

GeoPlexus, Inc.

Health & Safety Training • Geo/Environmental Personnel • Engineering Geology Consultants • Environmental Management Consultants

91 007 07 01 0:35

October 21, 1991

KTW & ASSOCIATES
43289 Osgood Road
Fremont, CA 94539
Attn: Mr. Kevin Krause

Subject: September 1991 Quarterly Ground Water Sampling Report for
Mitzi Stockel
3234 Castro Valley Blvd
Castro Valley, California

Gentlemen;

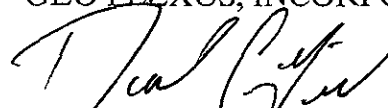
As requested and authorized, the attached Quarterly Ground Water Sampling Report has been prepared to document the monitoring well sampling efforts performed at the subject site. The report presents the sampling protocol, recorded ground water elevations, and results of the analytical testing performed on the ground water samples collected in September, 1991.

This is the final report (both monthly and quarterly) for the one-year monitoring period. It is our recommendation that the ground water monitoring be discontinued and the existing wells be abandoned.

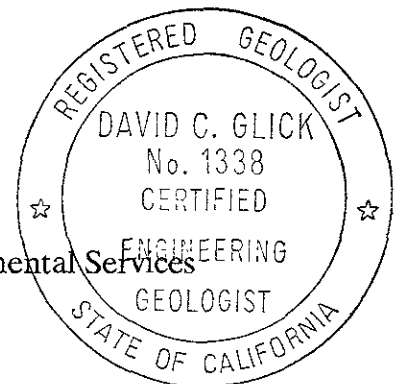
It has been a pleasure to be of service to you on this project. Questions or comments regarding the attached report should be addressed to the undersigned.

Respectfully submitted,

GEO PLEXUS, INCORPORATED



David C. Glick, CEG 1338
Director of Geological and Environmental Services



Enclosure:

(1) Quarterly Ground Water Sampling Report for Mitzi Stockel

QUARTERLY
GROUND WATER SAMPLING REPORT
for
MITZI STOCKEL
3234 CASTRO VALLEY BLVD.
CASTRO VALLEY, CALIFORNIA

PREPARED FOR
KTW & ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA

October 21, 1991

QUARTERLY
GROUND WATER SAMPLING REPORT
for
MITZI STOCKEL
3234 CASTRO VALLEY BLVD.
CASTRO VALLEY, CALIFORNIA

INTRODUCTION

The project site is located at 3234 Castro Valley Blvd. in the City of Castro Valley, in Alameda County, California. The site is the location of a former automotive repair facility (see Figure 1) and private residence. Five ground water monitoring wells exist surrounding the location of the former gasoline tank; however the traffic box and upper two feet of casing of Monitoring Well MW-2 was destroyed during site demolition and has been covered with concrete. Sampling of the monitoring wells was performed on September 25, 1991.

MONITORING WELL SAMPLING

Free product measurements were obtained for each monitoring well at the time of each sample acquisition utilizing an acrylic bailer lowered into the well to obtain a water sample. The bailer was used to collect a water sample to observe the presence of hydrocarbon odors, visible sheen, or free product. Odors, sheens, or free product were not observed on the water samples obtained from the wells.

Prior to sampling the monitoring wells, a minimum of four well volumes were purged from each well through the use of a teflon bailer. Water samples for analytical testing were obtained through the use of the teflon bailer.

It is noted that it started raining while the well purging/sampling activities were being performed and the water extracted from Monitoring Well MW-5 became discolored to an orange-brown color (similar to the color of the water ponded on the asphalt parking lot). The discoloration appeared approximately 20 minutes after the rain started and suggests a potential migratory path between the ground surface and the screened interval of Monitoring Well MW-5. This could also be the source of the low concentrations of unknown hydrocarbon products (not gasoline) which have been previously detected in the water samples obtained from Monitoring Well MW-5.

The water obtained from the monitoring wells during the purging and sampling activities was contained on-site in 55-gallon drums pending receipt of the laboratory test results.

The water samples were collected in sterilized glass vials with Teflon lined screw caps, acidified with HCL by the laboratory. The samples were sealed in the vials and properly labeled including: the date, time, sample location, project number, and indication of any preservatives added to the sample. A travel blank was obtained from the analytical testing laboratory, transported to the field with the sample vials, and was submitted along with other samples for analysis (identified as MW-A). The samples were placed on ice immediately for transport to the laboratory under chain-of-custody documentation.

