GOOD CHEVROLET
1630 Park Street • Phone 510/522-9221
ALAMEDA, CA 94501

February 11, 1993

Ms. Juliet Shin
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

RE: 1630 Park Street, Alameda, CA

Dear Ms. Shin:

Enclosed are the quarterly monitoring reports for January 1993, which were prepared by David Glick of GeoPlexus.

Mr. Glick has been instructed to prepare a work plan to address the containment of the ground water contaminant plume at this site. As soon as the plan has been prepared, we will forward a copy to you for review.

Sincerely,

JoAnn Stewart

JKS:js

Enclosure

cc: Greg Zentner - Regional Water Quality Board

GeoPlexus, Inc.

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

January 29, 1993
Project C92020

Good Chevrolet
1630 Park Avenue
Alameda, California 94501
Attn: Ms. JoAnn Stewart, General Manager

Subject: January, 1993 Quarterly Ground Water Report for Good Chevrolet, 1630 Park Avenue, Alameda, CA.

Dear Ms. Stewart:

As requested and authorized, the attached January, 1993 Quarterly Ground Water Monitoring Report has been prepared to document the monitoring well sampling efforts performed at the subject site. The report presents the recorded monthly ground water elevations for November, 1992 through January, 1993, along with the ground water sampling protocols and the results of the analytical testing performed on ground water samples collected on January 11, 1993.

In summary, the water samples obtained from Monitoring Wells MW-1, MW-2, and MW-3 contained detectable concentrations of Total Petroleum Hydrocarbons as gasoline ranging from 3,000-11,000 ppb and Volatile Aromatic Compounds (Benzene, Toluene, Ethyl Benzene, and Xylenes). The analytical test data (summarized on Table 1) indicates that there is a progressive, although erratic, reduction in the concentrations in the gasoline constituents detected in Monitoring Wells MW-1 and MW-3 with a progressive increase in the gasoline constituents detected in Monitoring Well MW-2.

Based on the continued increase in constituents detected in Monitoring Well MW-2, combined with a reduction in constituents in Monitoring Wells MW-1 and MW-3, it is recommended that additional site characterization investigations be performed to characterize the extent of ground water contamination plume (as requested by Alameda County Department of Environmental Health personnel).

1900 Wyatt Drive, Suite 1, Santa Clara, California 95054 Phone 408/987-0210 Fax 408/988-0815

It is further recommended that a pump test be performed to assess the feasibility for a ground water extraction system, either for migration control and/or ground water remediation. The pump test could be performed by installing a temporary extraction pump in Monitoring Well MW-2 and monitoring the ground water draw-down effects at Monitoring Wells MW-1 and MW-3 as a result of ground water extraction. The results of the pump test could be used to perform a risk assessment for ground water impact and for design of a ground water extraction system (if required).

It has been a pleasure to be of service to you on this project. The next sampling event us scheduled to be performed in April, 1993.

Questions or comments regarding the attached report should be addressed to the undersigned.

Copies of this report should be forwarded to:

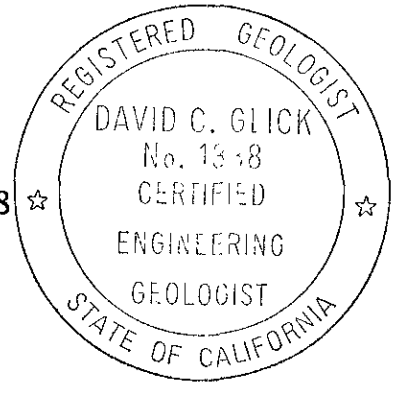
Ms. Juliet Shin
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Mr. Greg Zentner
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Room 500
Oakland, CA 94612

Respectfully submitted,

Geo Plexus, Incorporated

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



Enclosure: January, 1993 Quarterly Ground Water Monitoring Report

GeoPlexus, Inc.

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

JANUARY, 1993 QUARTERLY

GROUND WATER MONITORING REPORT

for

GOOD CHEVROLET

1630 PARK AVENUE

ALAMEDA, CALIFORNIA

January 29, 1993

Project C92020

1900 Wyatt Drive, Suite 1, Santa Clara, California 95054 Phone 408/987-0210 Fax 408/988-0815

JANUARY, 1993 QUARTERLY
GROUND WATER MONITORING REPORT
for
GOOD CHEVROLET
1630 PARK AVENUE
ALAMEDA, CALIFORNIA

INTRODUCTION

The project site is located at 1630 Park Avenue in the City of Alameda, in Alameda County, California as indicated on Figure 1. The site is the location of an automobile dealership and service center.

