STID 6633

HAGEMAN-AGUIAR, INC.

Underground Contamination Investigations, Groundwater Consultants, Environmental Engineering

RESULTS OF
LIMITED LEVEL II
ENVIRONMENTAL SITE ASSESSMENT

Property at
1295 59th Street
Emeryville, California

May 10, 1993

3732 Mt. Diablo Blvd. Suite 372 Lafayette, California 94549 (510) 284-1661 FAX (510) 284-1664

TABLE OF CONTENTS

I. INTRODUCTION

In order to evaluate and document the environmental conditions of the property at 1295 59th Street prior to the close of the upcoming real estate transaction, a Level I Environmental Site Assessment was conducted by Hageman-Aguiar, Inc. The location of the site is shown in Figure 1. The results of the investigation were presented in a report dated April 19, 1993.

The following statement was made among the conclusions (Section V) of the Level I Site Assessment Report:

> During the site walk-through, the location of a previous underground gasoline storage tank was noted. According to our inquiries, a small underground gasoline storage tank was removed from the site in the past year. It is likely that the tank was never registered with any local or state agency. Little else seems to be known about the tank.

As a follow-up to the Level I Environmental Site Assessment, a limited Level II Environmental Site Assessment was conducted by Hageman-Aguiar, Inc. The scope of work involved soil sampling and "grab" shallow groundwater sampling at two locations within the area of the previous underground storage tank location.

FIGURE 1.
Site Location Map

II. FIELD WORK

Soil and Groundwater Sampling

On May 4, 1993, two soil borings were drilled on the property. The locations of the soil borings are shown on Figure 2.

Borings B-1 and B-2 were hand-augered by Hageman-Aguiar personnel. At the soil boring location B-2, a soil sample for chemical analysis was collected at a depth of approximately 2-1/2 to 3 feet below ground surface by driving a split-barrel sampler fitted with brass liners.

At each of the two boring locations, shallow groundwater was encountered at a depth of approximately 3 feet below ground surface. One composite "grab" groundwater sample was collected from the two borings. The groundwater sampling was accomplished by removing water from both borings with a teflon bailer. The collected groundwater was placed inside appropriate 40 ml VOA bottles and 1-liter amber bottles free of any headspace.

All samples were immediately placed on ice, then transported under chain-of-custody to the laboratory following the completion of the field work. The soil sampling operation was conducted under the supervision of Gary Aguiar (Registered Civil Engineer #34262). The boring logs for B-1 and B-2 are included in Attachemnt A.