GRADIENT SURVEY

The elevation of the top of the casing of the four monitoring wells at the former gasoline tank site was established during previous investigations (vertical control of 0.01 foot). Prior to purging the monitoring wells, the depth to ground water (measured to the nearest 0.01 foot) was measured with an electronic water level meter in each of the four monitoring wells. Ground water elevations recorded suggest that the ground water flow across the site is in a southwesterly direction (see Figure 1) with Monitoring Well MW-5 in a down-gradient direction from the former gasoline tank.

ANALYTICAL TESTING

The ground water samples were submitted to and tested by Anametrix Laboratories located in San Jose, California. The samples from the four gasoline tank monitoring wells were tested for Total Petroleum Hydrocarbons as gasoline by Method GCFID (5030) and Volatile Aromatics by EPA Method 602. The travel blank was submitted for analysis for Volatile Aromatics by EPA Method 602. The analytical test data, along with the Chain-of-Custody Forms are presented in Appendix A.

SUMMARY OF FINDINGS

Ground water elevations recorded during the sampling suggest that ground water is at a depth of 6-7 feet below the ground surface and flows across the site in a southwesterly direction at a gradient of 0.037 ft/ft. The southwestern direction of ground water flow places Monitoring Well MW-5 in a "down-gradient" direction from the former underground gasoline storage tank.

The analytical test results for the ground water samples obtained for this sampling event indicate non-detectable quantities of TPH as gasoline or BTXE for the samples from Monitoring Wells MW-1, MW-3, MW-4, and MW-5. The low concentrations of petroleum hydrocarbons (not gasoline) which have been intermittently detected in samples from Monitoring Well MW-5 were not detected in this round of sampling.

This is the final report (both monthly and quarterly) for the one-year monitoring period. It is our recommendation that the ground water monitoring be discontinued and the existing wells be abandoned.

It has been a pleasure to be of service to you on this project. Questions or comments regarding the attached report should be addressed to the undersigned.

LIMITATIONS

We have only observed a small portion of the pertinent subsurface and ground water conditions present at the site. The conclusions and recommendations made herein are based on the assumption that subsurface and ground water conditions do not deviate appreciably from those described in the reports and observed during the field investigation.