A 300 gallon waste oil storage tank and a 500 gallon underground gasoline storage tank were reportedly removed from the property by Petroleum Engineering, Inc. in October, 1986. A subsurface investigation including installation of three ground water monitoring wells (see Figure 2) was performed by Groundwater Technology, Inc. in January, 1987 (Groundwater Technology, Inc. Report Dated April 29, 1987).

The ground water monitoring wells were reportedly sampled by Groundwater Technology, Inc. in January, 1989 (Groundwater Technology, Inc. letter report dated March 29, 1989) and again in July, 1989 (Groundwater Technology, Inc. letter report dated August 22, 1989). The wells were also reportedly sampled by Environmental Science Engineering, Inc. in April, 1991 (Environmental Science Engineering, Inc. report dated May 8, 1991).

Quarterly ground water monitoring was initiated by Geo Plexus in July, 1992. This report presents the ground water elevations recorded monthly in November and December, 1992 and January, 1993 along with the ground water sampling protocol and the results of the analytical testing performed on ground water samples collected on January 11, 1993.

GRADIENT SURVEY

The elevation of the top of the casing of the monitoring wells at the site were established during previous investigations (Environmental Science & Engineering, Inc.) with reported vertical control of 0.01 foot.

Ground water elevations were measured in each well to the nearest 0.01 foot with an electronic water level meter on a monthly basis to monitor the variations in the direction and gradient of ground water flow beneath the site. Prior to purging the monitoring wells for sampling, the depth to ground water in each well was measured to the nearest 0.01 foot with an electronic water level meter.

Ground water elevations recorded suggest that the ground water flow has varied from the north in November and December, 1992 to the northwest in January, 1993 as indicated on Figures 2, 3, and 4. The flow gradient has also varied from 0.011 to 0.016 ft/ft. The direction of ground water flow establishes Monitoring Wells MW-2 and MW-3 to be located in the general "down-gradient" direction from the former tanks (dependent on direction of flow).

MONITORING WELL SAMPLING

Free product measurements were obtained for each monitoring well at the time of each sample acquisition utilizing a teflon 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. Free product or visible sheens were not observed in the initial bailer water samples or following purging of the wells; however, the water samples obtained from the three wells exhibited gasoline odors.

Prior to sampling the monitoring wells, four to six well volumes were purged from each well through the use of a teflon bailer. Electrical conductivity, temperature, and pH of the ground water were recorded throughout the purging process. The purging activities continued until the electrical conductivity, temperature, and pH of the discharged water stabilized and the water appeared free of suspended solids.

Water samples for analytical testing were obtained through the use of a teflon bailer and 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 (HCl) added to the sample. A travel blank (identified as MW-A) was obtained from the analytical testing laboratory, transported to the field with the sample vials, and was submitted along with other samples for analysis. The samples were placed on ice immediately for transport to the laboratory under chain-of-custody documentation.

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.

ANALYTICAL TESTING

The ground water samples were submitted to and tested by Anametrix Laboratories located in San Jose, California, a State of California certified laboratory. Analytical testing was scheduled and performed in accordance with the State of California, Regional Water Quality Control Board and Alameda County Department of Environmental Health Guidelines

The samples were tested for Total Petroleum Hydrocarbons as gasoline by Method GCFID 5030/8015 and Volatile Aromatics by EPA Method 8020/5030. The travel blank was submitted for analysis for Volatile Aromatics by EPA Method 8020. The analytical test data, along with the Chain-of-Custody Form are presented in Appendix A.

SUMMARY OF FINDINGS

Ground water elevations recorded during the sampling suggest that ground water is at a depth of 7-8.5 feet below the ground surface (an increase in water level from previous months) and the flow direction has been variable from north to northwest at gradients of 0.011 - 0.016 ft/ft. The flow directions establish Monitoring Wells MW-2 and MW-3 in the "down-gradient" direction from the location of the former underground storage tanks (dependent of flow direction).

