Epigene International
CONSULTING GEOLOGISTS

February 29, 1996

Mr. J. W. Silveira
499 Embarcadero
Oakland, CA 94606

Subject: Quarterly Monitoring Report for Site Located at 1200 20th Ave., Oakland

INTRODUCTION

The site is located at the northeast corner of 20th Avenue and Solano Way in Oakland. A location map is shown on Figure 1. Two gasoline tanks were removed from the site on January 19, 1994 . A report documenting the tank removal activities and soil sampling and analysis was prepared by Epigene International dated February 14, 1994.

Based on the presence of soil contamination below the tank, the Alameda County Department of Environmental Health requested a subsurface investigation to assess the possible impact of the contamination on groundwater. Three monitoring wells were installed at the locations shown on Figure 2 in February of 1995.

GROUNDWATER SAMPLING

The wells were purged and sampled on February 16, 1996. The purging was carried out

using an electric submersible pump. Each well was purged of approximately seven to ten casing volumes and allowed to recover prior to sampling. Purge water was placed in a 55 gallon drum and left in front of the building.

Groundwater samples were collected in a dedicated bailer and placed in 40 ml VOAS that were supplied by the laboratory. The VOAS were labeled and stored in a cooled ice chest for transportation to a State-certified laboratory under chain of custody control.

The groundwater samples from each well were analyzed for TPH as gasoline and BTEX compounds. Hydrocarbon contamination was detected in primarily in MW-1. Low levels of gasoline and BTEX compounds were also present in MW-3. Very low levels of BTEX compounds were present in MW-2. Tables 1, 2 and 3 present a summary of the results for each well. The certified laboratory report and chain of custody documentation for the groundwater samples is presented in Appendix A.

GROUNDWATER GRADIENT

The elevation for the top of casing of each well was surveyed in March 1995 to mean sea level based on the City of Oakland datum. Because the original gradient was more northerly than expected, the top of casing elevations were resurveyed on June 20 to assess whether or not there was a survey error. The resurveyed elevations were the same as the original elevations.

The direction and slope of the gradient was calculated using a three-point solution. The calculated groundwater elevations and the direction of the gradient for the February 16 16 gauging is shown on Figure 2. A graph showing changes in groundwater elevation

through time is presented in Figure 3. The direction of the gradient continues to be toward the north. The slope of the gradient was calculated to be 0.06 ft/ft, significantly less than the calculated slope from the October 1995 gauging.

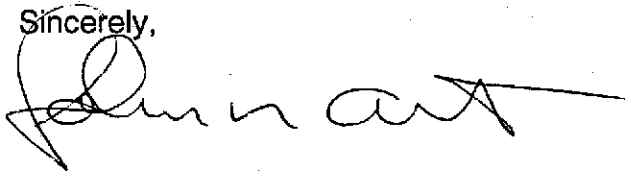
CONCLUSIONS AND RECOMMENDATIONS

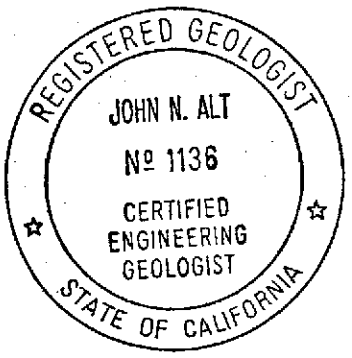
This report presents the results of the fourth quarterly monitoring of the three wells located adjacent to the site. The levels of contamination in the wells continues to be relatively low and there has been no significant change in the past three quarters. It is recommended that the site status of the site be discussed with Mr. Barney Chan of Alameda County Department of Environmental Health Services to assess whether or not additional monitoring is required or if it is reasonable to apply for closure of the site.

The northward trend of the groundwater gradient continues to be somewhat anomalous to the northwestward trend that was expected for this area. However, MW-2 continues to be in the calculated down-gradient direction of the former tanks.

It is a pleasure to work with you on this project. Should you have any questions, please contact the undersigned. With your permission, I will request a meeting with Mr. Chan of Alameda County to review the site.

