

May 19, 1993

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

5/19/93
STP 1686

Subject: Preliminary Site Characterization Investigation Report
5521 Doyle Street, Emeryville, California

Dear Mr. Tassone:

As requested and authorized, the attached Preliminary Site Characterization Investigation Report has been prepared to document the field investigation efforts performed at the subject site related to installation of one ground water monitoring well. The report presents the findings of the investigation and analytical testing performed on ground water samples obtained during the investigation along with conclusions and recommendations based on these findings.

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 soil or ground water samples.

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

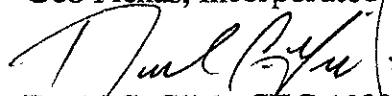
It has been a pleasure to be of service to you on this project. Questions or comments regarding the attached report should be addressed to the undersigned. Copies of this report should be forwarded to:

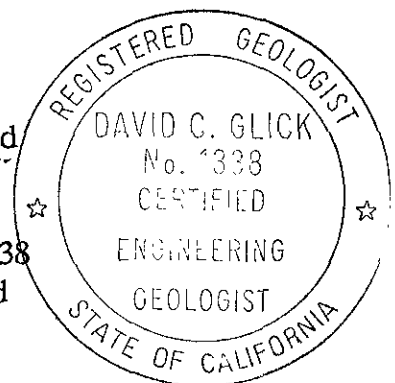
Ms. Susan Hugo
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

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

Respectfully submitted,

Geo Plexus, Incorporated


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



PRELIMINARY SITE CHARACTERIZATION INVESTIGATION

for

5521 DOYLE STREET

EMERYVILLE, CA

Prepared for:

Clementina Ltd.

2177 Jerrold Avenue

San Francisco, CA

Project C93011

May 19, 1993

PRELIMINARY SITE CHARACTERIZATION INVESTIGATION
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: (1) 6,000 gallon gasoline tank and (1) 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. The excavation was subsequently backfilled with the excavated soil materials.

A ground water sample was also obtained from the tank excavation which contained 1,200 parts per billion (ppb) of Total Petroleum Hydrocarbons as diesel; however, Total Petroleum Hydrocarbons as gasoline and Volatile Aromatic Compounds 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) has subsequently been disposed of under a discharge permit obtained from the State of California Regional Water Quality Control Board.

SCOPE OF WORK

To assess the potential impact to the ground water resources present at the site, Geo Plexus, Incorporated performed an investigation as described below:

- (1) advancing one exploration boring to a maximum depth of 20 feet in the "down-gradient" area of the former underground storage tanks and completing the boring as a ground water monitoring well;
- (2) development of the monitoring well and collection of ground water samples for analytical testing;
- (3) performing analytical testing on the ground water samples; and
- (4) preparation of this report documenting the findings of the investigation and presenting the results of the analytical testing.

Specifics of the individual investigative phases are described in the following sections of this report.

GROUND WATER GRADIENT DATA REVIEW

Local ground water data (direction of flow and gradient) was obtained from the site characterization investigation reports for:

Former Chevron Asphalt Plant & Terminal	1520 Powell Street
Hollis Street Project	6050 Hollis
Del Monte Plant	4204 Hollis/1250 Park
Sherwin Williams	Sherwin & Horton

Ground water data, including direction of ground water flow, have been obtained from the consultant's reports for these facilities which indicates that the direction of ground water flow in the vicinity of the project site is westerly to southwesterly as indicated on Figure 3. Temescal Creek appears to have a local influence on the ground water conditions and the variations in flow direction across the creek indicate that the shallow water has a flow component towards the creek.

Based on the information derived from the reports for these sites it was determined that the direction of ground water flow in the immediate vicinity of the project site is in a southwesterly direction as indicated on Figures 3 and 4.

SUBSURFACE INVESTIGATION

A Monitoring Well Permit was obtained from the Alameda County Flood Control and Water Conservation District (Zone 7) prior to drilling the boring (attached as Figure 5). One exploration boring was advanced in the "down-gradient" direction of the former underground storage tanks (see Figure 4) to characterize the underlying soils conditions and for construction of a monitoring well. The boring was drilled by West Hazmat Drilling, a State of California Licensed Drilling Contractor, C57 License No. 554979 and was logged under the supervision of a State of California Certified Engineering Geologist.