The analytical test results for the ground water samples obtained for this sampling event detected reportable quantities of Total Petroleum Hydrocarbons as gasoline and Volatile Aromatics (BTXE) for the samples from Monitoring Wells MW-1, MW-2, and MW-3. Total Petroleum Hydrocarbons as gasoline concentrations ranged from 1,200 to 17,000 parts per billion (ppb). Benzene concentrations ranged from 410 to 940 ppb.

Table 1 summarizes the current analytical test results along with the results of the previous analytical testing. The analytical test data (see Table 1) indicates that there is a progressive, although erratic, reduction in the concentrations in the gasoline constituents detected in Monitoring Wells MW-1 and MW-3 with a progressive increase in the gasoline constituents detected in Monitoring Well MW-2.

TABLE 1

SUMMARY OF GROUND WATER ANALYTICAL TEST DATA

Date Sampled	Total Petroleum Hydrocarbons	Benzene	Toluene	Ethyl-Benzene	Total Xylenes
Monitoring Well MW-1					
1-21-87 (1)	21,020	1,148	8,627	1,792	6,012
1-11-89 (1)	1,400	74	10	13	5
7-12-89 (1)	1,200	470	49	45	33
4-09-91 (2)	850	260	10	15	12
7-14-92 (3)	13,000	2,300	1,200	1,200	1,200
10-7-92 (3)	3,600	1,600	80	120	120
1-11-93 (3)	1,200	410	16	23	19
Monitoring Well MW-2					
1-21-87 (1)	5,018	386	1,981	285	1,432
1-11-89 (1)	10,000	3,000	410	240	190
7-12-89 (1)	7,600	2,700	540	250	320
4-09-91 (2)	4,900	910	210	130	200
7-14-92 (3)	13,000	4,400	1,500	610	1,100
10-7-92 (3)	11,000	5,200	1,500	500	1,200
1-11-93 (3)	17,000	940	1,100	480	930
Monitoring Well MW-3					
1-21-87 (1)	10,287	1,428	3,281	610	2,761
1-11-89 (1)	5,300	1,800	340	150	160
7-12-89 (1)	7,800	3,100	900	300	480
4-09-91 (2)	9,400	1,400	730	200	510
7-14-92 (3)	17,000	3,500	390	390	260
10-7-92 (3)	9,200	4,300	470	390	610
1-11-93 (3)	2,000	740	29	58	28

Note: (1) Concentrations reported by Groundwater Technology, Inc.
(2) Concentrations reported by Environmental Science & Engineering, Inc.
(3) Samples obtained and reported by Geo Plexus, Inc.

RECOMMENDATIONS

It is recommended that the existing ground water monitoring wells located at the project site continue to be monitored monthly (water level) and sampled quarterly in accordance with the established/approved quarterly monitoring program. The next sampling event is scheduled for April, 1993.

Based on the continued increase in constituents detected in Monitoring Well MW-2, combined with a reduction in constituents in Monitoring Wells MW-1 and MW-3, it is recommended that additional site characterization investigations be performed to characterize the extent of ground water contamination plume (as requested by Alameda County Department of Environmental Health personnel).

It is further recommended that a pump test be performed to assess the feasibility for a ground water extraction system, either for migration control and/or ground water remediation. The pump test could be performed by installing a temporary extraction pump in Monitoring Well MW-2 and monitoring the ground water draw-down effects at Monitoring Wells MW-1 and MW-3 as a result of ground water extraction. The results of the pump test could be used to perform a risk assessment for ground water impact and for design of a ground water extraction system (if required).