Sincerely,





John N. Alt
Certified Engineering Geologist No. 1136

cc: Mr. Robert Shapiro, Esq.
Mr. Barney Chan, Alameda County Dept. of Environmental Health

Attachments

Table 1 - Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-1

Sampling Date	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
2/22/95	NA	1900	92	39	57	260	0.14
6/20/95	NA	4100	410	32	14	180	NA
10/16/95	NA	1300	180	22	32	81	NA
2/16/96	NA	1700	200	21	41	120	NA

MW-1 is a 2 inch PVC well installed in February 1995 to a total depth of 30 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; *TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for RPH is presented in PPM with a detection limit of 5 PPM.

Table 2 - Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-2

Sampling Date	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
2/22/95	NA	ND	ND	ND	ND	ND	ND
6/20/95	NA	ND	1.8	ND	1.1	0.62	NA
10/16/95	NA	55	2.2	ND	1.5	ND	NA
2/16/96	NA	ND	3.3	2.7	0.99	2.4	NA

MW- 2 is a 2 inch PVC well installed in February 1995 to a total depth of 35 feet.

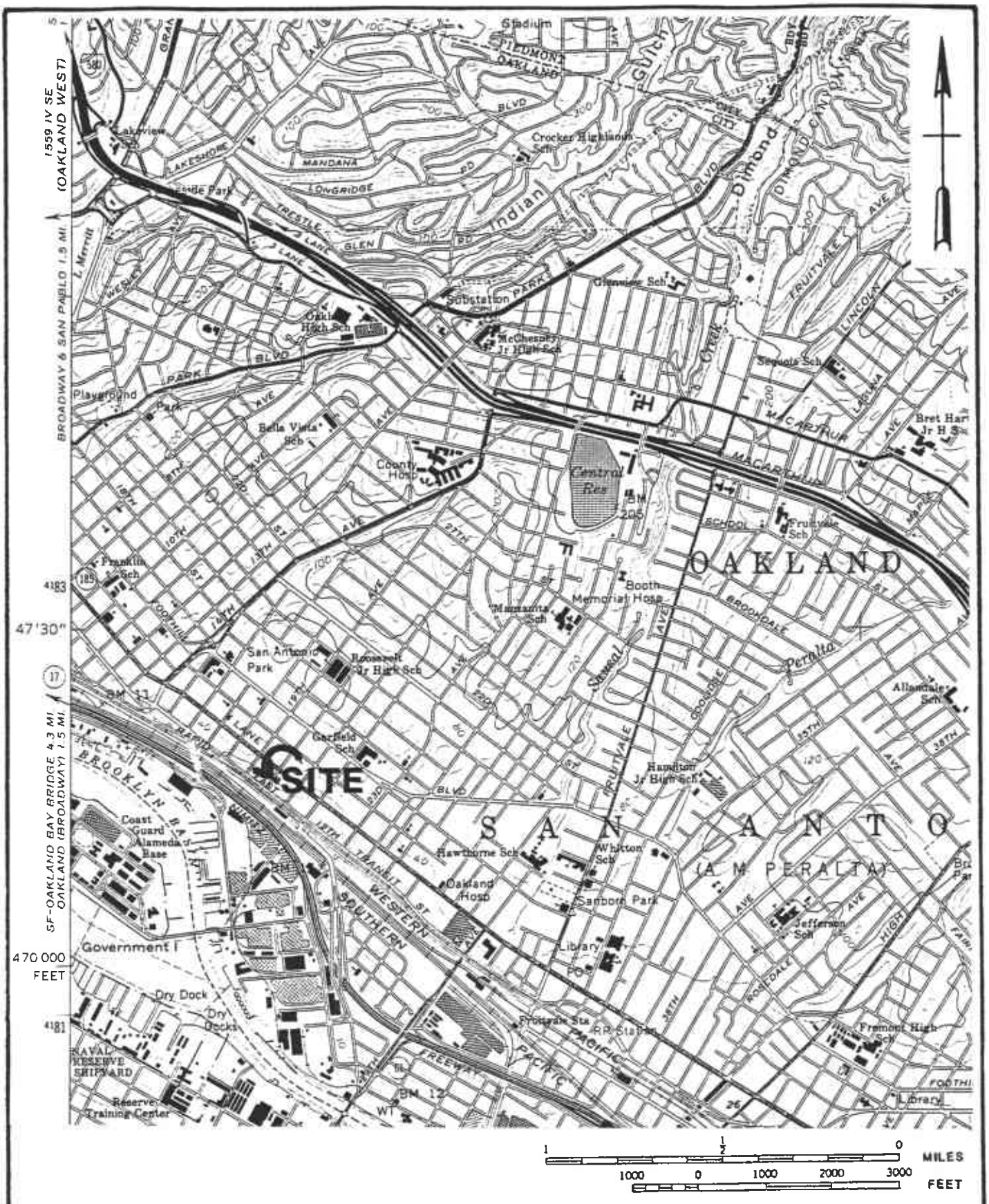
NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; *TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

