Epigene International
CONSULTING GEOLOGISTS

November 14, 1995

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

Subject: Quarter 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 October 16, 1995. 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 transported to the property located at 2301 East 12th Street and placed in 55 gallon drums.

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 both MW-2 and MW-3. 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 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 October 16 gauging is shown on Figure 2. The direction of the gradient continues to be toward the north. The slope of the gradient was calculated to be 0.12 ft/ft, a relatively high slope for this area.

CONCLUSIONS AND RECOMMENDATIONS

The wells should continue to be monitored on a quarterly basis. The next quarterly monitoring should be carried out in January of next year. The northward trend of the groundwater gradient continues to be somewhat anomalous to the northwestward trend that was expected for this area.

It is a pleasure to work with you on this project. Should you have any questions, please contact the undersigned.

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

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

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

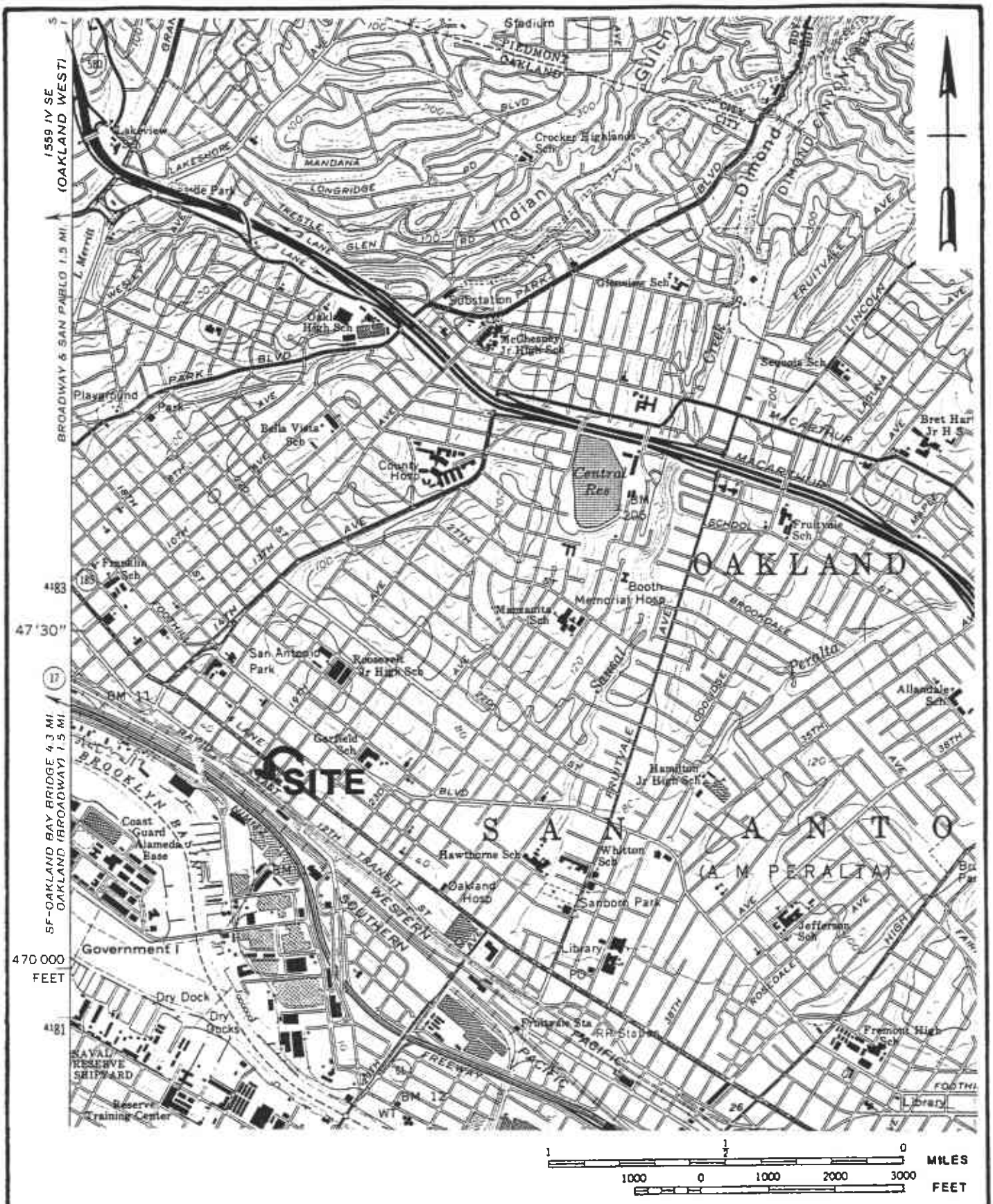
NOTE: NA is not analyzed; ND is not detected above detection limits which are typically 50 PPB for diesel and gasoline and 0.5 PPB for BTEX; *TRPH is Total Recoverable Petroleum Hydrocarbons as oil and grease. Results for TRPH is presented in PPM with a detection limit of 5 PPM.