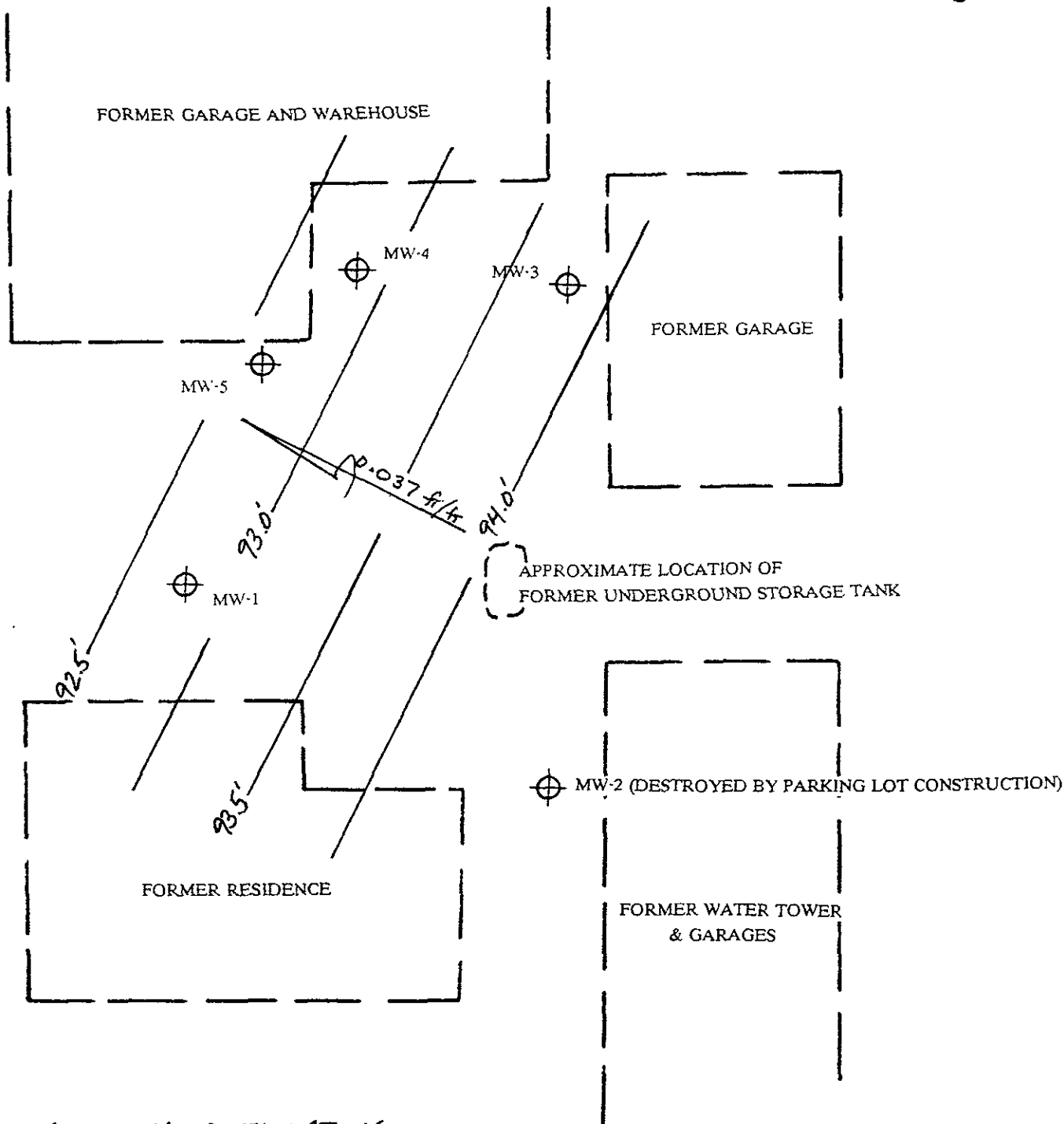
Geo Plexus, Incorporated provides consulting services in the fields of Geology and Engineering Geology performed in accordance with presently accepted professional practices. Professional judgments presented herein are based partly on information obtained from review of published documents, partly on evaluations of the technical information gathered, and partly on general experience in the fields of geology and engineering geology.

No attempt was made to verify the accuracy of the published information prepared by others used in preparation of this assessment report.

If you have questions regarding the findings, conclusions, or recommendations contained in this report, please contact us. We appreciate the opportunity to serve you.

GEO PLEXUS, INCORPORATED

DCG:dg



NOTE: GROUND WATER ELEVATIONS
 BASED ON TBM WITH
 ASSUMED ELEVATION OF 100.00'

DAVID C. GLICK ASSOCIATES		
DATE	SCALE 1"=20'	DRAWN BY
GROUND WATER GRADIENT PLAN		
STOCKEL	Figure	

Quarterly Ground Water Sampling Report
Mitzi Stockel
Castro Valley, California

October 21, 1991

APPENDIX A
CHAIN-OF-CUSTODY FORM
AND
ANALYTICAL TEST DATA

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. KEVIN KRAUSE
KRW ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA 94539

Workorder # : 9109273
Date Received : 09/27/91
Project ID : STOCKEL PROPERTY
Purchase Order: 2783-STK
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9109273- 1	MW-4	WATER	09/25/91	TPHg/BTEX
9109273- 2	MW-3	WATER	09/25/91	TPHg/BTEX
9109273- 3	MW-5	WATER	09/25/91	TPHg/BTEX
9109273- 4	MW-1	WATER	09/25/91	TPHg/BTEX
9109273- 5	MW-A	WATER	09/25/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. KEVIN KRAUSE
KTW ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA 94539

Workorder # : 9109273
Date Received : 09/27/91
Project ID : STOCKEL PROPERTY
Purchase Order: 2783-STK
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Charles Palmer 10/8/91
Department Supervisor Date

Chi Fan 10.8.91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9109273
Matrix : WATER
Date Sampled : 09/25/91