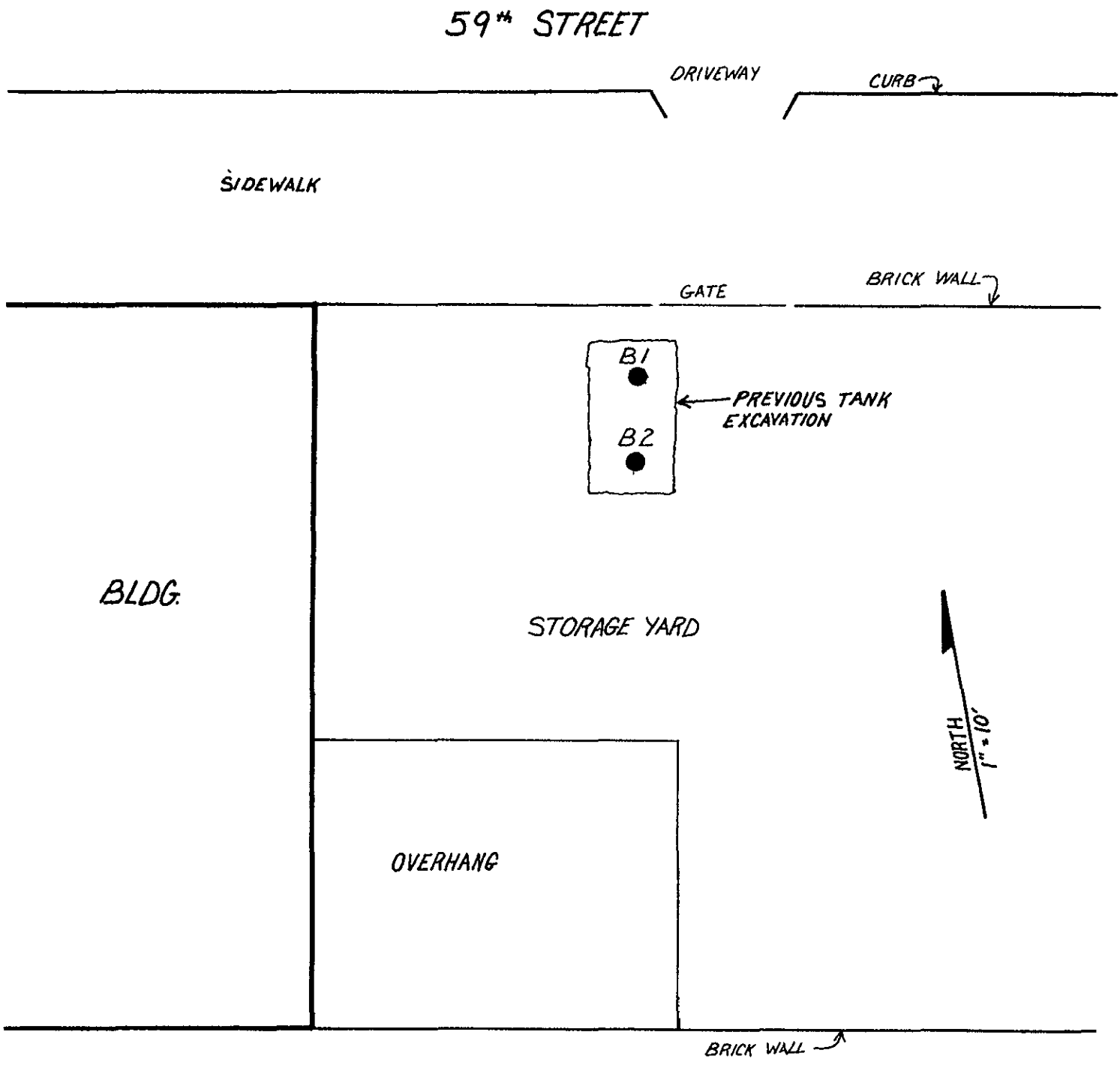


FIGURE 2.
Site Map.

III. ANALYTICAL RESULTS

All analyses were conducted by a California State DOHS certified laboratory in accordance with EPA recommended procedures (Priority Environmental Labs, Milpitas, CA). The soil sample was analyzed for 1) Total Petroleum Hydrocarbons as Gasoline, Benzene, Toluene, Ethylbenzene, and Total Xylenes (EPA method 8015), and 2) Total Extractable Petroleum Hydrocarbons (EPA method 8015).

Analytical Results: Soil

The results of laboratory analyses performed on the soil sample collected from boring B-2 are presented in Table 1. As shown in this table, no detectable concentrations of any petroleum constituents were found in the soil above the shallow groundwater table.

A copy of the laboratory certificate for the soil sample analysis is included in Attachment A.

TABLE 1.

Soil Sampling Results

Soil Boring	Depth (feet)	TPH as Gasoline (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl-Benzene (ug/kg)	Total Xylenes (ug/kg)
B-2	2.5 to 3.0	ND	ND	ND	ND	ND
Detection Limit		1.0	5.0	5.0	5.0	5.0

Soil Boring	Depth (feet)	TPH as Stoddard Solvent (mg/kg)	TPH as Kerosene (mg/kg)	TPH as Diesel (mg/kg)	TPH as Motor Oil (mg/kg)
B-2	2.5 to 3.0	ND	ND	ND	ND
Detection Limit		1.0	5.0	5.0	5.0

ND = not detected

Analytical Results: Groundwater

The results of laboratory analyses performed on the composite groundwater sample collected from borings B-1 and B-2 are presented in Tables 2 and 3.

