

435 - 445 = 0.2



HAGEMAN-AGUIAR, INC.

ENVIRONMENTAL
PROTECTION

95 MAR 27 PM 3: 21

Underground Contamination Investigations, Groundwater Consultants, Environmental Engineering

QUARTERLY
GROUNDWATER SAMPLING REPORT

(sampled March 16, 1995)

- ① review for closure
- Ready for closure
 - have consultant to explain human health risk to TPH-G, 6,000ppm, in soil as detected in SS. from well bump.

BERNITA LESKOWSKI PROPERTY
1701 Webster Street
Alameda, CA

March 21, 1995

TABLE OF CONTENTS

I. INTRODUCTION	1
II. FIELD WORK	3
Monitoring Well Sampling	3
Wastewater Generation	5
III. RESULTS OF WATER LEVEL MEASUREMENTS	6
Shallow Groundwater Flow Direction	6
Shallow Water Table Hydraulic Gradient	6
Historical Water Level Measurements	6
IV. SHALLOW GROUNDWATER SAMPLING RESULTS	10
Laboratory Analysis	10
Results of Laboratory Analysis	10

ATTACHMENT A -- Well Sampling Logs

ATTACHMENT B -- Analytical Results: Groundwater

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 $\mu\text{g}/\text{L}$ (ppb) and Benzene at "trace" concentrations of up to 0.71 $\mu\text{g}/\text{L}$ (ppb).

On March 16, 1995, 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 March 16, 1995, 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.

