

GeoPlexus, Inc.

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

93 AUG 27 AM 11:35 August 19, 1993

Mr. Tad Tassone
Clementina Ltd.
2177 Jerrold Avenue
San Francisco, CA 94124

ST 10 1684

Subject: Quarterly Ground Water Monitoring Report
5521 Doyle Street, Emeryville, California

Dear Mr. Tassone:

As requested and authorized, the attached 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 ground water elevations, the ground water sampling protocols, and the results of the analytical testing performed on ground water samples collected on August 4, 1993.

In summary, the analytical testing did not detect Total Petroleum Hydrocarbons as gasoline, Total Petroleum Hydrocarbons as diesel, or Volatile Aromatic Compounds (Benzene, Toluene, Ethyl Benzene, or Total Xylenes) in the ground water samples.

Copies of this report should be forwarded to:

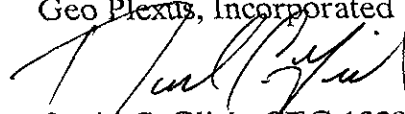
Ms. Susan Hugo
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

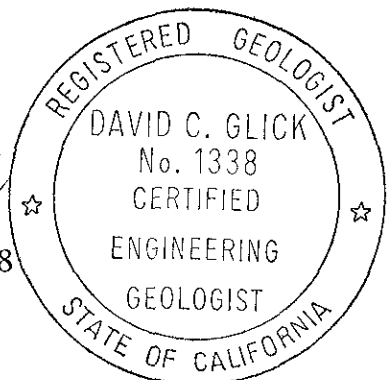
Mr. Richard Hiatt
Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Room 500
Oakland, CA 94612

It has been a pleasure to be of service to you on this project. The next quarterly sampling event is scheduled for November, 1993. Questions or comments regarding the attached report should be addressed to the undersigned.

Respectfully submitted,

Geo Plexus, Incorporated


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



AUGUST, 1993 QUARTERLY
GROUND WATER MONITORING REPORT

for

5521 DOYLE STREET

EMERYVILLE, CA

Prepared for:

Clementina Ltd.

2177 Jerrold Avenue

San Francisco, CA

Project C93036

August 19, 1993

AUGUST, 1993 QUARTERLY
GROUND WATER MONITORING REPORT
for
5521 DOYLE STREET
EMERYVILLE, CA

INTRODUCTION

The project site is located at 5521 Doyle Street, in the city of Emeryville, Alameda County, California as indicated on Figure 1 and was formerly occupied by a Clementina Equipment Rental facility. It is understood that two (2) underground storage tanks were removed from the site in December, 1992. The tanks were reported as a 6,000 gallon gasoline tank and a 6,000 gallon diesel tank and were located as indicated on Figure 2.

Soil samples were reportedly obtained during the tank removal activities and submitted for analytical testing by Superior Analytical. The soil samples did not contain detectable concentrations of Total Petroleum Hydrocarbons as gasoline, Total Petroleum Hydrocarbons as diesel, or Volatile Aromatic Compounds (Benzene, Toluene, Ethyl Benzene, and Xylene). The excavation was subsequently backfilled with the excavated soil materials.

A ground water sample obtained from the tank excavation contained 1,200 parts per billion (ppb) of Total Petroleum Hydrocarbons as diesel; however, Total Petroleum Hydrocarbons as gasoline and Volatile Aromatic Compounds (Benzene, Toluene, Ethyl Benzene, and Xylene) were not detected. The excavation was purged of water prior to backfilling and the purged water was contained on-site in steel tanks pending bacterial remediation of the hydrocarbon products. The purged water (concentrations reduced to below detectable levels) was disposed of under a discharge permit obtained from the State of California Regional Water Quality Control Board.

Based on published reports for the project area, the direction of ground water flow in the immediate vicinity of the project site is in a westerly direction as indicated on Figure 3. A Preliminary Site Characterization Investigation was performed by Geo Plexus, Inc. which included installation of one (1) ground water monitoring well in the reported/verified "down-gradient" direction of the excavation as indicated on Figure 4.

