



HAGEMAN-AGUIAR, INC.

Underground Contamination Investigations, Groundwater Consultants, Environmental Engineering

① Continue w/ QMR

11/28/94
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QUARTERLY
GROUNDWATER SAMPLING REPORT

(sampled November 18, 1994)

BERNITA LESKOWSKI PROPERTY
1701 Webster Street
Alameda, CA

November 28, 1994

12.40 - 12.55 = 0.3

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I. INTRODUCTION

The subject site is the Bernita Leskowski property located at 1701 Webster Street in Alameda, California. The location of the site is shown on Figure 1 (site location map).

On May 2 and 3, 1989, one 500-gallon and two 550-gallon underground storage tanks were removed from the site. Petroleum hydrocarbon contamination was detected in soil samples collected from the tank excavation and the excavated soil pile. Due to the locations of nearby structures and utilities, some petroleum-contaminated soil was left in place. Following the underground storage tank removals, Blymyer Engineers installed three shallow groundwater monitoring wells and subsequently sampled the wells on November 9, 1989. The laboratory results indicated the presence of Gasoline at concentrations of up to 360 $\mu\text{g/L}$ (ppb) and Benzene at "trace" concentrations of up to 0.71 $\mu\text{g/L}$ (ppb).

Recent correspondence from the Alameda County Environmental Health Department stated that analysis for Total Petroleum Hydrocarbon as Diesel may be discontinued for future "rounds" of sampling at the site (Ref. Attachment A - August 16, 1994 letter from Juliet Shin to Bernita Leskowski).

On November 18, 1994, all three shallow groundwater monitoring wells were sampled by Hageman-Aguiar, Inc., as a part of the continued quarterly shallow groundwater sampling at the site.



FIGURE 1.
Site Location Map.

II. FIELD WORK

Monitoring Well Sampling

On November 18, 1994, groundwater samples were collected from the three monitoring wells MW-1, MW-2 and MW-3. The locations of the monitoring wells are shown on Figure 2 (site map).

Prior to groundwater sampling, each well was purged by pumping several casing volumes of water using a stainless steel air-lift pump. Field conductivity, temperature, and pH meters were present on-site during the monitoring well sampling. As the purging process proceeded, the three parameters were monitored. Purging continued until readings appeared to have reasonably stabilized. After the water level in the well had attained 80% or more of the original static water level, a groundwater sample was collected using a clean teflon bailer. The water sample was placed inside appropriate 40 mL VOA vials 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 work day.

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

Copies of the well sampling logs are included as Attachment B.

