

GOOD CHEVROLET

1630 Park Street • Phone 415/522-9221
ALAMEDA, CA 94501

May 24, 1993

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

Re: Summary of Findings from Up-Gradient" Water Sampling

Dear Ms. Shin and Mr. Zentner:

Enclosed is a copy of the above-referenced Report.

Good Chevrolet

by

JoAnn Stewart

JKS:js

Enclosure



May 13, 1993
Project C93013

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

Subject: Summary of Findings from "Up-Gradient" Water Sampling
Good Chevrolet, 1630 Park Street, Alameda, CA

Dear Ms. Stewart:

As requested and authorized, this Letter Report has been prepared to document the collection and analytical testing of the "up-gradient" hydropunch ground water samples obtained at the subject site.

INTRODUCTION

The project site is located at 1630 Park Street 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.

BACKGROUND

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 three existing ground water monitoring wells located at the project site have been monitored by Geo Plexus personnel on a quarterly basis from July, 1992 through April, 1993 to evaluate the ground water conditions and to establish the directions of ground water flow at the project site. The quarterly monitoring has determined that Total Petroleum Hydrocarbons as gasoline and Volatile Aromatic Compounds have existed at various concentrations in the ground water across the northeastern portion of the project site. Table 1 presents a summary of the analytical test data to date. The analytical test data (see Table 1) indicates that there was an erratic, and unexplained, increase in the concentrations in the gasoline constituents detected in Monitoring Wells MW-1, MW-2, and MW-3 between January and March, 1993.

TABLE 1

SUMMARY OF GROUND WATER ANALYTICAL TEST DATA

<u>Date Sampled</u>	<u>Total Petroleum Hydrocarbons</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl-Benzene</u>	<u>Total Xylenes</u>
<u>Monitoring Well MW-1</u>					
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
4-23-93 (3)	2,200	720	180	82	150
<u>Monitoring Well MW-2</u>					
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
4-23-93 (3)	52,000	13,000	8,400	1,700	5,300
<u>Monitoring Well MW-3</u>					
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
4-23-93 (3)	6,500	2,600	280	260	190

- 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.

SCOPE OF WORK

The Alameda County Department of Environmental Health has requested that Good Chevrolet initiate a ground water migration containment/ground water remediation program to abate the hydrocarbon products detected in the ground water at the project site and to perform additional investigations as required to determine the extent of the ground water impact (both on-site and off-site).

The scope of work for this investigative effort included advancing two (2) subsurface exploratory/hydropunch borings at locations which are "up-gradient" from the former underground gasoline storage tanks (and existing ground water monitoring wells) to obtain ground water "grab" samples for analytical testing to establish "background" water quality.

SUBSURFACE INVESTIGATION

Two subsurface exploration/hydropunch borings were advanced in the "up-gradient" direction of the former underground storage tanks at the location indicated on Figure 3. The borings were drilled by Exploration Geoservices, State of California Licensed Drilling Contractor, C57 License No. 489288 and were logged under the supervision of a State of California Certified Engineering Geologist.

The soil borings were advanced to a depth of 6-feet below ground surface using an eight-inch, nominal diameter, continuous flight hollow stem auger. Drilling and sampling equipment used for advancing the exploratory borings was thoroughly steam cleaned before drilling began to prevent the introduction of off-site contamination. A hydropunch probe (a stainless steel probe surrounding a PVC well screen) was then advanced through the undisturbed soil into the saturated zone (7-9 feet) and the frictional outer stainless steel casing was retracted to expose the well screen to the saturated sediments. The probe was allowed to stand for a period of 30 minutes to allow ground water to stabilize.

Ground water samples were obtained by lowering a stainless steel bailer through the hollow stem auger and into the hydropunch probe. The bailer was extracted from the probe and the water was decanted into 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. The samples were placed immediately into a chilled cooler and maintained at 4° C for transport to the laboratory under chain-of-custody documentation.

The hydropunch probe and bailer equipment were cleaned between sample events using a phosphate-free detergent bath and double rinsed in hot water baths to prevent cross contamination. A new PVC hydropunch well screen was used for each sample.

The borings were filled to the ground surface with a cement/bentonite slurry upon completion of the investigation.

ANALYTICAL TESTING

The ground water samples were submitted to and tested by McCampbell Analytical, Inc., 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 Aromatic Compounds by EPA Method 8020/5030. The Chain-of-Custody Form and analytical test data are presented as Figure 4 and 5, respectively.