Analytical testing of the initial ground water samples obtained from the monitoring well did not detect Total Petroleum Hydrocarbons as gasoline, Total Petroleum Hydrocarbons as diesel, Volatile Aromatic Compounds (Benzene, Toluene, Ethyl Benzene, and Xylenes).

MONITORING WELL SAMPLING

Free product measurements were obtained at the time of sample acquisition utilizing an acrylic bailer lowered into the wells to obtain a surface 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, visible sheen, or odors were not observed in the monitoring well sample.

Prior to sampling, a minimum of four well volumes were purged from the 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. Water samples for analytical testing were obtained through the use of the teflon bailer. The water developed from the monitoring wells was contained on-site pending receipt of the laboratory test results.

The water samples were collected in sterilized glass vials with Teflon lined screw caps. The water samples collected for Total Petroleum Hydrocarbons as gasoline and Volatile Aromatics were collected in 40 mil. vials acidified with HCL by the analytical laboratory. The water samples collected for Total Petroleum Hydrocarbons as diesel were collected in sterilized 1-liter amber jars 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 (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.

ANALYTICAL TESTING

The ground water samples were submitted to and tested by McCampbell Analytical, Inc., a State of California, Department of Health Services certified testing laboratory. Analytical testing was scheduled and performed in accordance with the State of California, Regional Water Quality Control Board and Alameda County Guidelines. The analytical test data, along with the Chain-of-Custody Forms are presented in Appendix A.

The water samples were tested for Total Petroleum Hydrocarbons as gasoline by Method GCFID 5030/8015, Total Petroleum Hydrocarbons as diesel by Method GCFID 3550/8015, and Volatile Aromatics by EPA Method 8020 as indicated on the Chain-of-Custody Form.

SUMMARY OF FINDINGS

Ground water was observed/recorded at a depth of 10.3 feet below the ground surface.

The analytical testing did not detect Total Petroleum Hydrocarbons as gasoline, Total Petroleum Hydrocarbons as diesel, or Volatile Aromatic Compounds (Benzene, Toluene, Ethyl Benzene, or Xylenes) in the ground water sample obtained from Monitoring Well MW-1. Tables 1 and 2 summarize the current analytical test results along with the results of the previous analytical testing.

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>
5-12-93	ND	N.D.	N.D.	N.D.	N.D.
8-04-93	ND	N.D.	N.D.	N.D.	N.D.

Note: Total Petroleum Hydrocarbons reported as gasoline
N.D. indicates non-detectable concentrations

TABLE 2

SUMMARY OF GROUND WATER ANALYTICAL TEST DATA

<u>Date Sampled</u>	<u>Total Petroleum Hydrocarbons</u>
5-12-93	ND
8-04-93	ND

Note: Total Petroleum Hydrocarbons reported as diesel
N.D. indicates non-detectable concentrations

RECOMMENDATION

It is recommended that the ground water monitoring well at the site continue to be sampled on a quarterly basis to monitor the absence of the hydrocarbon products in the ground water to support site closure.