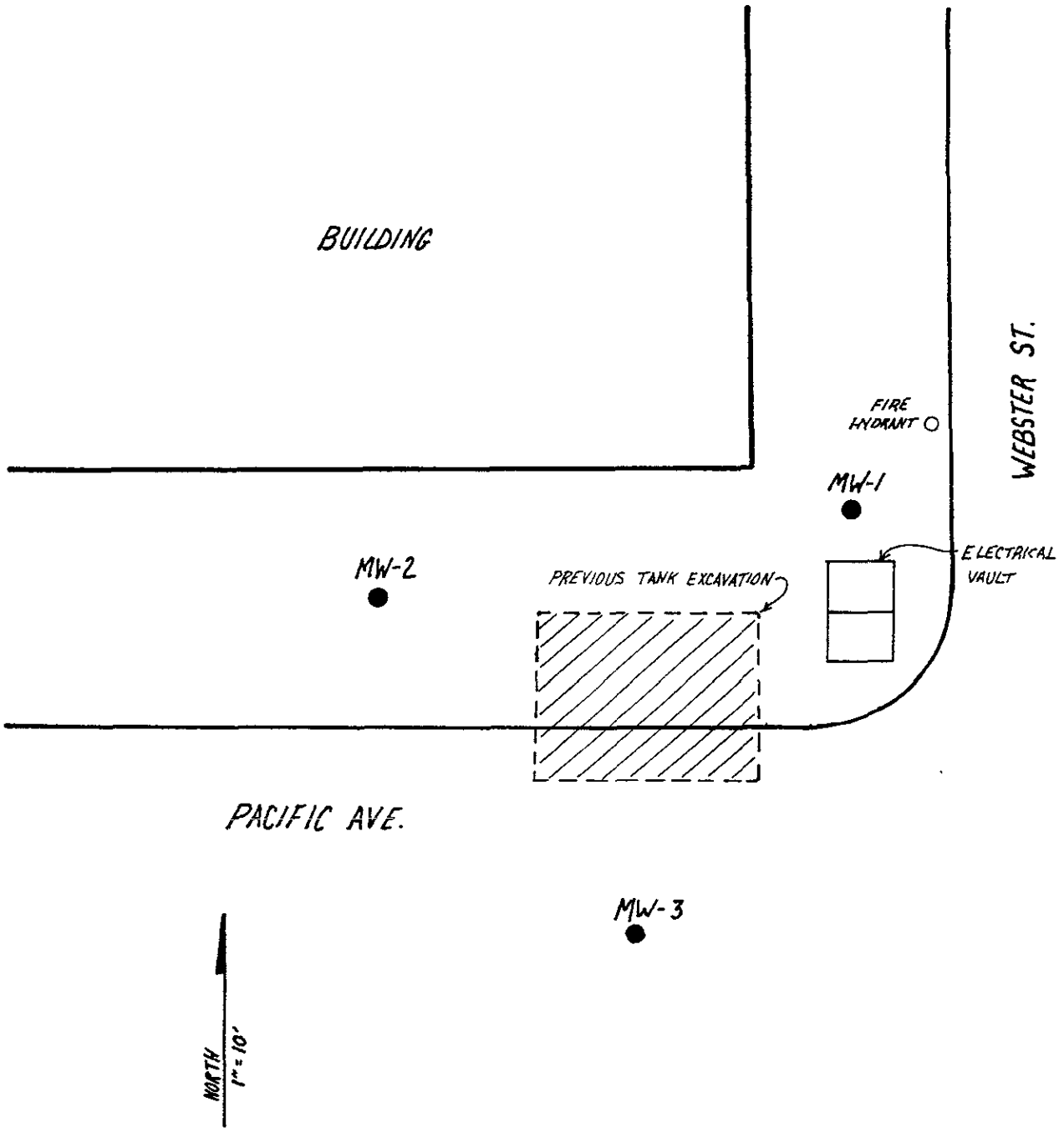


FIGURE 2.
Site Map.

Wastewater Generation

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

III. RESULTS OF WATER LEVEL MEASUREMENTS

Shallow Groundwater Flow Direction

Sallow water table elevations were measured on November 18, 1994. These measurements are shown in Table 1. Figure 3 presents a contour map for the shallow groundwater table beneath the site. As shown in this figure, the data from the three monitoring wells indicate that the shallow groundwater flow was in the westerly direction during this most recent sampling event.

Shallow Water Table Hydraulic Gradient

Figure 3 presents the contour map for the shallow groundwater table beneath the site. As shown in this figure, the shallow groundwater table beneath the site appears to be relatively flat, with a calculated hydraulic gradient of $dH/dL = 0.1'/8.1' = 0.0123$.

Historical Water Level Measurements

Table 2 presents the results of all water level measurements collected between June 17, 1993, and the present time.

TABLE 1.

**Shallow Water Table Elevations
November 18, 1994**

Well	Top of Casing Elevation (feet)	Depth to Water (feet)	Water Table Elevation (feet)
MW-1	15.23	6.64	8.59
MW-2	14.96	6.72	8.24
MW-3	15.05	6.75	8.30

Based upon National Geodetic Survey Monument WEB PAC,
located at NE corner Webster Street and Pacific Street
Elev = 14.055 feet MSL (May 1990)