SUMMARY OF FINDINGS

The analytical testing did not detect reportable quantities of Total Petroleum Hydrocarbons as gasoline or Volatile Aromatic Compounds (BTXE) in the ground water samples obtained from this investigation. This data would indicate that the "background" water quality is below the detectable threshold limits for Total Petroleum Hydrocarbons as gasoline and Volatile Aromatic Compounds and does not support evidence of an "off-site" source of the hydrocarbon compounds detected in the ground water at the project site.

Furthermore, since the "up-gradient" sample locations indicate non detectable concentrations of Total Petroleum Hydrocarbons as gasoline and Volatile Aromatic Compounds (BTXE) it is concluded that a localized source (i.e., in the immediate vicinity of the former underground storage tanks and Monitoring Well MW-2) exists for the erratic increase in gasoline constituents detected in Monitoring Wells MW-1, MW-2, and MW-3.

Based on the findings of this investigation, and the results of the quarterly monitoring, it is recommended that an additional investigation be performed to determine the source of the gasoline compounds and to characterize the extent of ground water contamination plume observed at the project site.

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.

CLOSURE

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

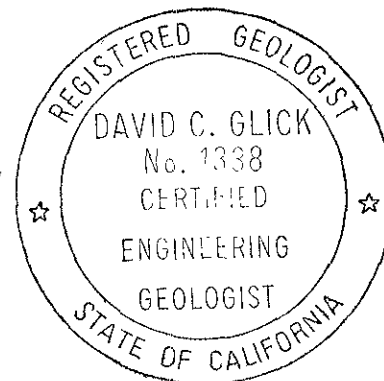
Mr. Greg Zentner
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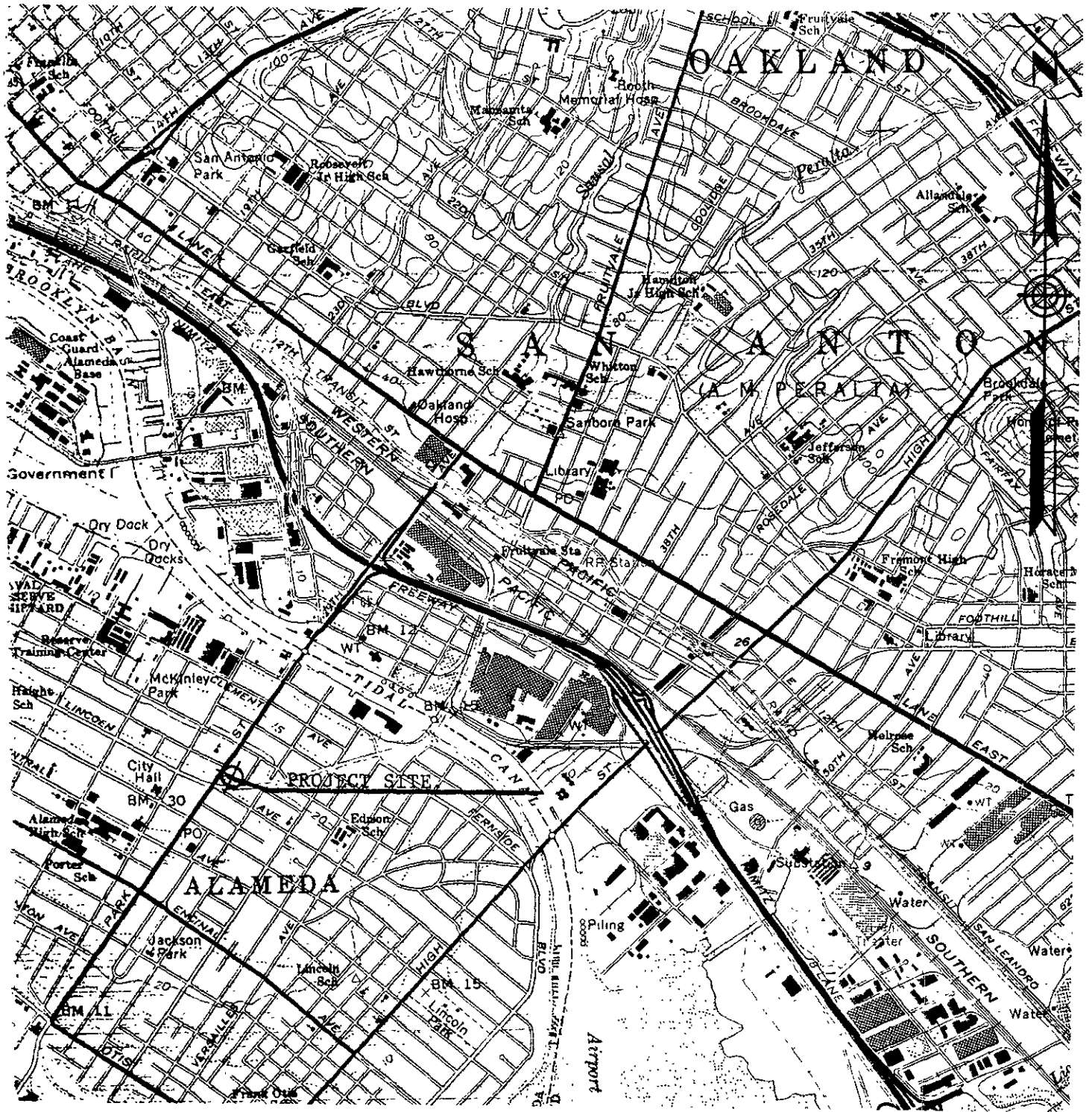
Respectfully submitted,