LIMITATIONS

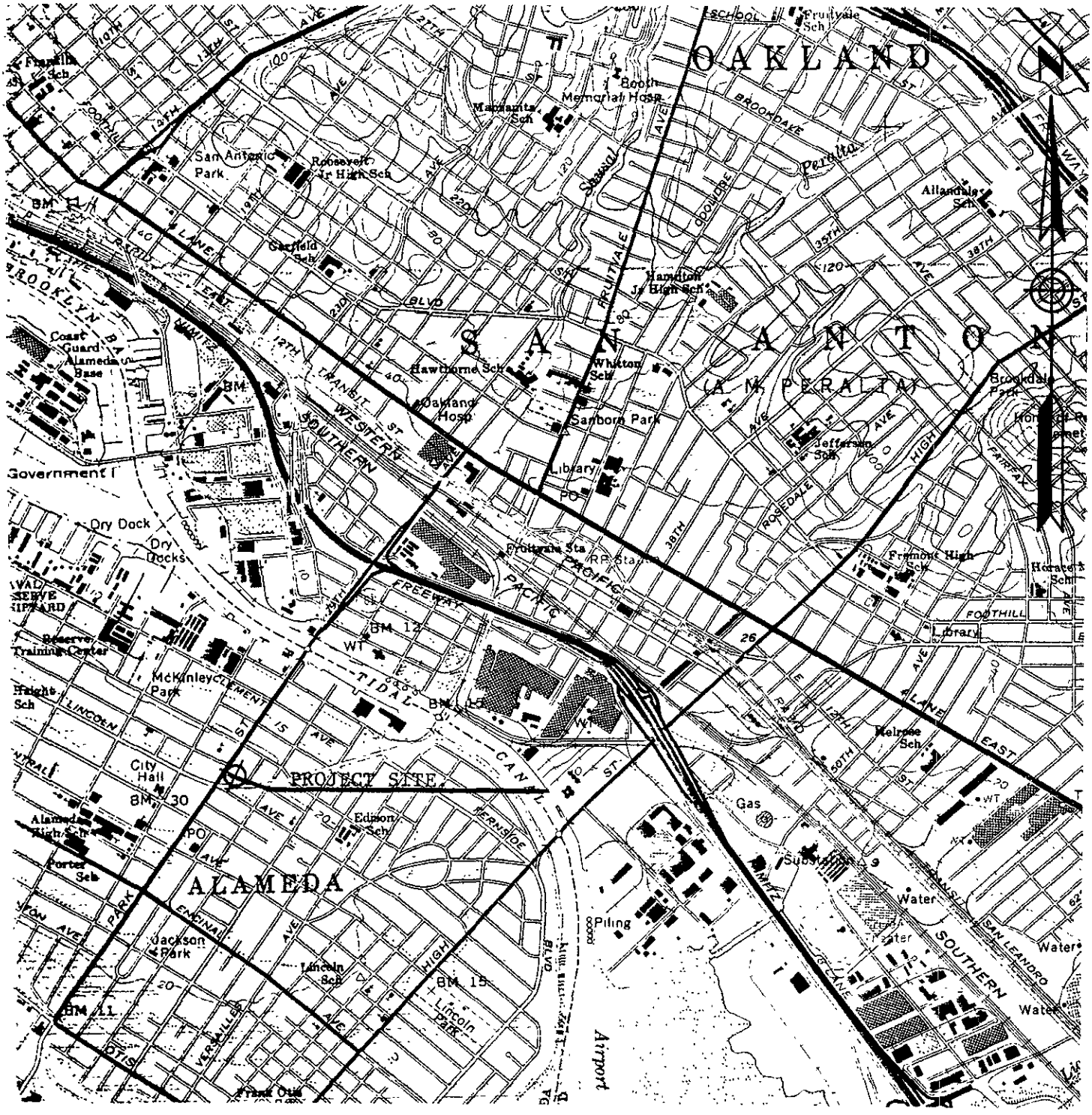
We have only observed a small portion of the pertinent subsurface and ground water conditions present at the site. The conclusions and recommendations made herein are based on the assumption that subsurface and ground water conditions do not deviate appreciably from those described in the reports and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

