW-4

Sample Time: 5:51 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
Benzene	ND		1	0.5	0.5	µg/L		5/5/00	WGC4000504	EPA 8020
Toluene	ND		1	0.5	0.5	µg/L		5/5/00	WGC4000504	EPA 8020
Ethyl Benzene	ND		1	0.5	0.5	µg/L		5/5/00	WGC4000504	EPA 8020
Nylenes, Total	ND		1	0.5	0.5	µg/L		5/5/00	WGC4000504	EPA 8020
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			100			65 - 135	

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Gasoline	ND		1	50	50	µg/L		5/5/00	WGC4000504	EPA 8015 MOD. (Purgeable)
			Surrogate			Surrogate Recovery			Control Limits (%)	
			aaa-Trifluorotoluene			107			65 - 135	


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director*Environmental Analysis Since 1983*

# Entech Analytical Labs, Inc.

CA ELAP# 2346

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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-001

Client Sample ID: MW-1

Sample Time: 3:56 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	5/5/00	WMS000505	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene				109				65 - 135
	Dibromofluoromethane				108				65 - 135
	Toluene-d8				78				65 - 135

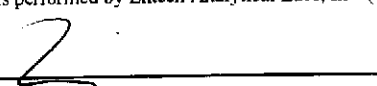
DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

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Environmental Analysis Since 1983

# Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-002

Client Sample ID: MW-2

Sample Time: 4:33 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	5/5/00	WMS000505	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene				91		65 - 135		
	Dibromofluoromethane				106		65 - 135		
	Toluene-d8				91		65 - 135		


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-003

Client Sample ID: MW-3

Sample Time: 5:13 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	5/5/00	WMS000505	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene			80			65 - 135		
	Dibromofluoromethane			123			65 - 135		
	Toluene-d8			90			65 - 135		


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276

Lab Sample ID: 20276-004

Client Sample ID: MW-4

Sample Time: 5:51 PM

Sample Date: 5/1/00

Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Methyl-t-butyl Ether	ND		1	5	5	µg/L	5/5/00	WMS000505	EPA 8260B
	<b>Surrogate</b>			<b>Surrogate Recovery</b>			<b>Control Limits (%)</b>		
	4-Bromofluorobenzene			96			65 - 135		
	Dibromofluoromethane			108			65 - 135		
	Toluene-d8			91			65 - 135		


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
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Hageman-Aguiar, Inc.  
11100 San Pablo Avenue, Suite 200-A  
El Cerrito, CA 94530  
Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276      Lab Sample ID: 20276-001      Client Sample ID: MW-1  
Sample Time: 3:56 PM      Sample Date: 5/1/00      Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	76	x	1	50	50	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 100		Control Limits (%) 65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 100		Control Limits (%) 65 - 135

Order ID: 20276      Lab Sample ID: 20276-002      Client Sample ID: MW-2  
Sample Time: 4:33 PM      Sample Date: 5/1/00      Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 107		Control Limits (%) 65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 107		Control Limits (%) 65 - 135


DF = Dilution Factor

ND = Not Detected

DLR = Detection Limit Reported

PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
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Attn: Randal Wilson

Date: 5/9/00  
Date Received: 5/2/00  
Project Name: Matheson-Oakland  
Project Number:  
P.O. Number:  
Sampled By: Randal Wilson

## Certified Analytical Report

Order ID: 20276      Lab Sample ID: 20276-003      Client Sample ID: MW-3  
Sample Time: 5:13 PM      Sample Date: 5/1/00      Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 119		Control Limits (%) 65 - 135


Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 119		Control Limits (%) 65 - 135

Order ID: 20276      Lab Sample ID: 20276-004      Client Sample ID: MW-4  
Sample Time: 5:51 PM      Sample Date: 5/1/00      Matrix: Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	320		1	50	50	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 114		Control Limits (%) 65 - 135

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	5/3/00	5/4/00	DW000501	EPA 8015 MOD. (Extractable)
						Surrogate Hexacosane		Surrogate Recovery 114		Control Limits (%) 65 - 135

DF = Dilution Factor      ND = Not Detected      DLR = Detection Limit Reported      PQL = Practical Quantitation Limit  
Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