Geo Plexus, Incorporated



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






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

PARK AVENUE

SIDEWALK

Date of water sample and concentration of Total Petroleum Hydrocarbons as gasoline (ppb).

MW-3



1-21-87	10,287
1-11-89	5,300
7-12-89	7,800
4-09-91	9,400
7-14-92	17,000
10-7-92	9,200
1-11-93	2,000
4-23-93	6,500

MW-2



1-21-87	5,018
1-11-89	10,000
7-12-89	7,600
4-09-91	4,900
7-14-92	13,000
10-7-92	11,000
1-11-93	17,000
4-23-93	52,000

MW-1



1-21-87	21,020
1-11-89	1,400
7-12-89	1,200
4-09-91	850
7-14-92	13,000
10-7-92	3,600
1-11-93	1,200
4-23-93	2,200

GOOD CHEVROLET SHOW ROOM

APPROXIMATE LOCATION OF FORMER STORAGE TANKS

VEHICLE STORAGE

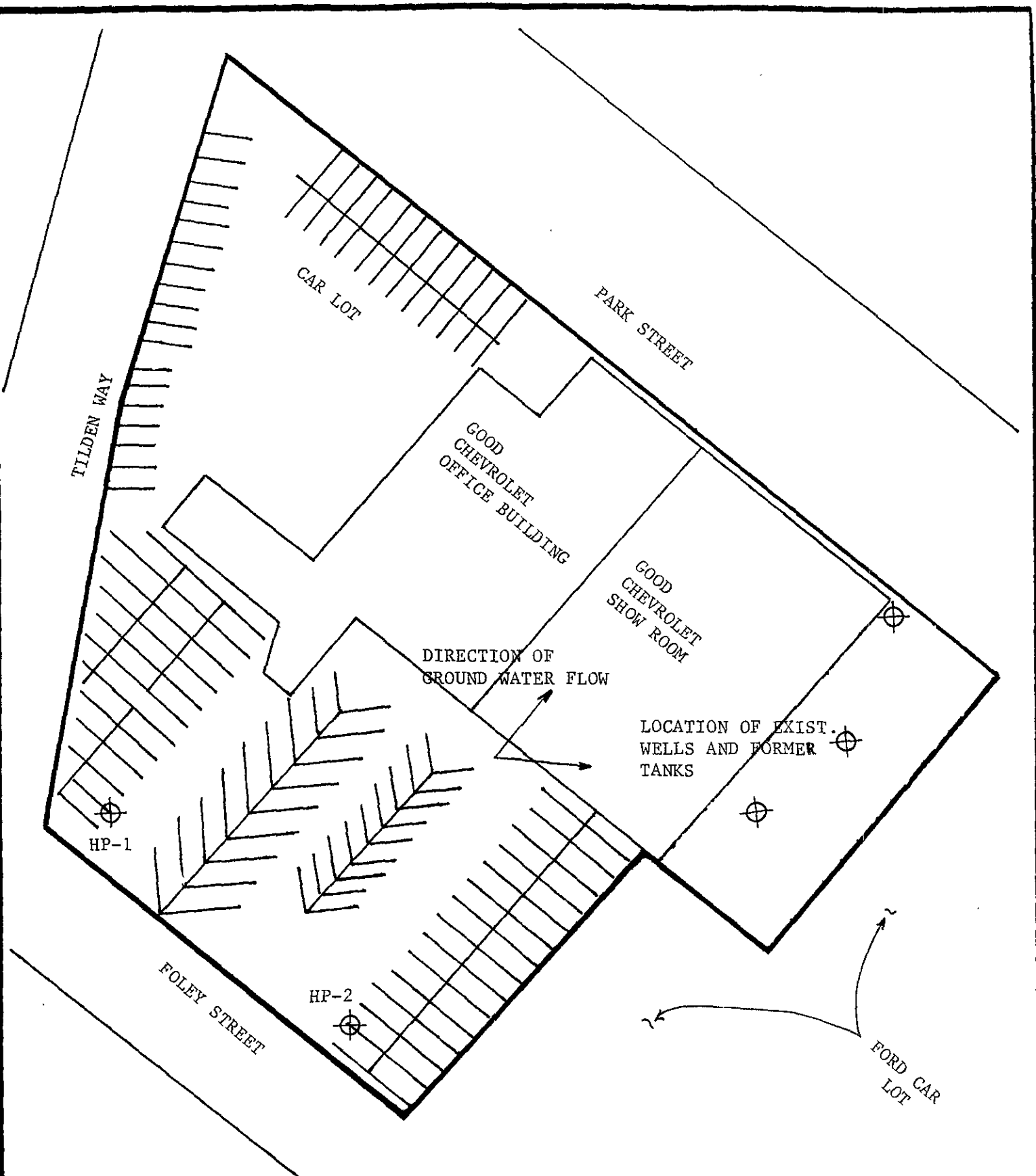
VARIATIONS IN GROUND WATER FLOW DIRECTION 1992-1993

FENCE

LOCATION OF "UP-GRADIENT" WATER SAMPLES (see Figure 3)

GeoPlexus, Inc.

GOOD CHEVROLET		
DATE 5/13/93	SCALE 1" = 10'	DRAWN BY twf
SITE PLAN		
		Figure 2



HP=HYDROPUNCH BORING LOCATION

GOOD CHEVROLET		
DATE	SCALE	DRAWN BY
	1"=50'	twf
SITE PLAN		
		Figure 3

ANALYT

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis					Condition of Samples	Initial
C93013		GOOD CHEVROLET						TPHG	TPHD	BTEX	Oil&Grease			
Send Report Attention of:			Report Due		Verbal Due									
DAVID GLICK			1 1		1 1									
Sample Number	Date	Time	Comp	Grab	Station Location									
HP1-WS1A1B	4/23/93	1045		1	HydraPunch 1	2EA	ACIDIFIED 40 ml UOA	✓		✓			Good	14
HP2-WS1A1B	4/23/93	1145		1	HydraPunch 2	2EA	↓	✓		✓			↓	↓
30325														
30326														
ICET <input checked="" type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> HEAD SPACE ABSENT <input checked="" type="checkbox"/> PRESERVATIVE <input checked="" type="checkbox"/> APPROPRIATE CONTAINERS <input checked="" type="checkbox"/> NOAS / O&G METALS <input checked="" type="checkbox"/>														