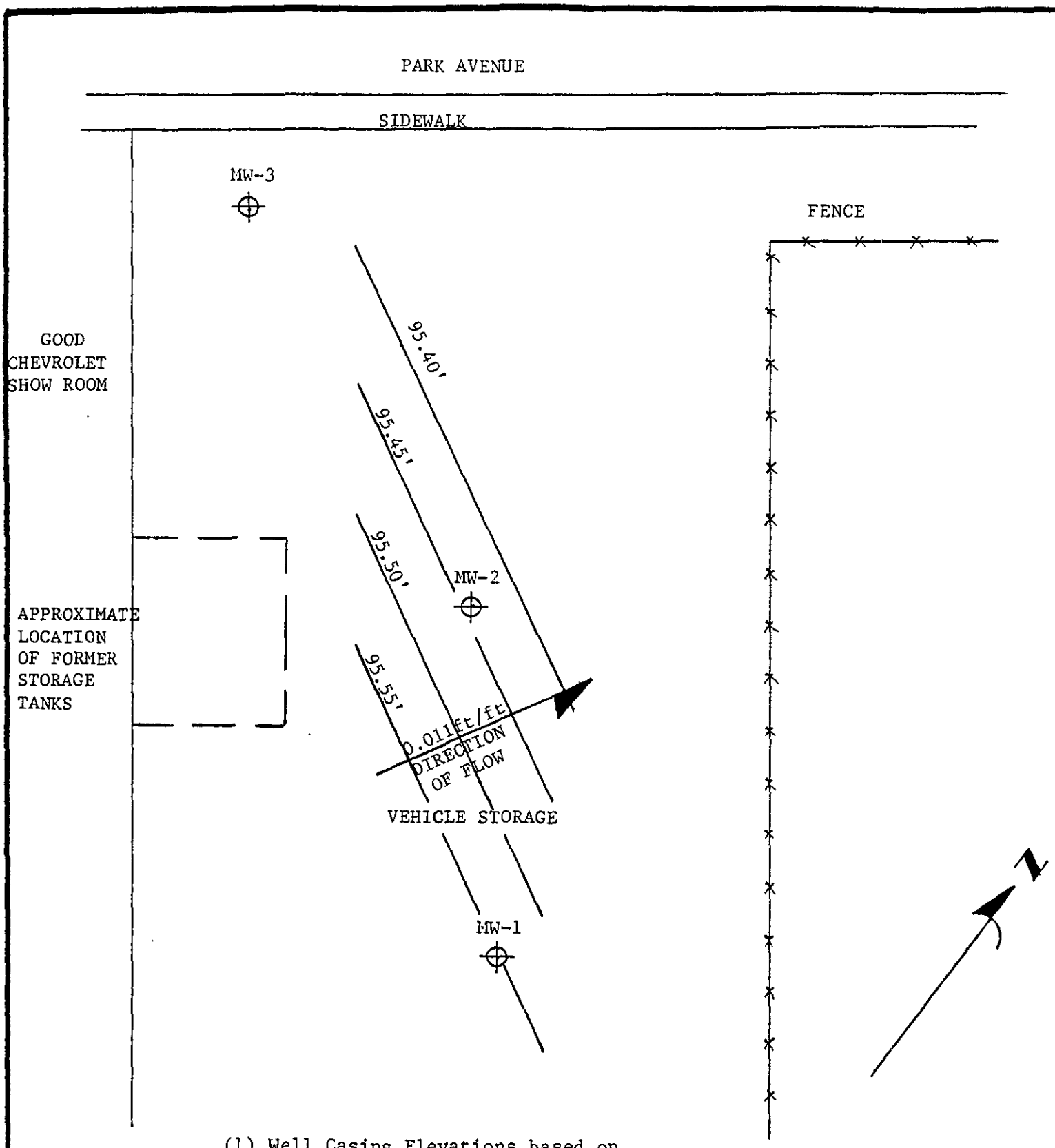
If you have questions regarding the findings, conclusions, or recommendations contained in this report, please contact us. We appreciate the opportunity to serve you.

Geo Plexus, Incorporated



GOOD CHEVROLET		
DATE 10-9-92	SCALE 1"=2000'	DRAWN BY deg
LOCATION MAP		
	Figure 1	

GeoPlexus, Inc.