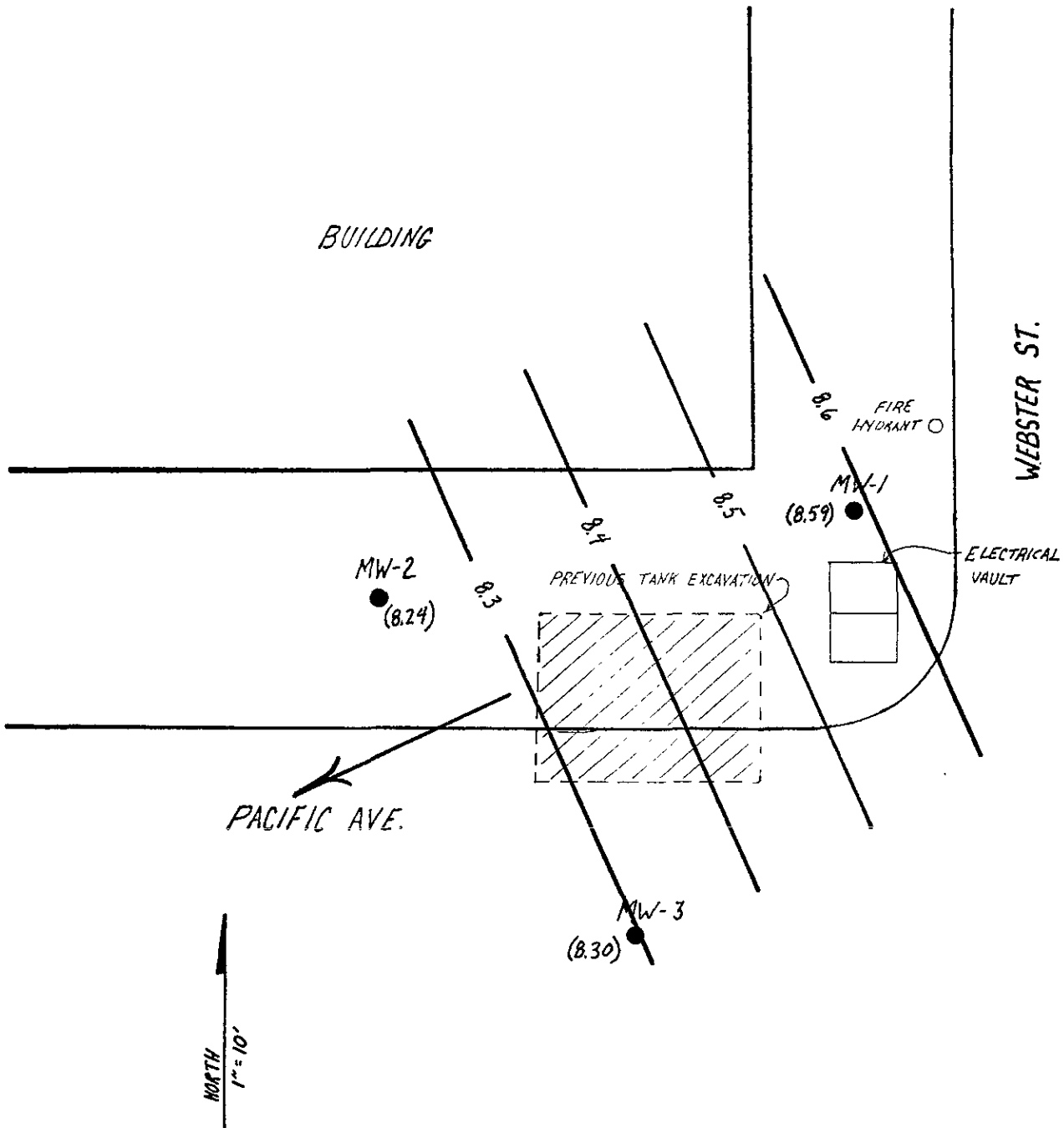


TABLE 2.
Historical Water Table Elevations
(feet)

Well	Date of Measurement								
	6-17-93	9-23-93	12-28-93	4-19-94	8-16-94	11-18-94			
MW-1	9.11	8.24	8.18	8.60	8.27	8.59			
MW-2	8.84	7.92	7.84	8.39	7.96	8.24			
MW-3	8.94	8.04	7.95	8.58	8.07	8.30			
Flow Direction	W	W	W	NW	W	SW			
Hydraulic Gradient	0.0091	0.011	0.011	0.0084	0.0098	0.0123			

IV. SHALLOW GROUNDWATER SAMPLING RESULTS

Laboratory Analysis

All analyses were conducted by a California State DOHS certified laboratory in accordance with EPA recommended procedures (Priority Environmental Labs, Milpitas, CA).

All Groundwater samples were analyzed for 1) Total Petroleum Hydrocarbons as Diesel (EPA method 8015), 2) Total Petroleum Hydrocarbons as Gasoline (EPA method 8015), and 3) Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA method 602).