The boring was advanced using an eight (8) inch, nominal diameter, continuous flight hollow stem auger. Soil samples were obtained from the borings at five foot intervals through the use of a 2-inch I.D. split-barrel sampler. The sampler was advanced into the undisturbed soil ahead of the auger to obtain a core sample. Pre-cleaned brass liners were placed in the sampler to retain the soil. The drill cuttings and soil samples obtained from the borings were monitored during drilling to observe moisture changes in the soils and to determine the depth of the first saturated zone.

The drilling and sampling equipment was thoroughly steam cleaned before drilling began to prevent the introduction of off-site contamination and again upon completion of drilling. The sampling equipment was cleaned between each sample event by washing in a hot water bath with a phosphate-free detergent and then rinsed in a hot water bath to prevent cross contamination. The soil cuttings derived from the soil boring were placed with the stockpiled soils derived from the tank removal for disposal. The rinsate water derived from the steam cleaning was contained in 55-gallon containers for disposal.

SUBSURFACE CONDITIONS

The soil boring revealed 7 feet of medium dense, dark-gray, silty sand underlain by 2 feet of dense, orange-brown, gravelly, silty sand and 4-5 feet of dense, saturated, orange-brown gravelly sand. A dense, orange-brown silty sand was encountered between 14-17 feet and the boring was terminated at 17 feet in the silty sand (possible local aquitard). The Boring Log is presented as Figure 6.

The soil samples obtained from the boring were observed in the field for evidence of contamination (i.e., discoloration, odor, visible product, etc.). The soil samples did not exhibit any indication of contamination.

Ground water was encountered in the exploration borings at a depth of 15 feet below the ground surface at the time of drilling. Water stabilized in Monitoring Well MW-1 at a depth of 12 feet at the time of drilling and at 11.5 feet following development of the monitoring well.

MONITORING WELL INSTALLATION

Following completion of the drilling, the boring was completed as a monitoring well constructed in accordance with Alameda County Monitoring Well Construction Guidelines by installing 2-inch diameter polyvinyl chloride (PVC) flush-threaded casing and slotted pipe directly through the hollow stem auger. The slotted section of the PVC pipe installed through the saturated zone had 0.020 inch factory perforations. The PVC materials used in the well construction were thoroughly cleaned prior to introduction into the boring.

The monitoring well was filter-packed with clean #2/12 silica sand throughout the screened interval. The filter-pack material was installed in the annular spacing between the monitoring well pipe and the auger as the auger was removed. The filter-pack was extended two feet above the top of the screened interval. To assure continuity and integrity of the filter material, and to prevent the bore hole from caving, no more than five feet of auger was removed at a time during placement of the filter-pack.

A one foot thick layer of bentonite pellets was placed above the filter material to provide an annular seal. The bentonite was hydrated with water prior to placement of the grout seal. The remainder of the boring was filled with an 11-sack cement-sand slurry to within one foot of grade. A locking cap was placed on the PVC well casing and a water tight aluminum traffic box was installed in concrete flush with the ground surface over the well casing. Figure 7 illustrates the construction of Monitoring Well MW-1.

MONITORING WELL DEVELOPMENT

The monitoring well was allowed to stabilize for a minimum of 72 hours between construction and development activities. Free product measurements were obtained prior to development 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. Free product, visible sheen, or odors were not observed in the monitoring well.

The initial well development was through the use of a Brainard Kilman 1.7-inch hand pump (to remove sediment) and was followed by purging with a teflon bailer. The well was developed until a minimum of four well volumes had been purged and the discharged water appeared clear of sediment. Electrical conductivity, temperature, and pH of the ground water was recorded throughout the development process. The well development continued until the electrical conductivity, temperature, and pH of the discharged water stabilized (twelve volumes actually evacuated). Depth to water measurements were recorded prior to and following the well development activities. Ground water stabilized at a depth of 11.5 feet below the ground surface.

MONITORING WELL SAMPLING

The monitoring well was allowed to stabilize for a minimum of 72 hours between development and sampling activities. 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.

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 Volatile Organics 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. The samples were placed on ice immediately for transport to the laboratory under chain-of-custody documentation.

ANALYTICAL TESTING

The soil and 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 soil and 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. The analytical data is included in Appendix A of this report.

CONCLUSIONS

The soil boring revealed 7 feet of medium dense, dark-gray, silty sand underlain by 2 feet of dense, orange-brown, gravelly, silty sand and 4-5 feet of dense, saturated, orange-brown gravelly sand. A dense, orange-brown silty sand was encountered between 14-17 feet and the boring was terminated at 17 feet in the silty sand (possible local aquitard).