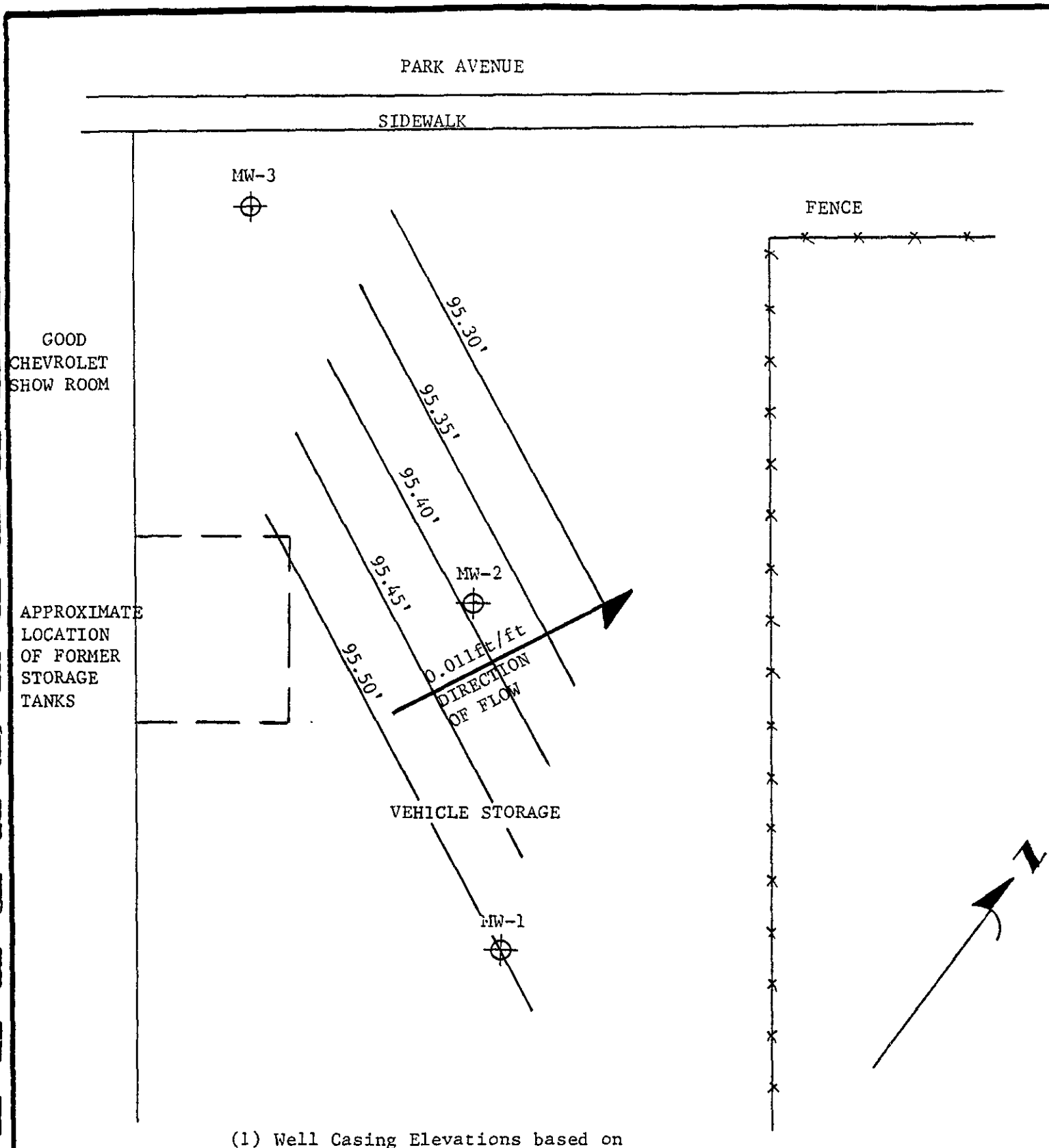


(1) Well Casing Elevations based on Environmental Science & Engineering, Inc. Report dated 5/8/91 (referenced to temporary bench mark)

	Casing Elev.	Depth to water.	Water Elev.
MW-1	104.76'	-9.21'	95.55'
MW-2	104.86'	-9.42'	95.44'
MW-3	104.52'	-9.05'	95.47'

GeoPlexus, Inc.