Project Number : STOCKEL PROPERT
Date Released : 10/08/91

Reporting Limit	Sample I.D.# MW-4	Sample I.D.# MW-3	Sample I.D.# MW-5	Sample I.D.# MW-1	Sample I.D.# MW-A
COMPOUNDS (ug/L)	-01	-02	-03	-04	-05
Benzene	0.5	ND	ND	ND	ND
Toluene	0.5	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND	ND
TPH as Gasoline	50	ND	ND	ND	ND
% Surrogate Recovery	96%	106%	70%	110%	108%
Instrument I.D.	HP4	HP4	HP4	HP4	HP4
Date Analyzed	10/01/91	10/01/91	10/01/91	10/01/91	10/02/91
RLMF	1	1	1	1	1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
- RLMF - Reporting Limit Multiplication Factor.
Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Laura Shor 10/8/91
Analyst Date

Cheryl Balmer 10/8/91
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9109273
Matrix : WATER
Date Sampled : 09/25/91

Project Number : STOCKEL PROPERT
Date Released : 10/08/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# 04B1001A BLANK	Sample I.D.# 04B1002A BLANK
Benzene	0.5	ND	ND
Toluene	0.5	ND	ND
Ethylbenzene	0.5	ND	ND
Total Xylenes	0.5	ND	ND
TPH as Gasoline	50	ND	ND
% Surrogate Recovery		105%	113%
Instrument I.D.		HP4	HP4
Date Analyzed		10/01/91	10/02/91
RLMF		1	1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
- BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
- RLMF - Reporting Limit Multiplication Factor.
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All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

C. Far 10.8.91
Analyst Date

Cheryl Balmer 10/8/91
Supervisor Date

STOCKEL MONTHLY GROUNDWATER MONITORING WELL TABLE
3234 Castro Valley Boulevard, Castro Valley California

<u>Month No.</u>	<u>Date</u>	<u>Sampling No.</u>	<u>TPH-G</u>	<u>B</u>	<u>T</u>	<u>X</u>	<u>E</u>
1	9/06/90	MW-1	N/D	N/D	N/D	N/D	N/D
1	9/06/90	MW-2	N/D	N/D	N/D	N/D	N/D
1	9/06/90	MW-3	N/D	N/D	N/D	N/D	N/D
1	9/06/90	MW-4	N/D	N/D	N/D	N/D	N/D
1	9/06/90	MW-5	N/D	N/D	N/D	N/D	N/D
2	10/24/90	MW-1	N/D	N/D	N/D	N/D	N/D
2	10/24/90	MW-3	N/D	N/D	N/D	N/D	N/D
2	10/24/90	MW-4	N/D	N/D	N/D	N/D	N/D
2	10/24/90	MW-5	50	N/D	N/D	N/D	N/D
3	11/27/90	MW-1	N/D	N/D	N/D	N/D	N/D
3	11/27/90	MW-3	N/D	N/D	N/D	N/D	N/D
3	11/27/90	MW-4	N/D	N/D	N/D	N/D	N/D
3	11/27/90	MW-5	N/D	N/D	N/D	N/D	N/D
4	12/13/90	MW-1	N/D	N/D	N/D	N/D	N/D
4	12/13/90	MW-3	N/D	N/D	N/D	N/D	N/D
4	12/13/90	MW-4	N/D	N/D	N/D	N/D	N/D
4	12/13/90	MW-5	N/D	N/D	N/D	N/D	N/D
5	1/22/91	MW-1	N/D	N/D	N/D	N/D	N/D
5	1/22/91	MW-3	N/D	N/D	N/D	N/D	N/D
5	1/22/91	MW-4	N/D	N/D	N/D	1.6	N/D
5	1/22/91	MW-5	95	N/D	N/D	N/D	N/D
7	3/13/91	MW-1	N/D	N/D	N/D	N/D	N/D
7	3/13/91	MW-3	N/D	N/D	N/D	N/D	N/D
7	3/13/91	MW-4	N/D	N/D	N/D	N/D	N/D
7	3/13/91	MW-5	87	0.6	N/D	N/D	N/D
8	4/30/91	MW-1	N/D	N/D	N/D	N/D	N/D
8	4/30/91	MW-4	N/D	N/D	N/D	N/D	N/D
8	4/30/91	MW-5	120 J	0.6	N/D	N/D	N/D

STOCKEL MONTHLY GROUNDWATER MONITORING WELL TABLE
3234 Castro Valley Boulevard, Castro Valley California