The soil samples obtained from the boring were observed in the field for evidence of contamination (i.e., discoloration, odor, visible product, etc.). The soil samples did not exhibit any indication of contamination.

Ground water was encountered in the exploration borings at a depth of 15 feet below the ground surface at the time of drilling and stabilized at 11.5 feet following development of the monitoring well.

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 soil or ground water sample obtained from Monitoring Well MW-1.

RECOMMENDATION

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

LIMITATIONS

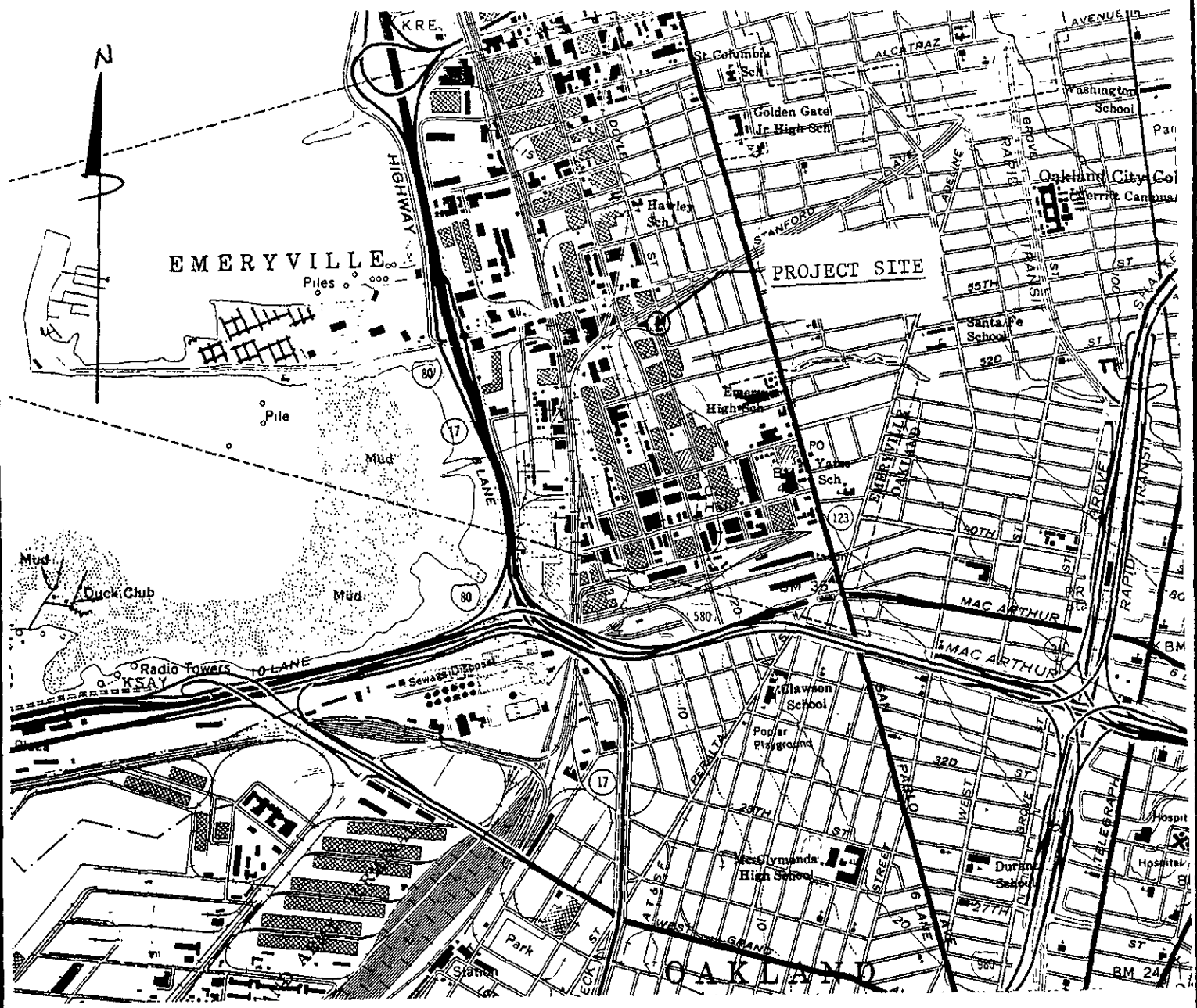
We have only observed a small portion of the pertinent soil and ground water conditions present at the site. Subsurface conditions across the site have been extrapolated from information obtained from review of existing documents and from the field investigation. The conclusions made herein are based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