GOOD CHEVROLET		
DATE 11/17/92	SCALE 1"= 10'	DRAWN BY twf
GRADIENT PLAN		
	Figure 2	

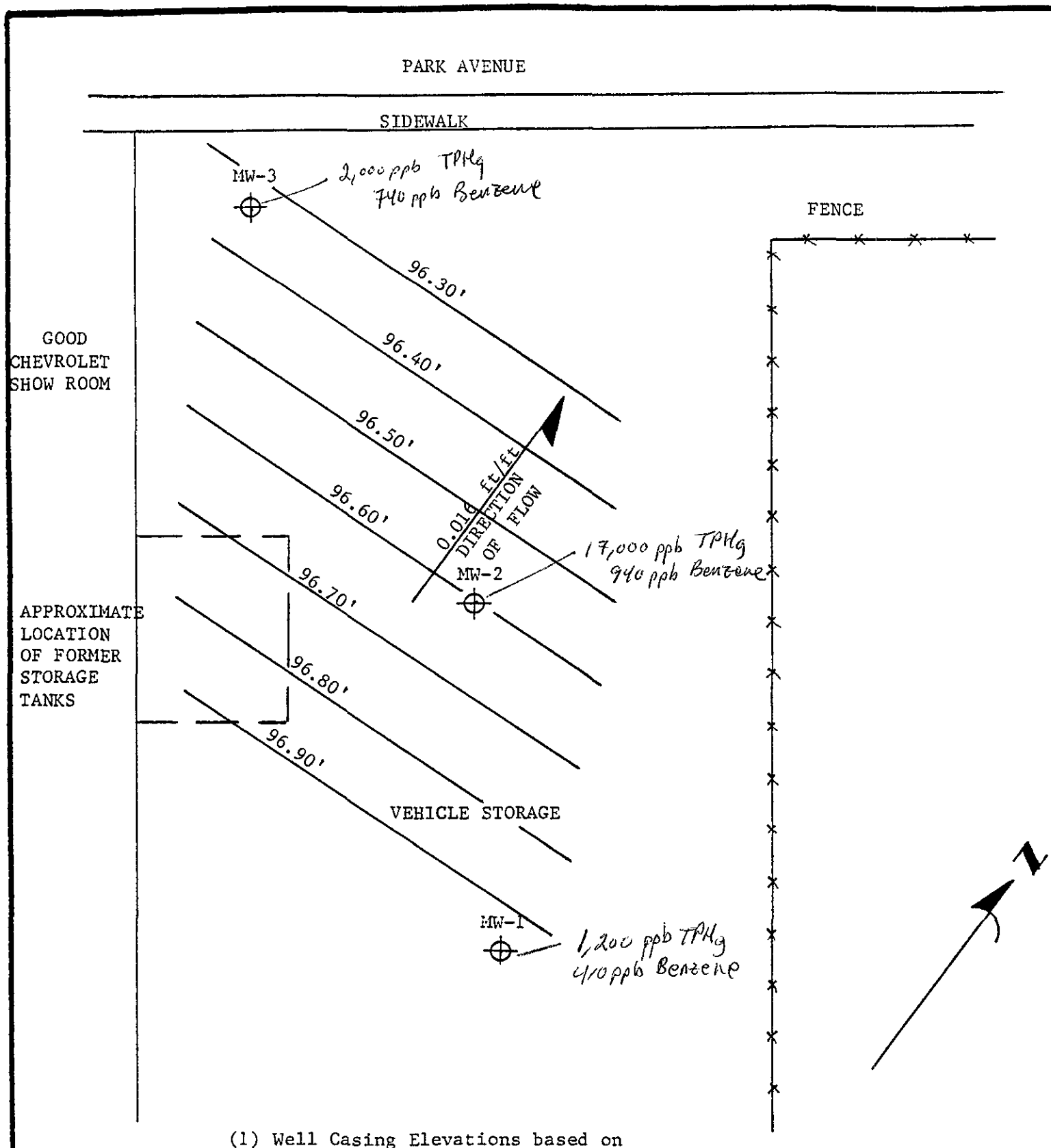


(1) Well Casing Elevations based on Environmental Science & Engineering, Inc. Report dated 5/8/91 (referenced to temporary bench mark)

	Casing Elev.	Depth to water.	Water Elev.
MW-1	104.76'	-9.26'	95.50'
MW-2	104.86'	-9.47'	95.39'
MW-3	104.52'	-9.12'	95.40'

GeoPlexus, Inc.

GOOD CHEVROLET		
DATE 12/15/92	SCALE 1"= 10'	DRAWN BY twf
GRADIENT PLAN		
	Figure 3	



(1) Well Casing Elevations based on Environmental Science & Engineering, Inc. Report dated 5/8/91 (referenced to temporary bench mark)

	Casing Elev.	Depth to water.	Water Elev.
MW-1	104.76'	-7.81'	96.95'
MW-2	104.86'	-8.25'	96.61'
MW-3	104.52'	-8.18'	96.34'

GeoPlexus, Inc.