Results of Laboratory Analysis

Table 3 presents the results of the laboratory analysis of the groundwater samples collected from the monitoring wells. For this most recent round of quarterly sampling, no detectable concentrations of either Gasoline, Benzene, Toluene, Ethylbenzene, or Total Xylenes were found in any of the shallow groundwater samples collected from wells MW-1, MW-2 and MW-3.

A copy of the laboratory certificate for the water sample analyses are included in Attachment C.

**TABLE 3.
Shallow Groundwater Sampling Results**

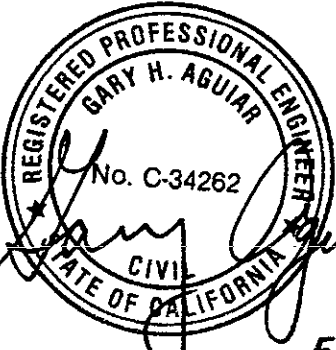
Well	Date	TPH as Gasoline (ug/L)	TPH as Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
MW-1	11-09-89	360	---	0.71	ND	0.81	1.4
	06-17-93	ND	53	ND	ND	ND	ND
	09-23-93	ND	ND	ND	ND	ND	ND
	12-28-93	ND	ND	ND	ND	ND	ND
	04-19-94	190	ND	5.6	5.1	4.2	13
	08-16-94	ND	ND	ND	ND	ND	ND
	11-18-94	ND	(*)	ND	ND	ND	ND
MW-2	11-09-89	71	---	ND	0.85	ND	ND
	06-17-93	ND	ND	ND	ND	ND	ND
	09-23-93	ND	ND	ND	ND	ND	ND
	12-28-93	92	ND	0.7	1.1	1.7	5.4
	04-19-94	120	ND	2.2	1.8	1.1	8.7
	08-16-94	ND	ND	ND	ND	ND	ND
	11-18-94	ND	(*)	ND	ND	ND	ND
MW-3	11-09-89	320	---	0.58	ND	1.2	2.1
	06-17-93	ND	ND	ND	ND	ND	ND
	09-23-93	ND	ND	ND	ND	ND	ND
	12-28-93	ND	ND	ND	ND	ND	ND
	04-19-94	380	ND	3.0	4.3	4.7	17
	08-16-94	ND	ND	ND	ND	ND	ND
	11-18-94	ND	(*)	ND	ND	ND	ND
Detection Limit		50	50	0.5	0.5	0.5	0.5

ND = not detected

(*) = Requirement for TPH as Diesel Discontinued - Alameda County Department of Environmental Health (8/16/94)

QUARTERLY GROUNDWATER SAMPLING REPORT
BERNITA LESKOWSKI PROPERTY
1701 Webster Street, Alameda, CA

November 28, 1994



Gary Aguiar RCE 34262
EXP. 9-30-95

Gerard F. Aarons 11-28-94
Gerard F. Aarons Geologist

ATTACHMENT A

CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, Assistant Agency Director

August 16, 1994

Ms. Bernita Leskowski
6319 Castle Drive
Oakland, CA 94611

Alameda County CC 4580
Health Care Services Agency
Dept. Of Environmental Health
1131 Harbor Bay Pkwy 2nd Flr.
Alameda, CA 94502-6577

STID 3804

RE: Investigations at 1701 Webster St., Alameda, California

Dear Ms. Leskowski,

This office has received Hageman-Aguiar's (HA) letter, dated June 6, 1994, and HA's Quarterly Ground water Monitoring Report, dated April 26, 1994. As proposed in the letter and report, the analysis for Total Petroleum Hydrocarbons as diesel may be discontinued at the site.

In addition to the above proposal, HA has proposed to forgo delineating the extent of soil and ground water contamination, and to continue ground water monitoring. Quarterly ground water monitoring is acceptable at this time, however, if benzene concentrations above the Maximum Contaminant Level of 1 parts per billion (ppb) persist, further work may be required.

Although ground water samples have not identified exceedingly high levels of contaminants, the depth to the water table has generally been shallower than the depths at which elevated levels of soil contamination were observed. Up to 6,000 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg) have been identified in the former tank pits at 10 feet below ground surface (bgs). Elevated levels of TPHg were identified in soil samples collected from Well MW-2 and MW-3 at 7.5 to 8 feet bgs (up to 2,300 ppm). However, the water table has generally been noted to be between 6 and 7 feet bgs in the past sampling quarters, except for in the initial sampling event in 1989, when the water table was at 8 feet bgs. This office is concerned that higher contaminant concentrations will be observed if the water table decreases to greater depths.