LIMITATIONS

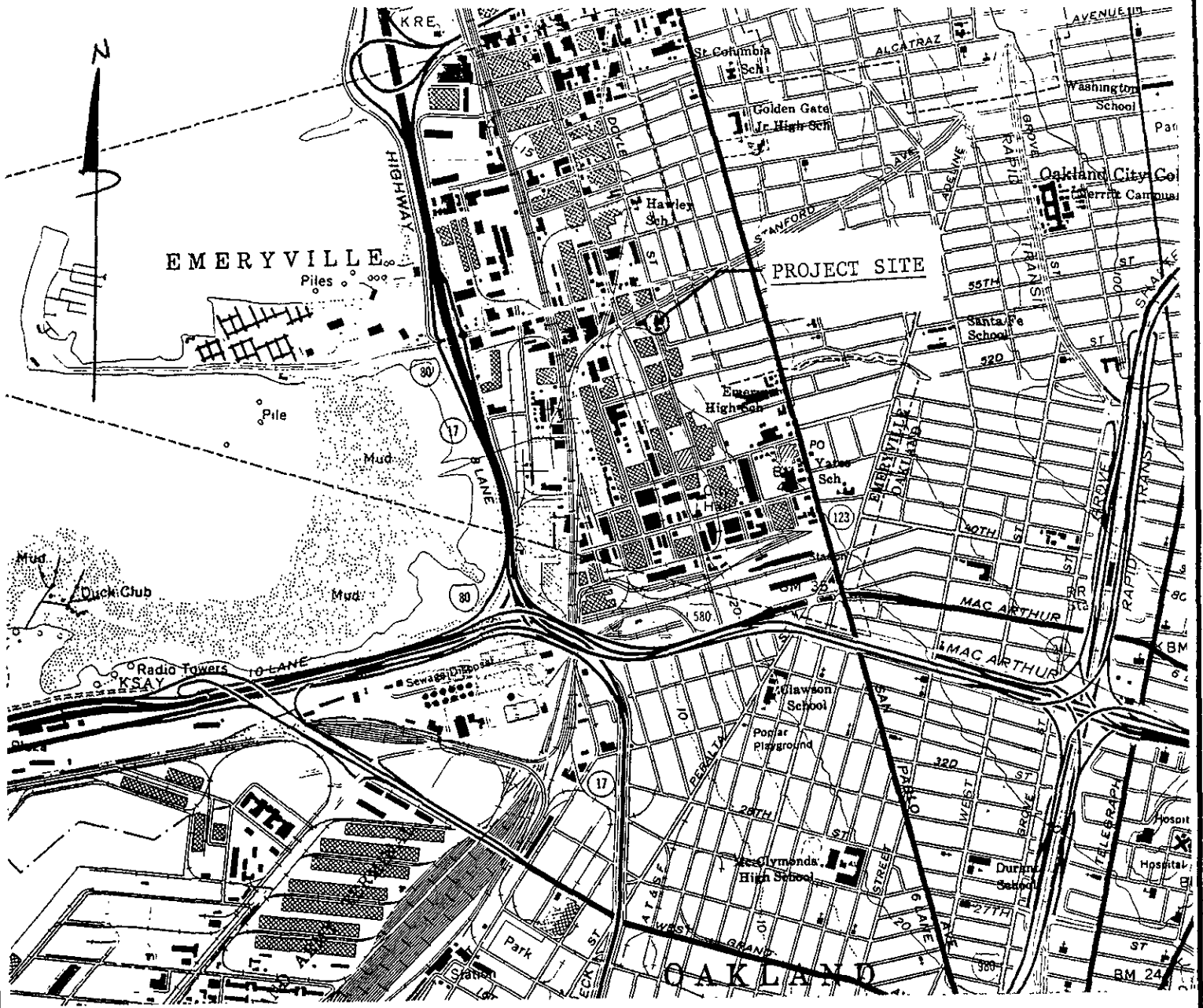
We have only observed a small portion of the pertinent soil and ground water conditions present at the site. Subsurface conditions across the site have been extrapolated from information obtained from review of existing documents and from the field investigation. The conclusions made herein are based on the assumption that soil 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