<u>Month No.</u>	<u>Date</u>	<u>Sampling No.</u>	<u>TPH-G</u>	<u>B</u>	<u>T</u>	<u>X</u>	<u>E</u>
9	5/21/91	MW-1	N/D	N/D	N/D	N/D	N/D
9	5/21/91	MW-3	N/D	N/D	N/D	N/D	N/D
9	5/21/91	MW-4	N/D	N/D	N/D	N/D	N/D
9	5/21/91	MW-5	110	1.2	N/D	N/D	N/D
10	6/25/91	MW-1	N/D	N/D	N/D	N/D	N/D
10	6/25/91	MW-3	N/D	N/D	N/D	N/D	N/D
10	6/25/91	MW-4	N/D	N/D	N/D	N/D	N/D
10	6/25/91	MW-5	74	N/D	N/D	N/D	N/D
10	6/25/91	MW-A	N/D	N/D	N/D	N/D	N/D
11	7/30/91	MW-1	N/D	N/D	N/D	N/D	N/D
11	7/30/91	MW-3	N/D	N/D	N/D	N/D	N/D
11	7/30/91	MW-4	N/D	N/D	N/D	N/D	N/D
11	7/30/91	MW-5	86	N/D	N/D	N/D	N/D
11	7/30/91	MW-A	N/D	N/D	N/D	N/D	N/D
12	8/29/91	MW-1	N/D	N/D	N/D	N/D	N/D
12	8/29/91	MW-3	N/D	N/D	N/D	N/D	N/D
12	8/29/91	MW-4	N/D	N/D	N/D	N/D	N/D
12	8/29/91	MW-5	54	N/D	N/D	N/D	N/D
12	8/29/91	MW-A	N/D	N/D	N/D	N/D	N/D
13	9/27/91	MW-1	N/D	N/D	N/D	N/D	N/D
13	9/27/91	MW-3	N/D	N/D	N/D	N/D	N/D
13	9/27/91	MW-4	N/D	N/D	N/D	N/D	N/D
13	9/27/91	MW-5	N/D	N/D	N/D	N/D	N/D
13	9/27/91	MW-A	N/D	N/D	N/D	N/D	N/D

ABBREVIATIONS:

TPH-G	Total Petroleum Hydrocarbons as Gasoline	B	Benzene
T	Toluene	X	Xylenes
E	Ethylbenzene	ND	Non-detected

Note: All water samples are measured in micrograms per liter (ug/l) or parts per billion (ppb).

DAVID C. GLICK ASSOCIATES

542 BENVENUE AVE, LOS ALTOS, CA 94024 (415) 948-6740

Engineering Geology Consultants
Environmental Management Consultants
Technical Information Service

September 30, 1991

KTW & ASSOCIATES
43289 Osgood Road
Fremont, CA 94539
Attn: Mr. Kevin Krause

Subject: Monthly Ground Water Sampling Report for
Mitzi Stockel
3234 Castro Valley Blvd
Castro Valley, California

Gentlemen;

As requested and authorized, the attached Monthly Ground Water Sampling Report has been prepared to document the Monitoring Well sampling efforts performed at the subject site. The report presents the sampling protocol, recorded ground water elevations, and results of the analytical testing performed on the ground water samples collected in August, 1991.

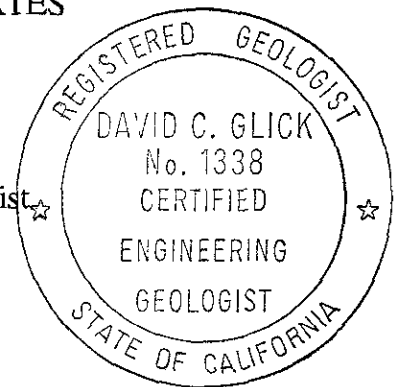
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Respectfully submitted,

DAVID C. GLICK ASSOCIATES



David C. Glick, CEG 1338
Principal Engineering Geologist



Enclosure:

(1) Monthly Ground Water Sampling Report for Mitzi Stockel

MONTHLY
GROUND WATER SAMPLING REPORT

for

MITZI STOCKEL
3234 CASTRO VALLEY BLVD.
CASTRO VALLEY, CALIFORNIA

PREPARED FOR
KRW & ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA

September 30, 1991

MONTHLY
GROUND WATER SAMPLING REPORT
for
MITZI STOCKEL
3234 CASTRO VALLEY BLVD.
CASTRO VALLEY, CALIFORNIA

INTRODUCTION

The project site is located at 3234 Castro Valley Blvd. in the City of Castro Valley, in Alameda County, California. The site is the location of a former automotive repair facility (see Figure 1) and private residence. Five ground water monitoring wells exist surrounding the location of the former gasoline tank; however the traffic box and upper two feet of casing of Monitoring Well MW-2 was destroyed during site demolition and has been covered with concrete. In accordance with the agreement between Alameda County and KTW & Associates, the monthly monitoring includes monitoring wells MW-1, MW-4, and MW-5. As such, monitoring well MW-3 was not sampled for the monthly data collection. Sampling of the monitoring wells was performed on August 29, 1991.