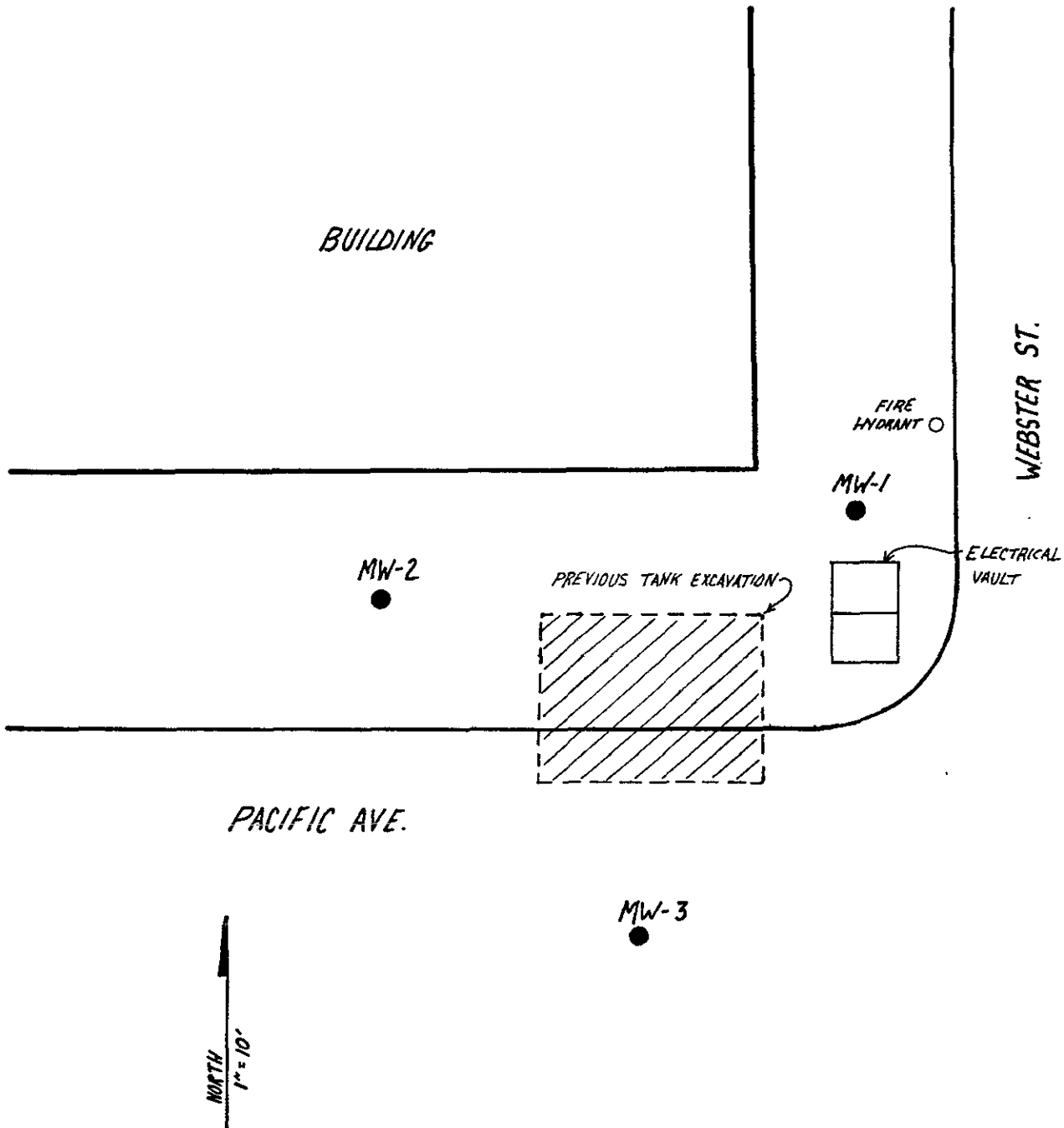


FIGURE 2.
Site Map.

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 March 16, 1995. 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 southwesterly 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 $dH/dL = 0.5'/8.5' = 0.0058$.

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
March 16, 1995**

Well	Top of Casing Elevation (feet)	Depth to Water (feet)	Water Table Elevation (feet)
MW-1	15.23	5.20	10.03
MW-2	14.96	5.07	9.89
MW-3	15.05	5.19	9.86