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

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.

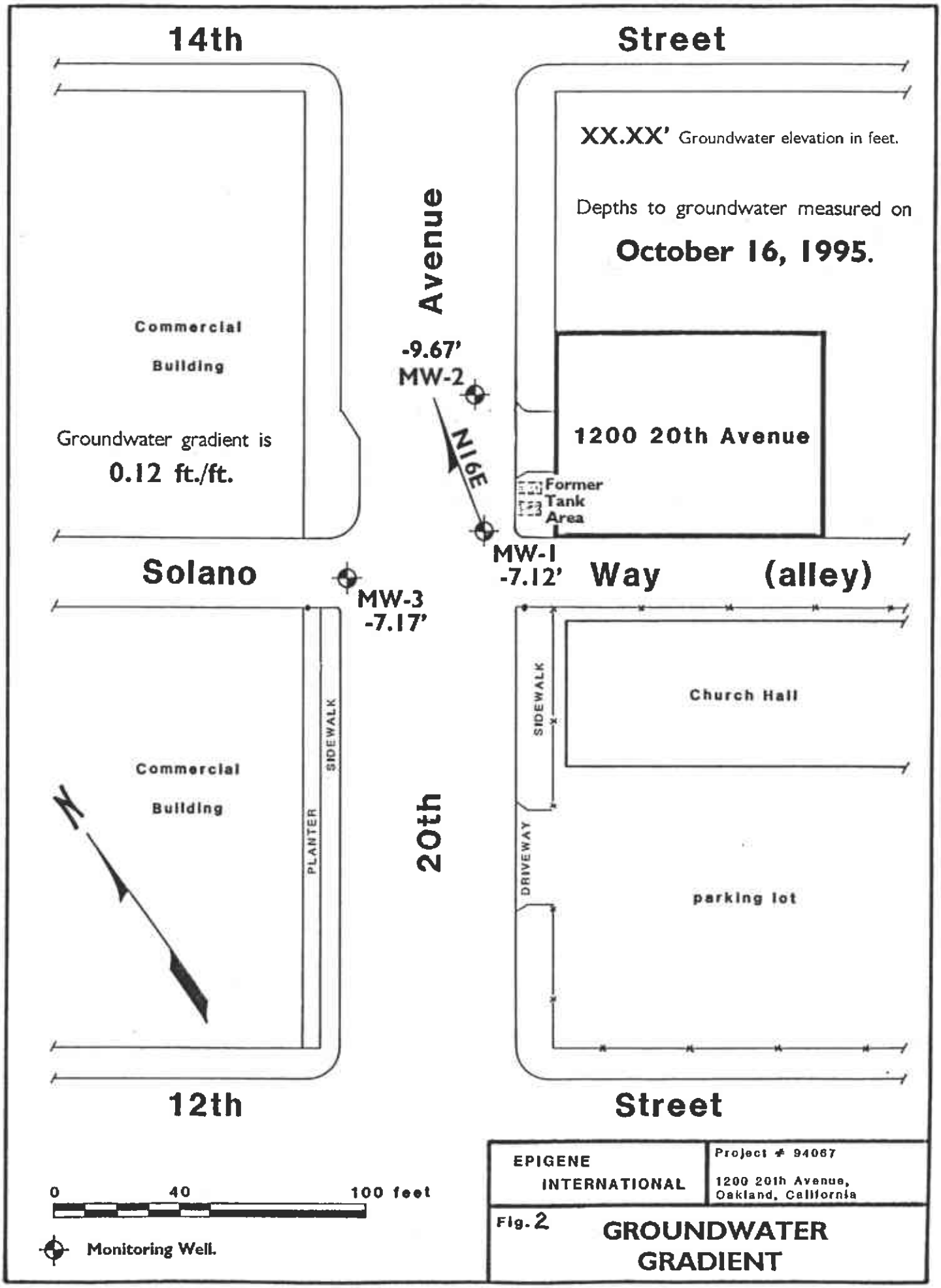


Base map from U.S.G.S. 7 1/2' series Oakland East quadrangle, 1980.