Table 3 - Summary of Hydrocarbon Concentrations (in PPB) Detected in MW-3

Sampling Date	TPH Diesel	TPH Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
2/22/95	NA	ND	ND	ND	ND	ND	ND
6/20/95	NA	160	0.60	ND	0.60	0.72	NA
10/16/95	NA	130	5.8	ND	3.2	ND	NA
2/16/96	NA	54	5.6	2.8	2.9	8.1	NA

MW-3 is a 2 inch PVC well installed in February 1995 to a total depth of 30 feet.

NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; *TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

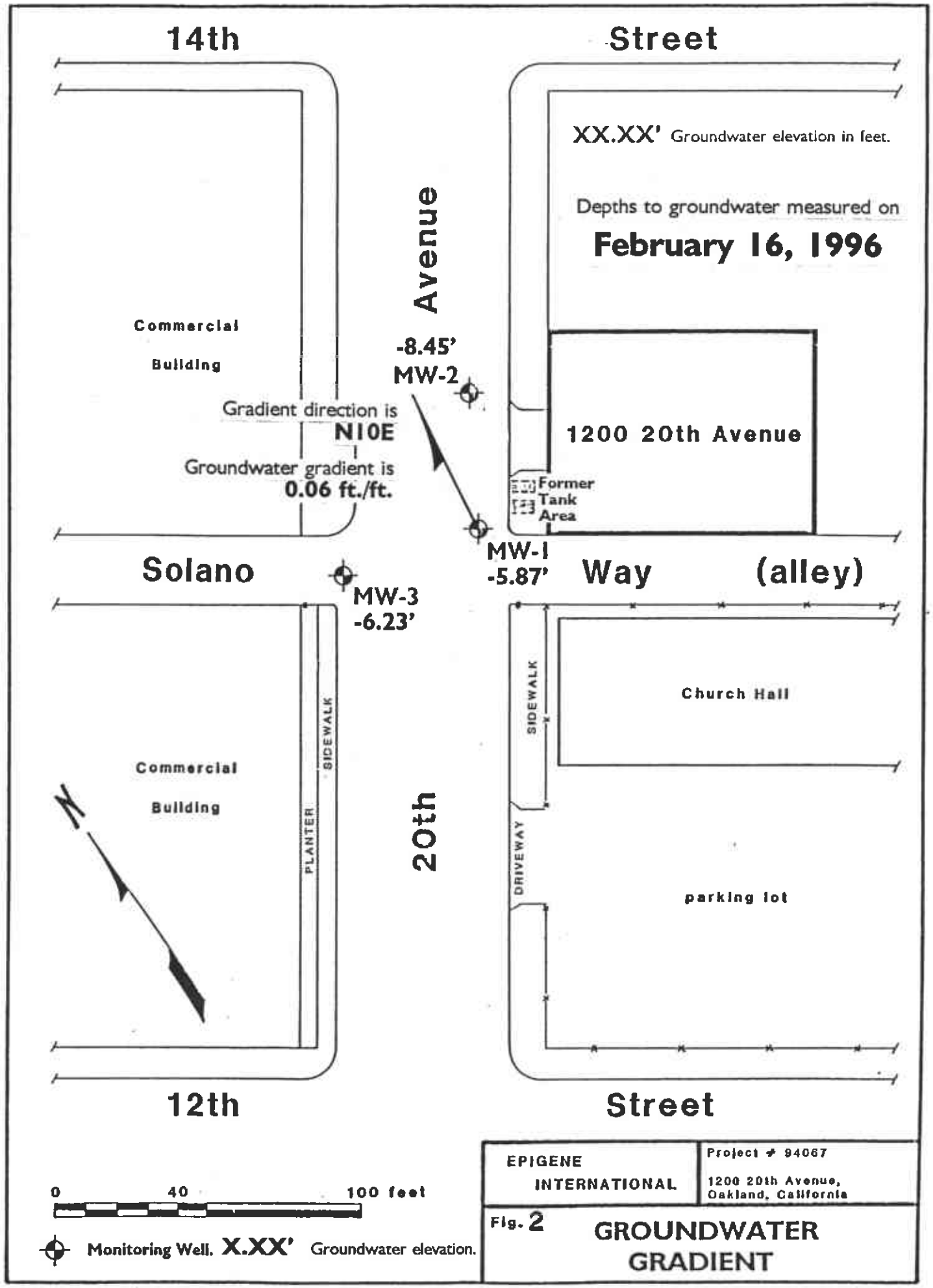


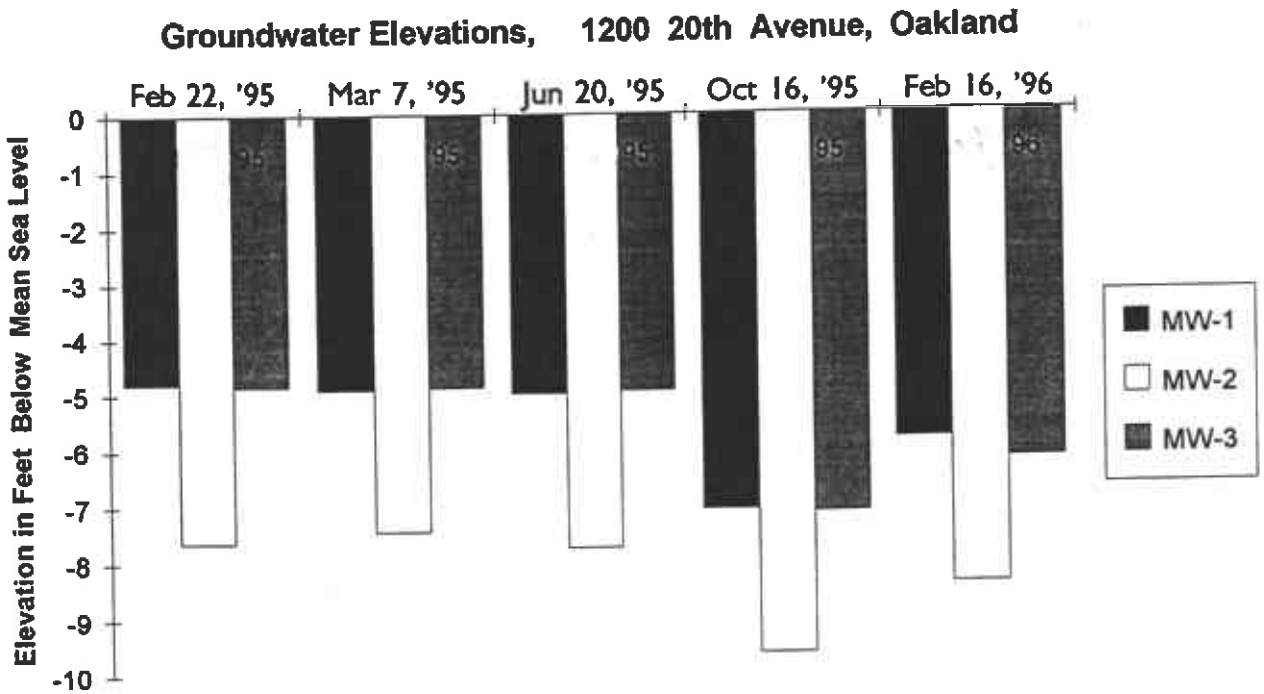
Base map from U.S.G.S. 7 1/2' series Oakland East quadrangle, 1980.