MONITORING WELL SAMPLING

Free product measurements were obtained for each monitoring well at the time of each sample acquisition utilizing an acrylic bailer lowered into the well to obtain a water sample. The bailer was used to collect a water sample to observe the presence of hydrocarbon odors, visible sheen, or free product. Odors, sheens, or free product were not observed on the water samples obtained from the wells.

Prior to sampling the monitoring wells, a minimum of four well volumes were purged from each well through the use of a teflon bailer. Water samples for analytical testing were obtained through the use of the teflon bailer.

The water obtained from the monitoring wells during the purging and sampling activities was contained on-site in 55-gallon drums pending receipt of the laboratory test results.

The water samples were collected in sterilized glass vials with Teflon lined screw caps. The samples were immediately sealed in the vials and properly labeled including: the date, time, sample location, project number, and indication of any preservatives added to the sample. A travel blank was obtained from the analytical testing laboratory, transported to the field with the sample vials, and was submitted along with other samples for analysis (identified as MW-A). The samples were placed on ice immediately for transport to the laboratory under chain-of-custody documentation.

GRADIENT SURVEY

The elevation of the top of the casing of the four monitoring wells at the former gasoline tank site was established during previous investigations (vertical control of 0.01 foot). Prior to purging the monitoring wells, the depth to ground water (measured to the nearest 0.01 foot) was measured with an electronic water level meter in each of the four monitoring wells. Ground water elevations recorded suggest that the ground water flow across the site is in a southwesterly direction (see Figure 1) with Monitoring Well MW-5 in a down-gradient direction from the former gasoline tank.

ANALYTICAL TESTING

The ground water samples were submitted to and tested by Anametrix Laboratories located in San Jose, California. The samples from the four gasoline tank monitoring wells were tested for Total Petroleum Hydrocarbons as gasoline by Method GCFID (5030) and Volatile Aromatics by EPA Method 602. The travel blank was submitted for analysis for Volatile Aromatics by EPA Method 602. The analytical test data, along with the Chain-of-Custody Forms are presented in Appendix A.

SUMMARY OF FINDINGS

Ground water elevations recorded during the sampling suggest that ground water is at a depth of 6-7 feet below the ground surface and flows across the site in a southwesterly direction at a gradient of 0.02 ft/ft. The southwestern direction of ground water flow places Monitoring Well MW-5 in a "down-gradient" direction from the former underground gasoline storage tank.

The analytical test results for the ground water samples obtained for this sampling event indicate non-detectable quantities of TPH as gasoline or BTXE for the samples from Monitoring Wells MW-1 and MW-4. The sample obtained from Monitoring Well MW-5 (down-gradient well) had detectable quantities of Total Petroleum Hydrocarbons as gasoline (54 parts per billion). However, the information presented from Anametrix Laboratory (see page 2 of test results) indicates that the "concentration reported as gasoline for sample MW-5 is primarily due to the presence of discrete hydrocarbon peaks not indicative of gasoline". The source or nature of these constituents has not been investigated. The analytical test did not detect BTXE in the samples from Monitoring Well MW-5.

DAVID C. GLICK ASSOCIATES

542 BENVENUE AVE., LOS ALTOS, CA 94024 (415) 948-6740

LIMITATIONS

We have only observed a small portion of the pertinent subsurface and ground water conditions present at the site. The conclusions and recommendations made herein are based on the assumption that subsurface and ground water conditions do not deviate appreciably from those described in the reports and observed during the field investigation.

David C. Glick Associates provides consulting services in the fields of Geology and Engineering Geology performed in accordance with presently accepted professional practices. Professional judgments presented herein are based partly on information obtained from review of published documents, partly on evaluations of the technical information gathered, and partly on general experience in the fields of geology and engineering geology.

No attempt was made to verify the accuracy of the published information prepared by others used in preparation of this assessment report.