If contaminant concentrations commensurate to those observed this last quarter persist, you will be required to delineate the extent of soil and ground water contamination observed at the site.

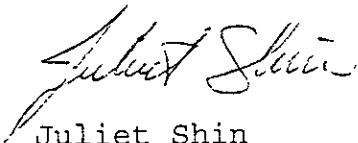
Lastly, HA's report mentions that the purge water from the wells may be sewerred. Permission from the Regional Water Quality

Ms. Bernita Leskowski
Re: 1701 Webster St.
August 16, 1994
Page 2 of 2

Control Board must be obtained prior to any discharge into the storm drain. An NPDES permit is required for any discharge to the sanitary sewer.

If you have any questions or comments, please contact me at (510) 567-6763.

Sincerely,



Juliet Shin
Hazardous Materials Specialist

cc: Bruce Hageman
Hageman-Aguiar
3732 Mt. Diablo Blvd., Ste 372
Lafayette, CA 94549

Edgar Howell

ATTACHMENT B

WELL SAMPLING LOGS

WELL SAMPLING LOG

Project/No. 1701 WEBSTER ST. Page 1 of 3
Site Location ALAMEDA, CA Date 11-18-94
Well No. MW1 Time Began 1040
Weather CLEAR / 45°F Completed 1116

EVACUATION DATA

Description of Measuring Point (MP) WELL BOX AT GRADE
Total Sounded Depth of Well Below MP 18.78
- Depth to Water Below MP 6.64 Diameter of Casing 4"
= Water Column in Well 12.14
Gallons in Casing 7.8 + Annular Space 6.9 = Total Gallons 14.7
(30% porosity)
Gallons Pumped Prior to Sampling 45
Evacuation Method AIRLIFT PUMP

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: NONE DETECTED
(thickness to 0.1 inch, if any)

Time	<u>1040</u>	<u>1050</u>	<u>1100</u>	<u>1110</u>
Gals Removed	<u>0</u>	<u>15</u>	<u>30</u>	<u>45</u>
Temperature	<u>19.6</u>	<u>20.7</u>	<u>20.8</u>	<u>20.6</u>
Conductivity	<u>(METER MALFUNCTION)</u>			
pH	<u>6.5</u>	<u>6.2</u>	<u>6.2</u>	<u>6.2</u>
Color / Odor	<u>CLR/ORG</u>	<u>CLR/ORG</u>	<u>CLR/ORG</u>	<u>CLR/ORG</u>
Turbidity	<u>LOW</u>	<u>LOW</u>	<u>LOW</u>	<u>LOW</u>

Comments: NONE

WELL SAMPLING LOG

Project/No. 1701 WEBSTER ST. Page 2 of 3
Site Location ALAMEDA, CA Date 11-18-94
Well No. MW 2
Weather CLEAR / 45°F Time Began 1005
Completed 1045

EVACUATION DATA

Description of Measuring Point (MP) WELL BOX AT GRADE
Total Sounded Depth of Well Below MP 19.52
- Depth to Water Below MP 6.72 Diameter of Casing 4"
= Water Column in Well 12.80
Gallons in Casing 8.2 + Annular Space 7.2 = Total Gallons 15.4
(30% porosity)
Gallons Pumped Prior to Sampling 45
Evacuation Method AIRLIFT PUMP

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: NONE DETECTED
(thickness to 0.1 inch, if any)

	<u>1005</u>	<u>1012</u>	<u>1022</u>	<u>1035</u>
Time				
Gals Removed	<u>0</u>	<u>15</u>	<u>30</u>	<u>45</u>
Temperature	<u>21.3</u>	<u>22.5</u>	<u>22.7</u>	<u>22.2</u>
Conductivity	<u>(METER MALFUNCTION)</u>			
pH	<u>6.9</u>	<u>6.6</u>	<u>6.4</u>	<u>6.3</u>
Color / Odor	<u>clr/ode</u>	<u>clr/ode</u>	<u>clr/ode</u>	<u>clr/ode</u>
Turbidity	<u>Low</u>	<u>Low</u>	<u>Low</u>	<u>Low</u>