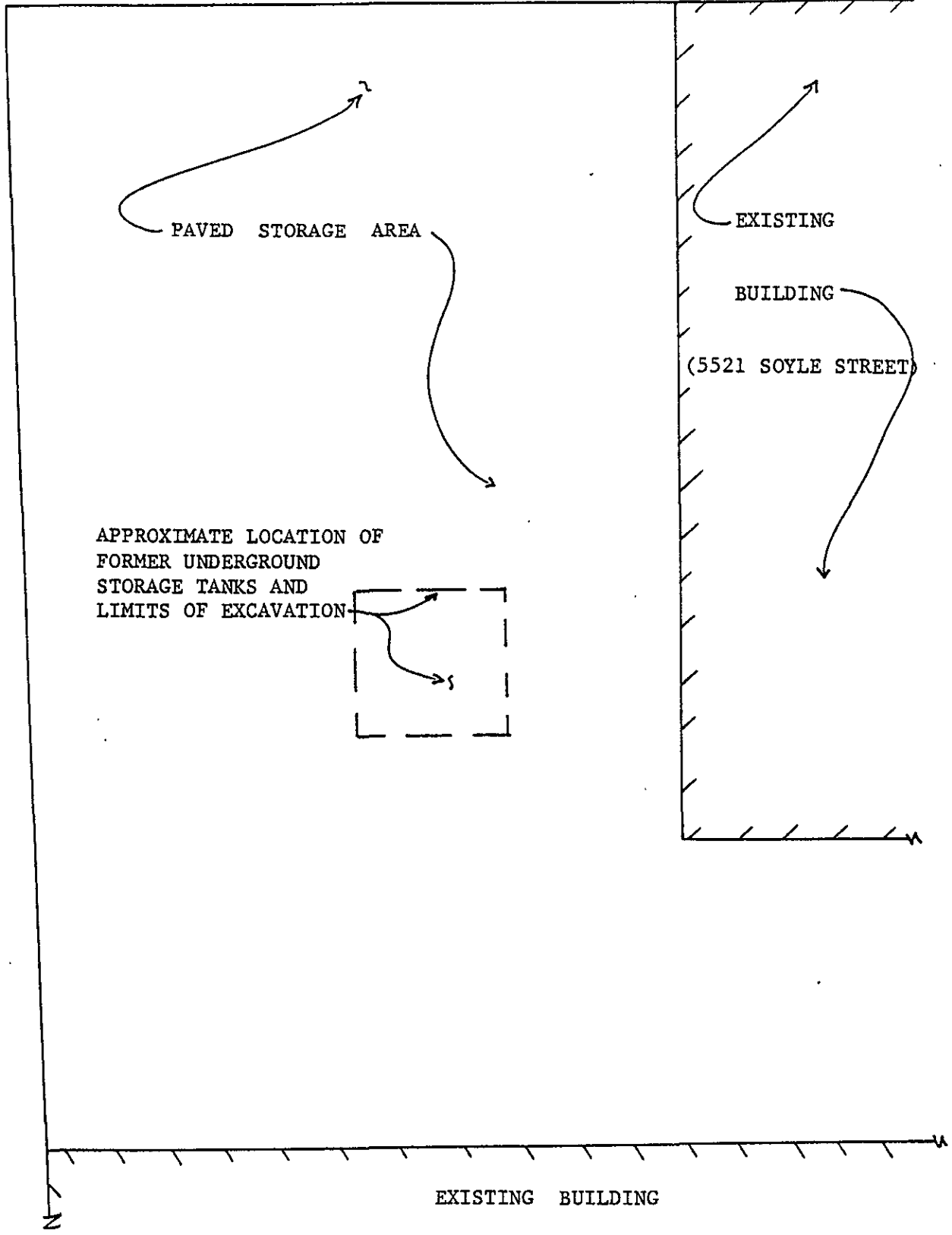


CLEMENTINA EQUIPMENT		
DATE 3/15/93	SCALE 1"=2000'	DRAWN BY dgc
LOCATION PLAN		
		Figure 1

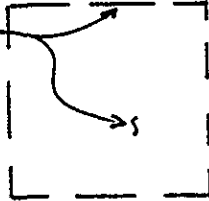
GeoPlexus, Inc.