  
Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

## STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel



**QUALITY CONTROL RESULTS SUMMARY**  
METHOD: Gas Chromatography  
Laboratory Control Sample

QC Batch #: WGBG2000503

Matrix: Water  
Units: µg/Liter

Date Analyzed: 05/03/00  
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	SP % R	SPD µg/Liter	SPD %R	RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<0.50	4.3	ND	3.4	79	3.3	77	1.9	25	67-115
Toluene	8020	<0.50	28.0	ND	28	101	27	96	5.0	25	82-122
Ethyl Benzene	8020	<0.50	5.6	ND	5.7	101	5.3	95	6.3	25	77-114
Xylenes	8020	<0.50	31.3	ND	32	102	31	99	3.3	25	85-125
Gasoline	8015	<50.0	484	ND	484	100	441	91	9.4	25	74-122
<i>aaa-TFT(S.S.)-PID</i>	8020			112%	109%		104%				65-135
<i>aaa-TFT(S.S.)-FID</i>	8015			99%	99%		98%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

## QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography  
Laboratory Control Sample

QC Batch #: WGBG2000509

Matrix: Water  
Units: µg/Liter

Date Analyzed: 05/09/00

Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	SP % R	SPD µg/Liter	SPD %R	RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<0.50	4.3	ND	3.4	78	3.4	80	1.9	25	67-115
Toluene	8020	<0.50	28.0	ND	28	101	28	101	0.0	25	82-122
Ethyl Benzene	8020	<0.50	5.6	ND	5.6	100	5.6	100	0.4	25	77-114
Xylenes	8020	<0.50	31.3	ND	32	101	32	101	0.2	25	85-125
Gasoline	8015	<50.0	484	ND	461	95	466	96	1.1	25	74-122
<i>aaa-TFT(S.S.)-PID</i>	8020			99%	96%		101%				65-135
<i>aaa-TFT(S.S.)-FID</i>	8015			109%	104%		105%				65-135

## Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

## QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds  
Laboratory Control SampleQC Batch #: WMS000505  
Matrix: Liquid  
Units: µg/LDate analyzed: 05/05/00  
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS	
									RPD	%R
1,1- Dichloroethene	8240/8260	40	ND	40.3	<b>101</b>	43.2	<b>108</b>	6.9	25	50-150
Methyl-tert-butyl ether	8240/8260	40	ND	38.4	<b>96</b>	39.4	<b>99</b>	2.6	25	50-150
Benzene	8240/8260	40	ND	39.0	<b>98</b>	42.5	<b>106</b>	8.6	25	50-150
Trichloroethene	8240/8260	40	ND	42.0	<b>105</b>	46.2	<b>116</b>	9.5	25	50-150
Toluene	8240/8260	40	ND	38.9	<b>97</b>	42.1	<b>105</b>	7.9	25	50-150
Chlorobenzene	8240/8260	40	ND	40.3	<b>101</b>	43.9	<b>110</b>	8.6	25	50-150
<i>Surrogates</i>										
Toluene -d8	8240/8260		96%	97%		98%				65-135
Dibromofluoromethane	8240/8260		105%	108%		107%				65-135
4-Bromofluorobenzene	8240/8260		91%	978%		100%				65-135
MTBE-d3	8240/8260		116%	111%		110%				65-135

## Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

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**QUALITY CONTROL RESULTS SUMMARY**

METHOD: Gas Chromatography  
Laboratory Control Sample

QC Batch #: WGC4000504

Matrix: Liquid

Units: µg/Liter

Date Analyzed: 05/04/00

Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	SP % R	SPD µg/Liter	SPD %R	% RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<0.50	4.7	ND	4.9	104	4.5	96	8.7	25	70-130
Toluene	8020	<0.50	29	ND	27	94	29	99	5.2	25	70-130
Ethyl Benzene	8020	<0.50	5.6	ND	5.2	93	5.5	98	4.6	25	70-130
Xylenes	8020	<0.50	32	ND	31	96	32	100	4.0	25	70-130
Gasoline	8015	<50.0	469	ND	448	96	455	97	1.4	25	70-130
aaa-TFT(S.S.)-FID	8020			113%	103%		106%				65-135
aaa-TFT(S.S.)-PID	8015			106%	97%		102%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

Entech Analytical Labs, Inc.

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Sunnyvale, CA 94086

**QUALITY CONTROL RESULTS SUMMARY**

METHOD: Gas Chromatography  
Laboratory Control Spikes

QC Batch #: DW000501  
Matrix: Liquid  
Units: µg/L

Date analyzed: 05/03/00  
Date extracted: 05/03/00  
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS	
										RPD	%R
Diesel	8015M	<50.0	1000	ND	985	99	929	93	6	25	60-121
Hexacosane(S.S.)				115%	112%		107%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