Relinquished by: (Signature)	Date/Time	Received by: (Signature)			Date/Time	Remarks:								
<i>[Signature]</i>	4/24/93 0855	<i>[Signature]</i>			4/24/93 1155	Purchase Order No.: 93-3024								
Relinquished by: (Signature)	Date/Time	Received by: (Signature)			Date/Time	STANDARD TURN AROUND								
<i>[Signature]</i>	4/24/93 1015	<i>[Signature]</i>			4-26-93									
Relinquished by: (Signature)	Date/Time	Received by: (Signature)			Date/Time	COMPANY: Geo Plexus, Inc.								
						ADDRESS: 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054								
						PHONE: (408) 987-0210 FAX: (408) 988-0815								

Figure 4

GEO Plexus, Inc. 1900 Wyatt Drive, #1 Santa Clara, CA 95054	Client Project ID: #C93013; Good Chevrolet	Date Sampled: 04/23/93
		Date Received: 04/26/93
	Client Contact: David Glick	Date Extracted:
	Client P.O: 93-3024	Date Analyzed: 05/03/93

Low Boiling Point (C6-C12) TPH* as Gasoline and 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	Ethyl Benzene	Xylenes	% Rec. Surrogate
30325	HP1-WS1A,B	W	ND	ND	ND	ND	ND	105
30326	HP2-WS1A,B	W	ND	ND	ND	ND	ND	106
Detection Limit unless otherwise stated; ND means Not Detected	W	50 ug/L	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.005	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L and soils in mg/kg

* cluttered chromatogram; sample peak co-elutes with surrogate peak

⁺The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) predominately unmodified or weakly modified gasoline; b) heavier gasoline range compounds predominate (aged gasoline?); c) lighter gasoline range compounds predominate (the most mobile gasoline compounds); d) heavy and light gasoline range compounds predominate (aged gasoline together with introduced light compounds?); e) gasoline range compounds predominate; no recognizable pattern; f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds predominate.

 Edward Hamilton, Lab Director