As shown in Table 2, there appears to be residual dissolved Gasoline concentrations present in the shallow groundwater found within the backfill of the previous underground tank location. Dissolved Gasoline, Benzene, Toluene, Ethylbenzene, and Total Xylenes were detected at concentrations of 11,000 µg/L (ppb), 23 µg/L (ppb), 26 µg/L (ppb), 38 µg/L (ppb), and 64 µg/L (ppb), respectively.

As shown in Table 3, dissolved Diesel was detected in the shallow groundwater sample at a concentration of 1,100 µg/L (ppb).

A copy of the laboratory certificate for the shallow groundwater sample analysis is included in Attachment A.

TABLE 2.

"Grab" Groundwater Sampling Results

Sample	Date	TPH as Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-Benzene (ug/L)	Total Xylenes (ug/L)	Specific Conductance (uS)
W 1-2	05-04-93	**11,000**	**23**	**26**	**38**	**64**	**1,800**
CCR Title 22 Maximum Contaminant Level		---	1	---	680	1,750	1,600
Detection Limit		50	0.5	0.5	0.5	0.5	10

TABLE 3.

"Grab" Groundwater Sampling Results

Sample	Date	TPH as Stoddard Solvent (ug/L)	TPH as Kerosene (ug/L)	TPH as Diesel (ug/L)	TPH as Motor Oil (mg/L)
W 1-2	05-04-93	ND	ND	**1,100**	ND
Detection Limit		50	50	50	0.5

ND = not detected

IV. ANALYSIS OF DATA

The results of the limited subsurface sampling at the location of the previous underground storage tank indicate that trace concentrations of Gasoline, Diesel and related petroleum constituents are present in the shallow groundwater. As noted by the boring logs, all of the soil and subsurface water encountered during the sampling operation had a natural appearance with no apparent odor or discoloration. This natural appearance coincides with the relatively low concentrations of various petroleum constituents found in the shallow groundwater.

The apparent low ratio of aromatic compound concentrations to the concentration of Gasoline Total Petroleum Hydrocarbons is indicative of old and/or weathered motor fuel. That is, the residual petroleum concentrations found at the present time are likely to have been introduced on the property into the subsurface a relatively long time ago, or else **may have traveled onto the property from an off-site location** (another property).

As a matter of reference, the State of California Maximum Contaminant Levels (MCL's) in **drinking water** for various chlorinated organic compounds, as set by Code of California Regulations, Title 22, section 64444.5, are listed along with the analytical results in Table 2. As shown in Table 2, the concentration of Benzene **only slightly exceeds** the respective MCL of 1 µg/L (ppb). In addition, the concentrations of Ethylbenzene and Total Xylenes fall far below the respective MCL's.

In terms of suitability of the shallow groundwater in the vicinity of the subject property for drinking water, Table 2 indicates that the Specific Conductance of the shallow groundwater sample was found to be 1,800 µS (micro-Siemen). As a matter of reference, the State of California MCL in **drinking water** for Specific Conductance is 1,600 µS. That is to say, the shallow groundwater in this portion of Emeryville is somewhat saline, such that suitability as a drinking water supply is somewhat questionable. In this case, the drinking water standards would not be applicable, and less stringent MCL's for aquatic toxicity would be utilized.

Based upon 1) the fact that the trace concentration of Benzene only slightly exceeds the respective MCL for drinking water, 2) suitability of shallow groundwater for drinking use in the immediate vicinity of the subject property appears highly unlikely, 3) a strong possibility of off-site migration of shallow groundwater contamination from another property and 4) the historical industrial use of this portion of Emeryville along with the consequent regional groundwater quality degradation, **we can say with relative certainty that future groundwater contamination remediation will not be required in the future by either the RWQCB or other local regulatory agency**.

V. CONCLUSIONS

1) During the soil borings, all of the soil and subsurface water encountered during the sampling operation had a natural appearance with no apparent odor or discoloration.

2) No detectable concentrations of any petroleum constituents were found in the soil above the shallow groundwater table.

3) The results of laboratory analysis indicate that trace concentrations of Gasoline, Diesel and related petroleum constituents are present in the shallow groundwater at the location of the previous underground storage tank.