Comments: NONE

WELL SAMPLING LOG

Project/No. 1701 WEBSTER ST. Page 3 of 3
Site Location ALAMEDA, CA Date 11-18-94
Well No. MW 3 Time Began 0925
Weather CLEAR/45°F Completed 1000

EVACUATION DATA

Description of Measuring Point (MP) WELL BOX AT GRADE
Total Sounded Depth of Well Below MP 19.50
- Depth to Water Below MP 6.75 Diameter of Casing 4"
= Water Column in Well 12.75
Gallons in Casing 8.2 + Annular Space 7.2 = Total Gallons 15.4
(30% porosity)
Gallons Pumped Prior to Sampling 45
Evacuation Method AIRLIFT PUMP

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: NONE DETECTED
(thickness to 0.1 inch, if any)

Time	0925	0933	0947	1000
Gals Removed	<u>0</u>	<u>15</u>	<u>30</u>	<u>45</u>
Temperature	<u>19.8</u>	<u>20.1</u>	<u>20.5</u>	<u>20.4</u>
Conductivity	<u>(METER MALFUNCTION)</u>			
pH	<u>7.1</u>	<u>7.1</u>	<u>6.8</u>	<u>6.6</u>
Color / Odor	<u>BRN/ORG</u>	<u>BRN/ORG</u>	<u>BRN/ORG</u>	<u>BRN/ORG</u>
Turbidity	<u>HIGH</u>	<u>HIGH</u>	<u>MED</u>	<u>MED</u>

Comments: NONE

ATTACHMENT C

ANALYTICAL RESULTS: GROUNDWATER



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

November 21, 1994

PEL # 9411058

HAGEMAN - AGUIAR, INC.

Attn: Jeffrey Roth

Re: Three water samples for Gasoline/BTEX analysis.


Project name: 1701 Webster St., - Alameda, CA.

Date sampled: Nov 18, 1994
Date extracted: Nov 19, 1994

Date submitted: Nov 18, 1994
Date analyzed: Nov 19, 1994

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
MW 1	N.D.	N.D.	N.D.	N.D.	N.D.
MW 2	N.D.	N.D.	N.D.	N.D.	N.D.
MW 3	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	88.5%	88.3%	90.2%	91.0%	100.5%
Detection limit	50	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	602	602	602	602


David Duong
Laboratory Director

PEL # 9411058

INV # 25450

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS: <i>1701 WEBSTER ST. ALAMEDA, CA</i>					SAMPLER: (Signature) <i>[Signature]</i>		ANALYSIS REQUESTED <i>TPH GAS/PSXE</i>						
					HAGEMAN - AGUIAR, INC. 3732 Mt. Diablo Blvd., Suite 372 Lafayette, CA 94549 (415)284-1661 (415)284-1664 (FAX)								
CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	STATION LOCATION							REMARKS	
<i>MW 1</i>	<i>11-18-94</i>	<i>1116</i>		<i>X</i>	<i>MONITOR WELL # 1</i>			<i>X</i>					<i>NORM TAT</i>
<i>MW 2</i>	<i>11-18-94</i>	<i>1045</i>		<i>X</i>	<i>↓</i>	<i>↓</i>	<i># 2</i>	<i>X</i>					<i>↓</i>
<i>MW 3</i>	<i>11-18-94</i>	<i>1008</i>		<i>X</i>	<i>↓</i>	<i>↓</i>	<i># 3</i>	<i>X</i>					<i>↓</i>
RELINQUISHED BY: (Signature) <i>[Signature]</i>					DATE <i>11-18-94</i>	TIME <i>1255</i>	RECEIVED BY: (Signature) <i>[Signature]</i>					DATE <i>11-18-94</i>	TIME <i>1255</i>
RELINQUISHED BY: (Signature)					DATE	TIME	RECEIVED BY: (Signature)					DATE	TIME
RELINQUISHED BY: (Signature)					DATE	TIME	RECEIVED BY: (Signature)					DATE	TIME
RELINQUISHED BY: (Signature)					DATE	TIME	RECEIVED FOR LABORATORY BY: (Signature)					DATE	TIME