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

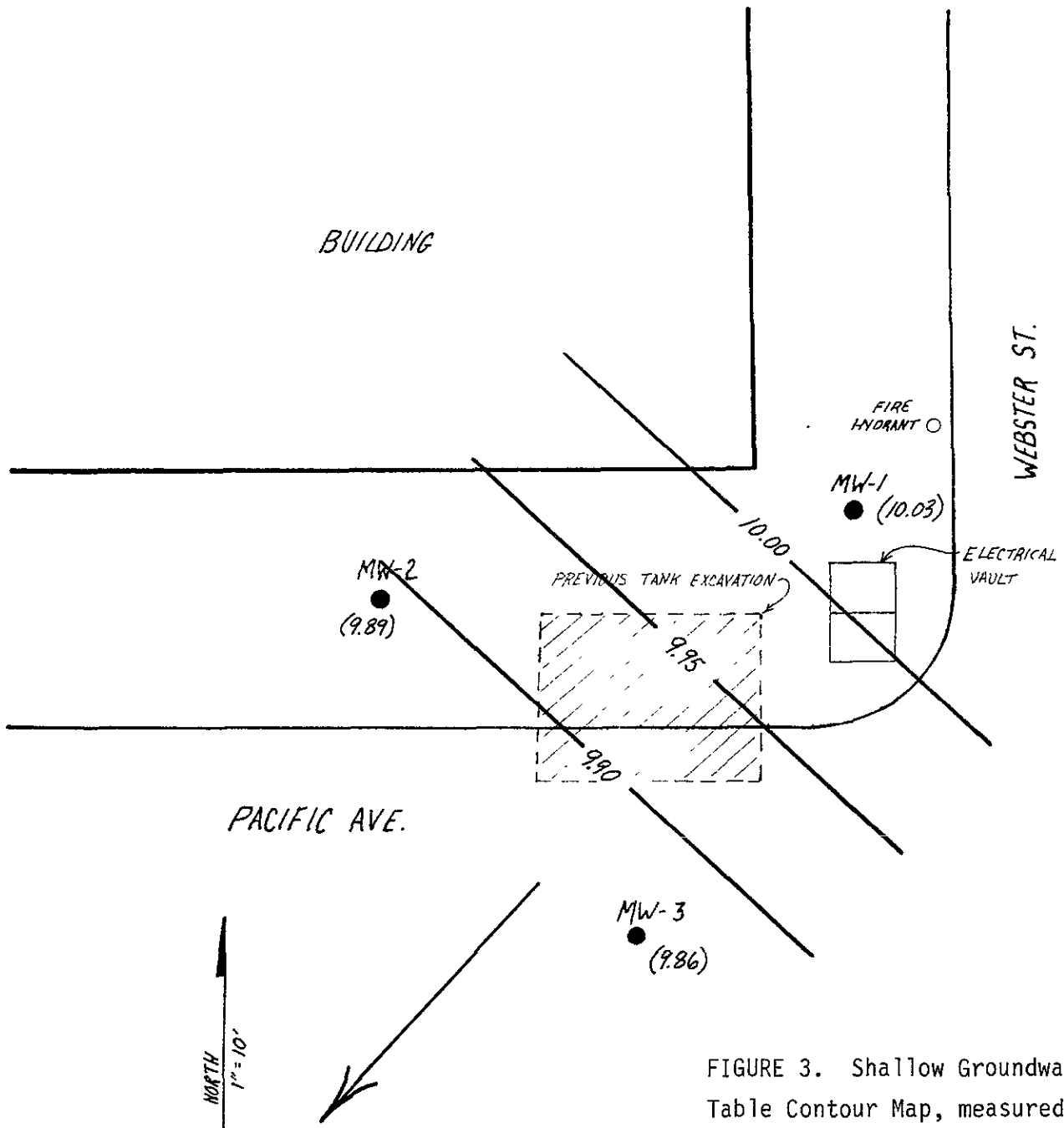


FIGURE 3. Shallow Groundwater Table Contour Map, measured 3/16/95.

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	3-16-95		
MW-1	9.11	8.24	8.18	8.60	8.27	8.59	10.03		
MW-2	8.84	7.92	7.84	8.39	7.96	8.24	9.89		
MW-3	8.94	8.04	7.95	8.58	8.07	8.30	9.86		
Flow Direction	W	W	W	NW	W	SW	SW		
Hydraulic Gradient	0.0091	0.011	0.011	0.0084	0.0098	0.0123	0.0058		

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

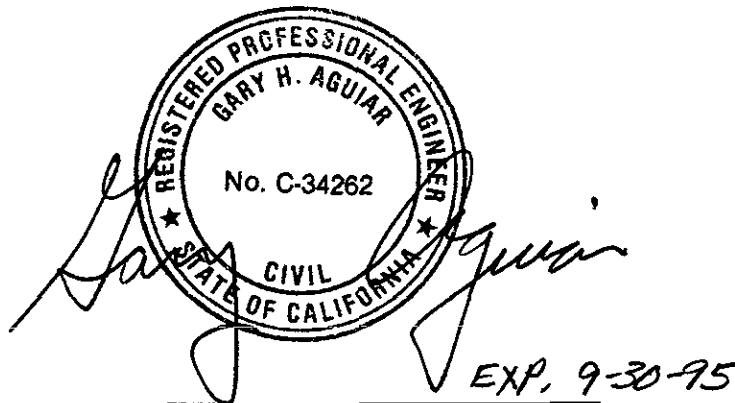
Well	Date	TPH as Gasoline (ug/L)	TPH as Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)
MW-1	11-09-89	360	—	0.71	ND	0.81	1.4
	06-17-93	ND	53	ND	ND	ND	ND
	09-23-93	ND	ND	ND	ND	ND	ND
	12-28-93	ND	ND	ND	ND	ND	ND
	04-19-94	190	ND	5.6	5.1	4.2	13
	08-16-94	ND	ND	ND	ND	ND	ND
	11-18-94	ND	(*)	ND	ND	ND	ND
	03-16-95	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
	03-16-95	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
	03-16-95	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

March 21, 1995



Gary Aguiar

RCE 34262

Gerard F. Aarons 3-21-95
Gerard F. Aarons Geologist

ATTACHMENT A

WELL SAMPLING LOGS

WELL SAMPLING LOG

Project/No. 1701 Webster St Page 1 of 3
 Site Location Alameda CA Date 3/16/45
 Well No. MW-1 Time Began 9:30
 Weather Clear mid 60°s Completed _____

EVACUATION DATA

Description of Measuring Point (MP) Well Box at Grade
 Total Sounded Depth of Well Below MP 14.58
 - Depth to Water Below MP 5.20 Diameter of Casing 4"
 = Water Column in Well _____
 Gallons in Casing _____ + Annular Space _____ = Total Gallons _____
 (30% porosity)
 Gallons Pumped Prior to Sampling 45
 Evacuation Method Airlift pump

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None clear
 (thickness to 0.1 inch, if any)

	<u>11:07</u>	<u>11:17</u>	<u>11:23</u>	<u>11:27</u>
Time	<u>11:07</u>	<u>11:17</u>	<u>11:23</u>	<u>11:27</u>
Gals Removed	<u>15 5</u>	<u>20</u>	<u>30</u>	<u>45</u>
Temperature	<u>66.5</u>	<u>65.3</u>	<u>66.0</u>	<u>66.0</u>
Conductivity	<u>380</u>	<u>370</u>	<u>380</u>	<u>380</u>
pH	<u>6.23</u>	<u>6.38</u>	<u>6.25</u>	<u>6.31</u>
Color / Odor	<u>Clear</u>	<u>Clear</u>	<u>=</u>	<u>=</u>
Turbidity	<u>Low</u>	<u>Low</u>	<u>=</u>	<u>=</u>