If you have questions regarding the findings, conclusions, or recommendations contained in this report, please contact us. We appreciate the opportunity to serve you.

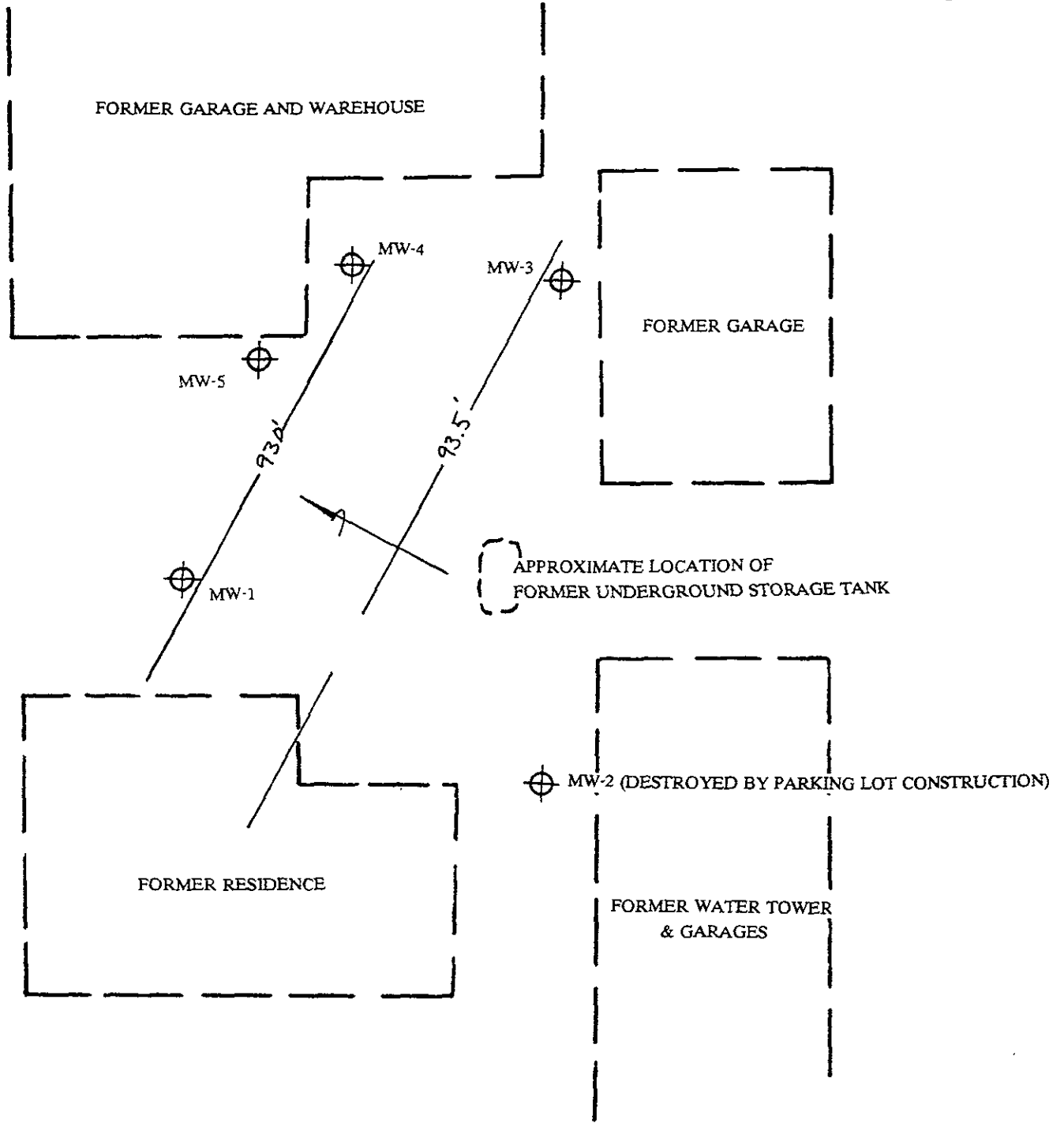
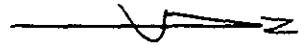
The following Figures and Appendix are attached and complete this report:

- Figure 1 Ground Water Gradient Plan
- Appendix A Chain-of-Custody Form and Analytical Test Data