DOYLE STREET

STANFORD AVENUE

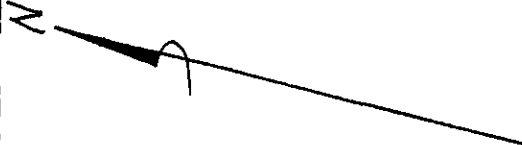


APPROXIMATE LOCATION OF
FORMER UNDERGROUND
STORAGE TANKS AND
LIMITS OF EXCAVATION



EXISTING
BUILDING
(5521 SOYLE STREET)

EXISTING BUILDING



CLEMENTINA PROPERTY		
DATE 5/3/93	SCALE 1"=20'	DRAWN BY dcb
SITE PLAN		
		Figure 2

ERYVILLE

FORMER CHEVRON ASPHALT PLANT & TERMINAL

Piles

HOLLIS STREET PROJECT

Hawley Sch

Golder Jr Hig

PROJECT SITE AND INFERRED DIRECTION OF GROUND WATER FLOW

Pile

SHERWIN WILLIAMS SITE

Mud

Emer High Sch

FORMER DEL MONTE PLANT

Mud

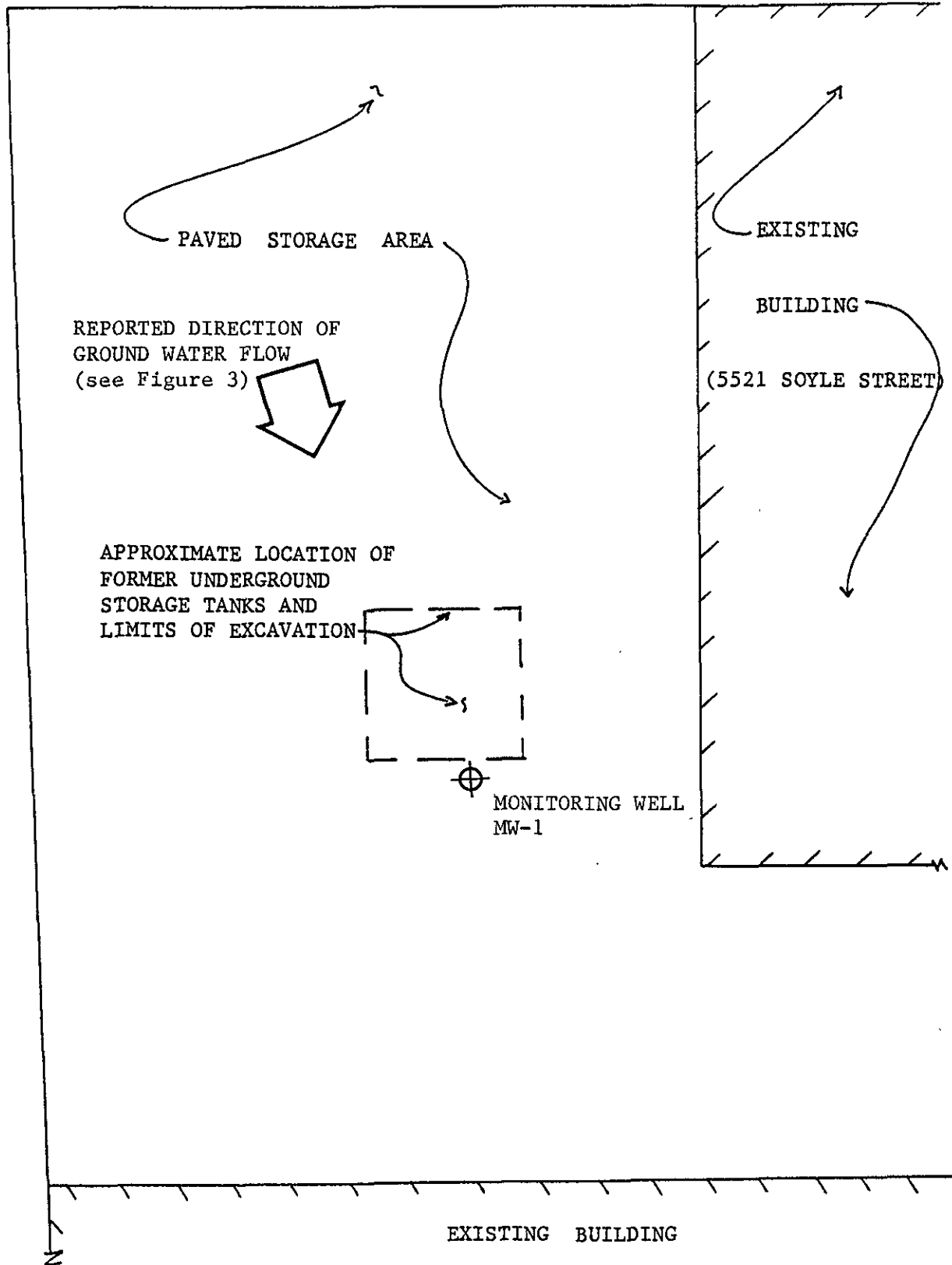
LANE

LANE

CLEMENTINA EQUIPMENT		
DATE 3/15/93	SCALE 1"=1000'	DRAWN BY dgc
LOCAL GROUND WATER FLOW		
		Figure 3

DOYLE STREET

STANFORD AVENUE



CLEMENTINA PROPERTY

DATE 5/3/93

SCALE 1"=20'

DRAWN BY dcg

MONITORING WELL LOCATION

Figure 4

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

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis				Condition of Samples	Initial
C93036		CLEMENTINA, Ltd DOYLE ST.						TPHC	TPHD	BTEX	Oil&Grease		
Send Report Attention of:		Report Due		Verbal Due									
DAVID GLICK		/ /		/ /									
Sample Number	Date	Time	Comp	Grab	Station Location								
MWA - WS1A,3	8/4/93	1400		/	MON well A	2EA	ACIDIFIED 40ml VOA	✓		✓			31638
MW1 - WS1A,3	8/4/93	1530		/	MON well 1	2EA	ACIDIFIED 40ml VOA	✓		✓			31639
MW1 - WS2A, B	8/4/93	1530		/	MON well 1	2EA	1LTR ATDBEA		✓				31640
							GOOD CONDITION		PRESERVATIVE APPROPRIATE CONTAINERS				
							HEAD SPACE ABSENT						
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		Remarks:					
<i>[Signature]</i>		8/9/93 1330		<i>[Signature]</i>		8/9/93 1330		Purchase Order No.: 93-3043					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		STANDARD TURN AROUND					