4) Dissolved Gasoline, Benzene, Toluene, Ethylbenzene, and Total Xylenes were detected in the shallow groundwater sample at concentrations of 11,000 µg/L (ppb), 23 µg/L (ppb), 26 µg/L (ppb), 38 µg/L (ppb), and 64 µg/L (ppb), respectively.

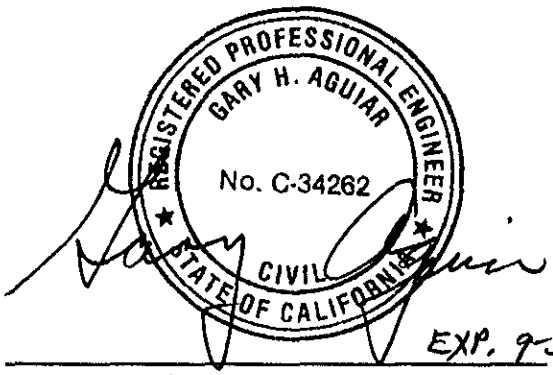
5) Dissolved Diesel was detected in the shallow groundwater sample at a concentration of 1,100 µg/L (ppb).

6) The weathered nature of the petroleum hydrocarbons found beneath the subject property indicate that they may have been introduced on the property into the subsurface a relatively long time ago, or else **may have traveled onto the property from an off-site location** (another property).

7) Based upon 1) the fact that the trace concentration of Benzene only slightly exceeds the respective MCL for drinking water, 2) suitability of shallow groundwater for drinking use in the immediate vicinity of the subject property appears highly unlikely, 3) a strong possibility of off-site migration of shallow groundwater contamination from another property and 4) the historical industrial use of this portion of Emeryville along with the consequent regional groundwater quality degradation, **we can say with relative certainty that future groundwater contamination remediation will not be required in the future by either the RWQCB or other local regulatory agency**.

REPORT OF
LIMITED LEVEL II ENVIRONMENTAL SITE ASSESSMENT
Property at
1295 59th Street, Emeryville, California

May 10, 1993



EXP. 9-30-95

Gary Aguiar **RCE 34262**

Bruce Hageman

ATTACHMENT A

Boring Logs

LOCATION OF BORING	PROJECT NAME & LOCATION	
SEE SITE MAP	1295 59th STREET, EMERVILLE, CA	
	DRILLING METHOD: 4" HAND AUGER	BORING B-1
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER WITH BRASS LINERS	SHT 1 of 1
	WATER LEVEL / TIME / DATE	DRILLING START: TIME 1000, DATE 5/4/93
SCALE: 1" =	CASING DEPTH / SCREEN	DRILLING FINISH: TIME 1015, DATE 5/4/93

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		BRN GRAVELLY CLAY (CL), SLIGHTLY MOIST, SOFT,
					1		OCCASIONAL SUB-ANGULAR BRN SANDSTONE, SANDY,
					2		GRASS/PLANT FIBERS
			WATER SAMPLE W1-2		3		(NO ODOR) SAME, MOIST
					4		SATURATED @ 3'
					5		REFUSAL — LARGE ROCKS AND/OR CONCRETE PIECES
					6		
					7		
					8		TOTAL DEPTH = 4½' BLS
					9		
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		

REGISTERED PROFESSIONAL ENGINEER
GARY H. AGUIAR
No. C-34262
CIVIL
STATE OF CALIFORNIA

HAGEMAN - AGUIAR, INC.

LOCATION OF BORING	PROJECT NAME & LOCATION	
SEE SITE MAP	1295 59th STREET, EMERYVILLE, CA	
	DRILLING METHOD: 4" HAND SAMPLER	BORING B-2
		SHT 1 of 1
	SAMPLING METHOD: 2" SPLIT BARREL SAMPLER WITH BRASS LINERS	DRILLING START / FINISH
	WATER LEVEL / TIME / DATE	TIME 1015 / TIME 1050
SCALE: 1" =	CASING DEPTH / SCREEN	DATE 5/4/93 / DATE 5/4/93