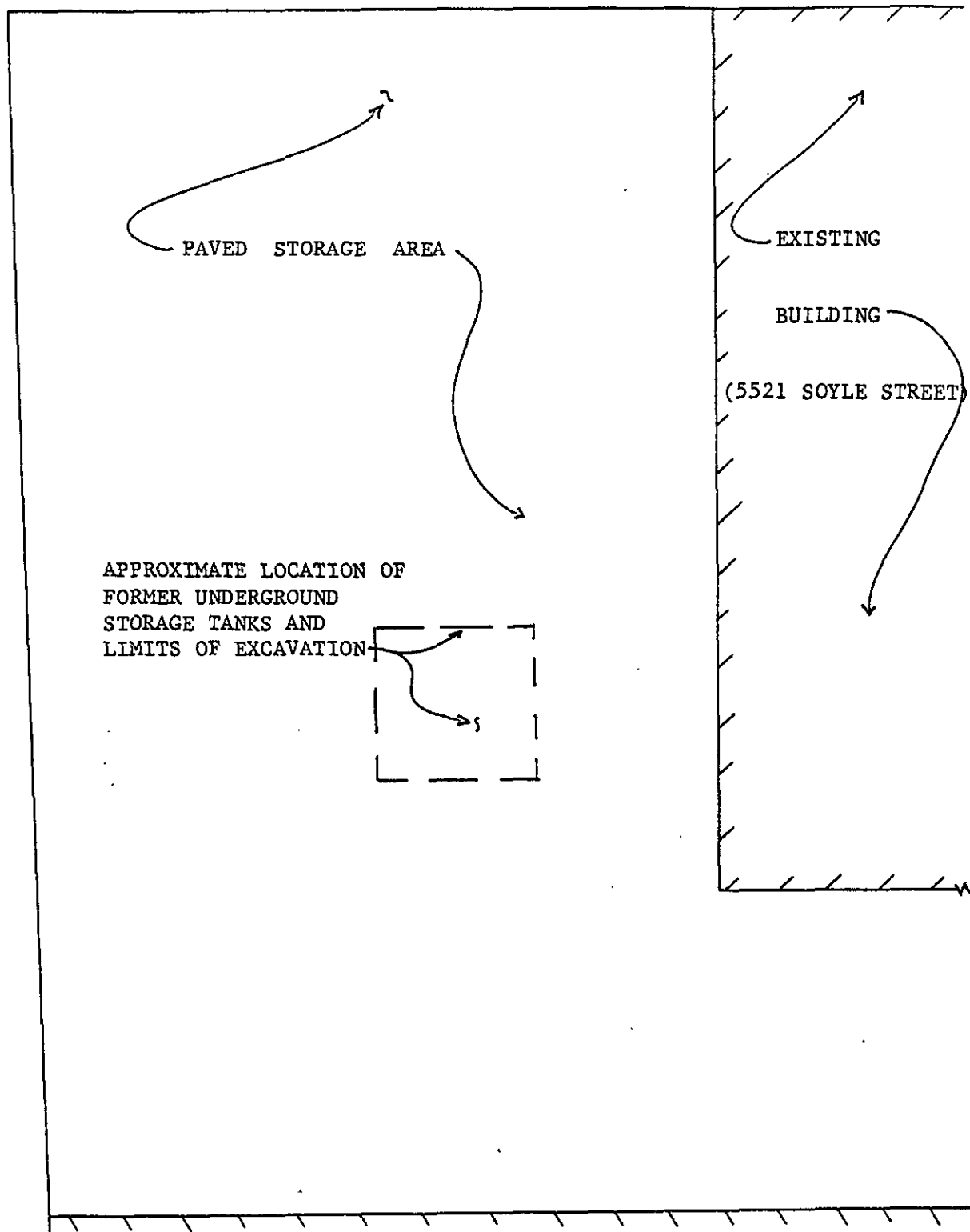


CLEMENTINA EQUIPMENT		
DATE 3/15/93	SCALE 1"=2000'	DRAWN BY dgc
LOCATION PLAN		
		Figure 1

GeoPlexus, Inc.