Comments: _____

WELL SAMPLING LOG

Project/No. 1701 Webster St
 Site Location Alameda CA
 Well No. MW-2
 Weather Clear mid 60°s

Page D of 3
 Date 3/16/95
 Time Began 9:30
 Completed _____

EVACUATION DATA

Description of Measuring Point (MP) Well Box at grade
 Total Sounded Depth of Well Below MP 19.48
 - Depth to Water Below MP 5.07 Diameter of Casing 4"
 = Water Column in Well _____
 Gallons in Casing _____ + Annular Space _____ = Total Gallons _____
 (30% porosity)
 Gallons Pumped Prior to Sampling 45
 Evacuation Method Airlift pump

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None Clear
 (thickness to 0.1 inch, if any)

Time	<u>11:48</u>	<u>11:57</u>	<u>12:03</u>	<u>12:14</u>
Gals Removed	<u>5</u>	<u>20</u>	<u>30</u>	<u>45</u>
Temperature	<u>68.1</u>	<u>67.2</u>	<u>67.9</u>	<u>67.2</u>
Conductivity	<u>390</u>	<u>370</u>	<u>420</u>	<u>440</u>
pH	<u>6.50</u>	<u>6.42</u>	<u>6.53</u>	<u>6.45</u>
Color / Odor	<u>clear</u>	<u>=</u>	<u>=</u>	<u>=</u>
Turbidity	<u>LOW</u>	<u>=</u>	<u>=</u>	<u>=</u>

Comments: _____

WELL SAMPLING LOG

Project/No. 1701 Webster St Page 3 of 3
 Site Location Alameda CA Date 3/16/95
 Well No. MW-3 Time Began 9:30
 Weather Clear Mid 60's Completed _____

EVACUATION DATA

Description of Measuring Point (MP) well box at Grade
 Total Sounded Depth of Well Below MP 19.64
 - Depth to Water Below MP 5.19 Diameter of Casing 4"
 = Water Column in Well _____
 Gallons in Casing _____ + Annular Space _____ = Total Gallons _____
 (30% porosity)
 Gallons Pumped Prior to Sampling 45
 Evacuation Method Airlift pump

SAMPLING DATA / FIELD PARAMETERS

Inspection for Free Product: None Clear
 (thickness to 0.1 inch, if any)

Time	5	20	30	45
Gals Removed	12:33	12:44	12:52	1:10
Temperature	65.0	64.5	64.8	64.7
Conductivity	470	470	470	470
pH	6.60	6.60	6.54	6.60
Color / Odor	Brown no odor	-	-	green/gray no odor
Turbidity	High	=	=	mod

Comments: _____

ATTACHMENT B

ANALYTICAL RESULTS: GROUNDWATER



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

March 20, 1995

PEL # 9503048

HAGEMAN - AGUIAR, INC.

Attn: Mark Hainsworth

Re: Three water samples for Gasoline/BTEX analysis.

Project name: Bernita Leskowski

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

Date sampled: Mar 16, 1995

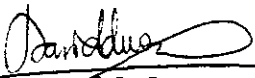
Date submitted: Mar 17, 1995

Date extracted: Mar 17-20, 1995

Date analyzed: Mar 17-20, 1995

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (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	92.2%	86.3%	87.5%	85.3%	96.4%
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 # 9503048

INV # 25772

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS: <i>Bernita Leskewski</i> <i>1701 Webster St</i> <i>Alameda CA</i>					SAMPLER: (Signature) <i>Mark Hamworth</i>		ANALYSIS REQUESTED <i>TPH Gas/BTEX</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
MW-1	3/16/95	13:20		X	Monitor well #1	X					Norm TAT
MW-2	3/16/95	13:28		X	↓ ↓ #2	X					
MW-3	3/16/95	13:33		X	↓ ↓ #3	X					
RELINQUISHED BY: (Signature) <i>Mark Hamworth</i>					DATE TIME	RECEIVED BY: (Signature)					DATE TIME
RELINQUISHED BY: (Signature)					DATE TIME	RECEIVED BY: (Signature)					DATE TIME
RELINQUISHED BY: (Signature)					DATE TIME	RECEIVED BY: (Signature)					DATE TIME
RELINQUISHED BY: (Signature)					DATE TIME	RECEIVED FOR LABORATORY BY: (Signature) <i>Dandrea</i>					DATE TIME

3/17/95
9:40 AM