SAMPLER	inches DRIVEN	inches RECOVER	BLOW COUNT per 6 inches	TIME	DEPTH in feet	USCS	SURFACE CONDITIONS:
					0		BRN GRAVELLY CLAY (CL), SLIGHTLY MOIST, SOFT, SANDY, GRAVELLY, GRASS/PLANT FIBERS,
					1		FILL MATERIAL: BRICKS, RAGS
			SOIL SAMPLE B-2	1030	2		
			WATER SAMPLE W 1-2	1050	3		SAME, MOIST
					4		REFUSAL — LARGE ROCKS AND/OR CONCRETE PIECES
					5		
					6		
					7		
					8		TOTAL DEPTH = 4½' BLS
					9		
					0		
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					0		

REGISTERED PROFESSIONAL ENGINEER
GARY H. AGUIAR
No. C-34262
CIVIL
STATE OF CALIFORNIA

HAGEMAN - AGUIAR, INC.

ATTACHMENT B

Analytical Results

PRIORITY ENVIRONMENTAL LABS

Priority Environmental Analytical Laboratory

May 05, 1993 PEL # 9305007

HAGEMAN - AGUIAR, INC.

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

Project name: Schmier Realty
Project location: 59th St. & Doyle - Emeryville, CA.

Date sampled: May 04, 1993 Date submitted: May 04, 1993
Date extracted: May 04-05, 1993 Date analyzed: May 04-05, 1993

RESULTS:

SAMPLE I.D.	Kerosene (ug/L)	Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	Motor Oil (mg/L)	Stoddard Solvent (ug/L)
W 1-2	N.D.	11000	1100	23	26	38	64	N.D.	N.D.
Detection Limit	50	50	50	0.5	0.5	0.5	0.5	0.5	50
Method of Analysis	3510/ 8015	5030/ 8015	3510/ 8015	602	602	602	602	3510/ 8015	3510/ 8015

SAMPLE I.D.	Kerosene (mg/Kg)	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)	Motor Oil (mg/Kg)	Stoddard Solvent (mg/Kg)
B 2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	91.4%	92.3%	87.2%	90.1%	93.0%	86.8%	100.9%	---	88.0%
Detection limit	1.0	1.0	1.0	5.0	5.0	5.0	5.0	10	1.0
Method of Analysis	3550/ 8015	5030/ 8015	3550/ 8015	8020	8020	8020	8020	3550/ 8015	3550/ 8015

David Duong
Laboratory Director

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

PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

May 06, 1993 PEL # 9305007

HAGEMAN - AGUIAR, INC.

Attn: Jeffrey Roth
Re: One water sample for Conductivity analysis.

Project name: Schmier Realty
Project location: 59th St.,& Doyle - Emeryville, CA.

Date sampled: May 04, 1993 Date submitted: May 04, 1993
Date extracted: May 06, 1993 Date analyzed: May 06, 1993

RESULTS:

SAMPLE I.D.	Conductivity (uS)
W 1-2	1800
Blank	0
Detection limit	10
Method of Analysis	120.1

David Duong
Laboratory Director

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

HAGEMAN-AGUIAR, INC.

PEL # 9305007

INV # 23581

CHAIN OF CUSTODY RECORD

PROJECT NAME AND ADDRESS:
SEHMIER REALTY
59th ST + DOYLE
EMERYVILLE, CA

SAMPLER: (Signature) [signature]

HAGEMAN - AGUIAR, INC.
3732 Mt. Diablo Blvd., Suite 372
Lafayette, CA 94549
(415)284-1661 (415)284-1664 (FAX)

ANALYSIS REQUESTED: TPH GAS/BTXE; TEPH

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	STATION LOCATION		TPH GAS/BTXE	TEPH				REMARKS
W1-2	5.4.93	1040		X	BORE HOLE WATER COMPOSITE		X	X				1 DAY TAT
B2	5.4.93	1030	X		SOIL SAMPLE #2 BORE HOLE		X	X				1 DAY TAT

RELINQUISHED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
[signature]	DATE 5.4.93 TIME 1205		DATE TIME
	DATE TIME		DATE TIME
	DATE TIME		DATE TIME
	DATE TIME	RECEIVED FOR LABORATORY BY: (Signature) [signature]	DATE 5/4/93 TIME 1205