Respectfully submitted,

DAVID C. GLICK ASSOCIATES

DCG:dg



DAVID C. GLICK ASSOCIATES		
DATE 9-30-91	SCALE 1"=20'	DRAWN BY
GROUND WATER GRADIENT PLAN		
STOCKEL	Figure 1	

Monthly Ground Water Sampling Report
Mitzi Stockel
Castro Valley, California

September 30, 1991

APPENDIX A
CHAIN-OF-CUSTODY FORM
AND
ANALYTICAL TEST DATA

CLIENT CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER		PROJECT NAME				Number of Cntrns	Type of Containers	Type of Analysis								Condition of Samples	Initial
		KTW & ASSOCIATES STOCKEL Property								Tphg / BTEX							
Send Report Attention of:				Report Due	Verbal Due												
KEVIN KRAUSE				1 1	1 1												
Sample Number	Date	Time	Comp	Grab	Station Location												
MW1, WSIA, B, C, 29-91	8-29-91	1135			MON. WELL 1	3CA	40 mil VOA							samples are			
MW4, WSIA, B, C "	"	1327			MON WELL 4									voids,			
MW5, WSIA, B, C "	"	1233			MON. WELL 5									#3 has 3mm			
MWA, WSIA, B, C		1250			MON. WELL A									bubbles in			
														one void.			
														The other			
														voids don't have			
														bubbles.			
														They are all			
														Preserved.			
														FB			
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	Remarks: STAND AND TURN AROUND											
<i>Richard Krause</i>		8-29-91 1536	<i>Faisal Basha</i>		8-29-91 1536												
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time												
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	COMPANY: KTW & ASSOCIATES ADDRESS: 65900 ROAD, FREMONT, CA PHONE: (415) 623-0480 FAX:											

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. KEVIN KRAUSE
KTW ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA 94539

Workorder # : 9108317
Date Received : 08/29/91
Project ID : STOCKEL PROPERTY
Purchase Order: A2731-STK
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9108317- 1	MW1	WATER	08/29/91	TPHg/BTEX
9108317- 2	MW4	WATER	08/29/91	TPHg/BTEX
9108317- 3	MW5	WATER	08/29/91	TPHg/BTEX
9108317- 4	MWA	WATER	08/29/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. KEVIN KRAUSE
KTW ASSOCIATES
43289 OSGOOD ROAD
FREMONT, CA 94539

Workorder # : 9108317
Date Received : 08/29/91
Project ID : STOCKEL PROPERTY
Purchase Order: A2731-STK
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentration reported as gasoline for sample MW5 is primarily due to the presence of discrete hydrocarbon peaks not indicative of gasoline.
- The surrogate recovery for the gasoline matrix spike duplicate of sample MW1 is outside of Anamatrix control limits due to the presence of interfering peaks.

Cheryl Baemen 9/9/91
Department Supervisor Date

C. Fan 9.9.91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9108317
Matrix : WATER
Date Sampled : 08/29/91

Project Number : STOCKEL PROPERT
Date Released : 09/09/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MW1	Sample I.D.# MW4	Sample I.D.# MW5	Sample I.D.# MWA	Sample I.D.# 12B0905A
Benzene	0.5	ND	ND	ND	ND	ND
Toluene	0.5	ND	ND	ND	ND	ND
Ethylbenzene	0.5	ND	ND	ND	ND	ND
Total Xylenes	0.5	ND	ND	ND	ND	ND
TPH as Gasoline	50	ND	ND	54	ND	ND
% Surrogate Recovery		107%	97%	107%	121%	85%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		09/05/91	09/05/91	09/05/91	09/05/91	09/05/91
RLMF		1	1	1	1	1

ND - Not detected at or above the practical quantitation limit for the method.
 TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
 RLMF - Reporting Limit Multiplication Factor.
 Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

C. Fern 9.9.91
Analyst Date

Cheryl Bulmer 9/9/91
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
 EPA METHOD 5030 WITH GC/FID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : STOCKEL PROPERTY MW1	Anamatrix I.D. : 9108317-01
Matrix : WATER	Analyst : CF.
Date Sampled : 08/29/91	Supervisor : CB
Date Analyzed : 09/05/91	Date Released : 09/09/91

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	%REC MS	MSD (ug/L)	%REC MSD	RPD	%REC LIMITS
GASOLINE	1000	1100	110%	1100	110%	0%	48-145
P-BFB			115%		153%		53-147

* Limits established by Anamatrix, Inc.