GOOD CHEVROLET

DATE	SCALE	DRAWN BY
1/11/93	1"= 10'	twf

GRADIENT PLAN

Figure 4

APPENDIX A

CHAIN-OF-CUSTODY FORM
AND
ANALYTICAL TEST DATA

Geo Plexus, Inc. — CHAIN-OF-CUSTODY (1a)

[redacted] Wyatt Drive, Ste [redacted] Santa Clara [redacted] Phone: (408) 987-0210 Fax: (408) 988-0815

PROJECT NUMBER: C92020 | PROJECT NAME: Good Chevrolet

Send Report Attention of: David Glick | Report Due: / / | Verbal Due: / /

Type of Analysis: Luft STANDARDS

	Sample Number	Date	Time	Comp	Grab	Station Location	Number of Cntnrs	Type of Containers	TPHG	TPHD	BTEX	Oil&Grease						Condition of Samples	Initial
(1)	MW-A WS-1-A,B	1/11/93			/	mon well A	2 CA	modified 40 ml VOA's	✓		✓								
(2)	MW-1 WS-1-ABC		1230		/	mon well 1	3 CA		✓		✓								
(3)	MW-2 WS-1-ABC		1155		/	mon well 2	3 CA		✓		✓								
(4)	MW-3 WS-1-ABC		1120		/	mon 3 well	3 CA		✓		✓								

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	1/14/93 1115		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
		[signature]	1/15

Remarks: Purchase Order No.: 93-3004

STANDARD TURNAROUND

COMPANY: Geo Plexus, Inc.
ADDRESS: 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054
PHONE: (408) 987-0210 FAX: (408) 988-0815

2066

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

MR. DAVID C. GLICK
GEOPLEXUS, INC.
1900 WYATT DRIVE, SUITE #1
SANTA CLARA, CA 95054

Workorder # : 9301093
Date Received : 01/11/93
Project ID : C92020
Purchase Order: 93-3004
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9301093- 1	MWA	WATER	01/11/93	TPHg/BTEX
9301093- 2	MW1	WATER	01/11/93	TPHg/BTEX
9301093- 3	MW2	WATER	01/11/93	TPHg/BTEX
9301093- 4	MW3	WATER	01/11/93	TPHg/BTEX

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

MR. DAVID C. GLICK
GEOPLEXUS, INC.
1900 WYATT DRIVE, SUITE #1
SANTA CLARA, CA 95054

Workorder # : 9301093
Date Received : 01/11/93
Project ID : C92020
Purchase Order: 93-3004
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Baemer 1/19/93
Department Supervisor Date

Peggie Davison 1/19/93
Chemist Date

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

Anametrix W.O.: 9301093
Matrix : WATER
Date Sampled : 01/11/93

Project Number : C92020
Date Released : 01/19/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# MWA -01	Sample I.D.# MW1 -02	Sample I.D.# MW2 -03	Sample I.D.# MW3 -04	Sample I.D.# BJ1301E3 BLANK
Benzene	0.5	ND	410	940	740	ND
Toluene	0.5	ND	16	1100	29	ND
Ethylbenzene	0.5	ND	23	480	58	ND
Total Xylenes	0.5	ND	19	930	28	ND
TPH as Gasoline	50	ND	1200	17000	2000	ND
% Surrogate Recovery		115%	113%	87%	108%	101%
Instrument I.D.		HP4	HP4	HP4	HP4	HP4
Date Analyzed		01/13/93	01/14/93	01/13/93	01/14/93	01/13/93
RLMF		1	10	100	10	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 modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Davisson 1/19/93
Analyst / Date

Cheryl Balmer 1/19/93
Supervisor Date

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

Anametrix W.O.: 9301093
Matrix : WATER
Date Sampled : N/A

Project Number : C92020
Date Released : 01/19/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BJ1401E3 BLANK
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Total Xylenes	0.5	ND
TPH as Gasoline	50	ND
% Surrogate Recovery		107%
Instrument I.D.		HP4
Date Analyzed		01/14/93
RLMF		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 modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Regis Davisson 1/19/93
Analyst Date

Cheryl Balmer 1/19/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSW0113
Matrix	: WATER	Analyst	: RD
Date Sampled	: N/A	Supervisor	: JB
Date Analyzed	: 01/13/93	Date Released	: 01/19/93
		Instrument ID	: HP4

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	20.0	20.5	102%	49-159
Toluene	20.0	20.7	103%	53-156
Ethylbenzene	20.0	21.0	105%	54-151
TOTAL Xylenes	20.0	21.0	105%	56-157
P-BFB			92%	53-147

* Limits established by Anametrix, Inc.