EPIGENE INTERNATIONAL	Project #94087. 1200 20th Avenue, Oakland, California.

Fig. 1

SITE LOCATION MAP


14th
Street
XX.XX' Groundwater elevation in feet.
Depths to groundwater measured on
October 16, 1995.
Commercial
Building
Groundwater gradient is
0.12 ft./ft.
Avenue
-9.67'
MW-2
N16E
1200 20th Avenue
Former
Tank
Area
MW-1
-7.12'
Solano
Way
(alley)
MW-3
-7.17'
Church Hall
SIDEWALK
Commercial
Building
PLANTER
SIDEWALK
20th
DRIVEWAY
parking lot
12th
Street
0
40
100 feet
Monitoring Well.
EPIGENE
INTERNATIONAL
Project # 94067
1200 20th Avenue,
Oakland, California
Fig. 2
GROUNDWATER
GRADIENT

APPENDIX A

CERTIFIED LABORATORY REPORT

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

10/24/95

Dear John:

Enclosed are:

1). the results of **3** samples from your **1200 20th Ave.** project,

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton

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

Epigene International 38750 Paseo Padre Pkwy, # A11 Fremont, CA 94536	Client Project ID: 1200 20th Ave.	Date Sampled: 10/16/95
		Date Received: 10/17/95
	Client Contact: John Alt	Date Extracted: 10/25-10/26/95
	Client P.O:	Date Analyzed: 10/25-10/26/95

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	Ethylbenzene	Xylenes	% Rec. Surrogate
57557	MW-1	W	1300,a	180	22	32	81	118#
57558	MW-2	W	55,a	2.2	ND	1.5	ND	97
57559	MW-3	W	130,c,b	5.8	ND	3.2	ND	97
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

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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/26/95-10/28/95 Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	103.2	101.1	100	103	101	2.1
Benzene	0	9.2	9.2	10	92.0	92.0	0.0
Toluene	0	9	9.1	10	90.0	91.0	1.1
Ethyl Benzene	0	9.2	9.5	10	92.0	95.0	3.2
Xylenes	0	29	30	30	96.7	100.0	3.4
TPH (diesel)	0	152	156	150	101	104	2.3
TRPH (oil & grease)	0	21400	21700	23700	90	92	1.4

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

5084AEIx63

CHAIN OF CUSTODY

Epigene International
CONSULTING GEOLOGISTS
38750 Paseo Padre Parkway, Suite B-4
Fremont, California, 94536
Business: (510) 791-1986 FAX: (510) 791-3306

Laboratory: McCampbell Analytical, Inc
110 2nd Ave. South, D-7
Pacheco, CA 94553
(510) 798-1620
Contact: Ed Hamilton

Contact: John Ait | Sampler: JNA/APA
Project Name: 1200 20th Ave. | No.
Date: 10/16/95

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	10/16 PM	H_2O	2	VOAS	W/HCl	X	X				57557
+ 2. MW-2	10/16 PM	H_2O	2	VOAS	W/HCl	X	X				57558
+ 3. MW-3	10/16 PM	H_2O	2	VOAS	W/HCl	X	X				57559
4.											
5.											
6.											
7.											
8.											
9.											
10.											

Analyses Requested: TPH/Gasoline, BTEX, TPH/Diesel, 601/8010, 602/8020

ICE/T ✓
COOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATIVE ✓
APTROPRIATE
CONTAINERS ✓

VOAS | O&G | METALS | OTHER

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
John Ait	10/17/95	11:00	J. O.	10-17-95	11:00
J. O.	10-17-95	12:30	Heidi Rivera	10-17-95	12:30

Turnaround Time: Standard

Additional Comments:

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