<i>[Signature]</i>		8/9/93 1350		<i>[Signature]</i>		8/9/93							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date/Time		COMPANY: Geo Plexus, Inc.					
<i>[Signature]</i>				<i>[Signature]</i>				ADDRESS: 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054					
								PHONE: (408)987-0210 FAX: (408)988-0815					

GEO Plexus, Inc. 1900 Wyatt Drive, # 1 Santa Clara, CA 95054	Client Project ID: # C93036; Clementina Ltd, Doyle St.	Date Sampled: 08/04/93
	Client Contact: David Glick	Date Received: 08/09/93
	Client P.O: 93-3043	Date Extracted: 08/09/93
		Date Analyzed: 08/09/93

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
31638	MWA-WS1A	W	ND	ND	ND	ND	ND	105
31639	MW1-WS1A	W	ND	ND	ND	ND	ND	110
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, soil samples in mg/kg, and all TCLP extracts in mg/L

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) 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 are significant; no recognizable pattern; 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 phase is present.

GEO Plexus, Inc. 1900 Wyatt Drive, # 1 Santa Clara, CA 95054	Client Project ID: # C93036; Clementina Ltd, Doyle St.	Date Sampled: 08/04/93
	Client Contact: David Glick	Date Received: 08/09/93
	Client P.O: 93-3043	Date Extracted: 08/09/93
		Date Analyzed: 08/09/93

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
31640	MWI-WS2A	W	ND	98
Detection Limit unless otherwise stated; ND means Not Detected	W	50 ug/L		
	S	10 mg/kg		

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

cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ 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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light (CL) or heavy (CH) diesel compounds are significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.