EPIGENE INTERNATIONAL	Project #94057. 1200 20th Avenue, Oakland, California.

Fig. 1

SITE LOCATION MAP


14th Street
XX.XX' Groundwater elevation in feet.
Depths to groundwater measured on
February 16, 1996
Avenue
Commercial Building
-8.45'
MW-2
Gradient direction is N10E
Groundwater gradient is 0.06 ft./ft.
1200 20th Avenue
Former Tank Area
MW-1
-5.87'
Solano Way (alley)
MW-3
-6.23'
SIDEWALK
Church Hall
Commercial Building
PLANTER
SIDEWALK
20th
DRIVEWAY
parking lot
12th Street
0 40 100 feet
Monitoring Well. X.XX' Groundwater elevation.
EPIGENE INTERNATIONAL
Project # 94067
1200 20th Avenue, Oakland, California
Fig. 2
GROUNDWATER GRADIENT


Groundwater Elevations, 1200 20th Avenue, Oakland
Feb 22, '95
Mar 7, '95
Jun 20, '95
Oct 16, '95
Feb 16, '96
Elevation in Feet Below Mean Sea Level
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
MW-1
MW-2
MW-3

APPENDIX A

CERTIFIED LABORATORY REPORT

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Telc: 510-798-1620 Fax: 510-798-1622

Epigene International 38750 Paseo Padre Pkwy, # A11 Fremont, CA 94536	Client Project ID: # 96-067; 1200 20th Ave., Oakland	Date Sampled: 02/16/96
		Date Received: 02/17/96
	Client Contact: John Alt	Date Extracted: 02/17/96
	Client P.O:	Date Analyzed: 02/17/96

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
61593	MW-1	W	1700,a	200	21	41	120	117#
61594	MW-2	W	ND	3.3	2.7	0.99	2.4	101
61595	MW-3	W	54,a	5.6	2.8	2.9	8.1	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

CHAIN OF CUSTODY

Epigene International
CONSULTING GEOLOGISTS
38750 Paseo Padre Parkway, Suite A-11
Fremont, California, 94536
Business: (510) 791-1988 FAX: (510) 791-3306

Laboratory:	McCampbell Analytical Inc.
	110 2nd Avenue South #D7
	Pacheco, CA 94553
	(510) 798-1620
Contact:	Ed Hamilton

Contact: John Alt	Sampler: INA/ASA
Project Name: 1200 20th Ave, Oakland, CA.	
Project no. 96-067	Date: 2/16/96

	Sample I.D.	Date/Time Sampled	Matrix Desc.	Container No. of	Container Type	Lab. #	TPH/Gasoline	BTEX	TPH/Diesel	601/8010	602/8020	Comments
†	1. MW-1	2/16/96 1435	H_2O	2	VOAS		X	X				61593
†	2. MW-2	1428		2	VOAS		X	X				61594
†	3. MW-3	1503		2	VOAS		X	X				61595
	4.											
	5.											
	6.											
	7.											
	8.											
	9.											
	10.											

ICE/T° ✓ PRESERVATIVE VOAS
GOOD CONDITION ✓ APPROPRIATE
HEAD SPACE ABSENT ✓ CONTAINERS ✓

Relinquished by:	Date: 2/17/96	Time: 12:30 PM	Received by:	Date: 2/17/96	Time: 12:30 pm
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Turnaround Time: STANDARD

Additional Comments: All VOAS contain HCl

Page 1 of 1