DOYLE STREET

STANFORD AVENUE



APPROXIMATE LOCATION OF
FORMER UNDERGROUND
STORAGE TANKS AND
LIMITS OF EXCAVATION

PAVED STORAGE AREA

EXISTING

BUILDING

(5521 SOYLE STREET)

EXISTING BUILDING

CLEMENTINA PROPERTY

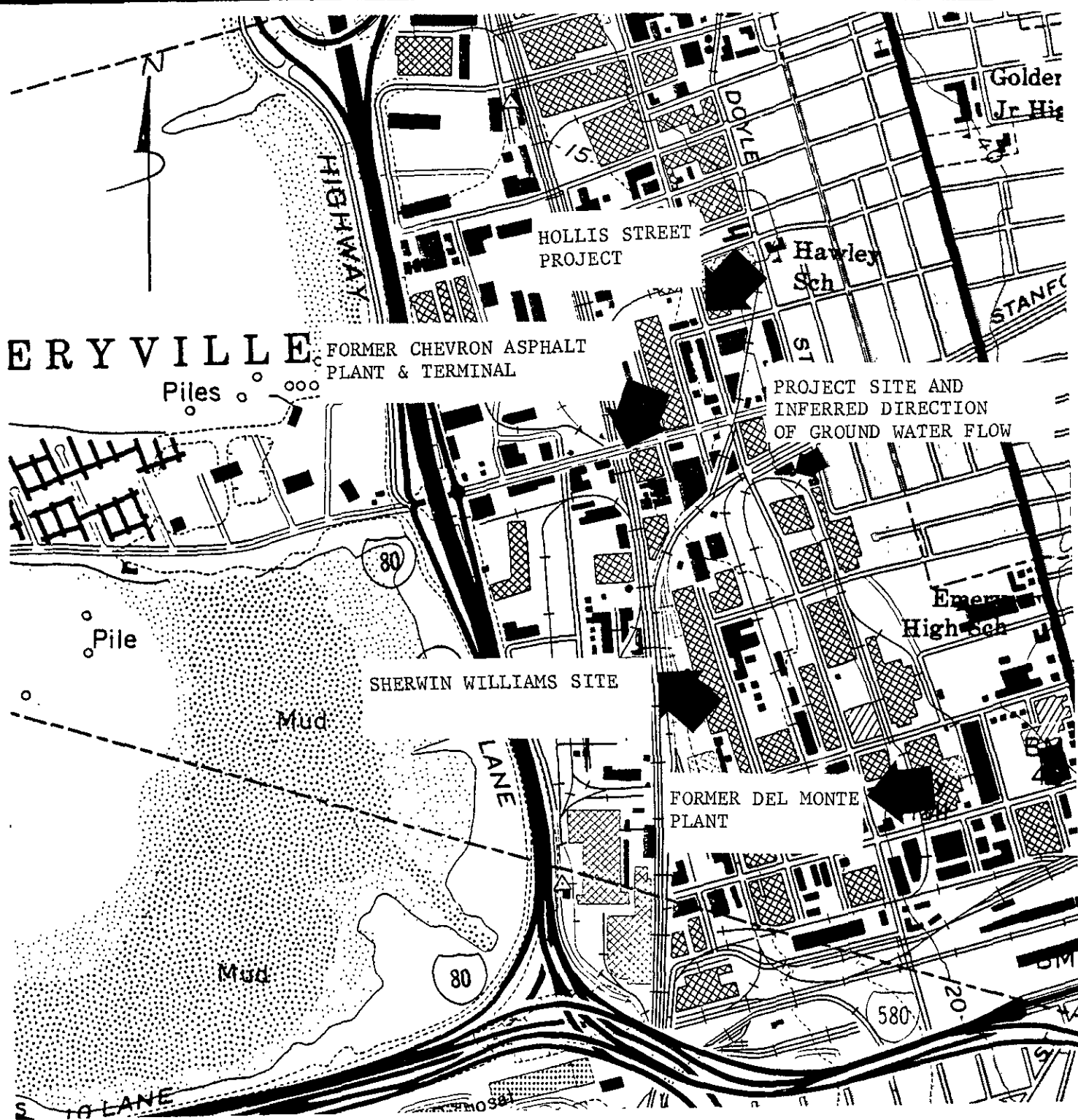
DATE 5/3/93

SCALE 1"=20'

DRAWN BY dcg

SITE PLAN

Figure 2



ERYVILLE FORMER CHEVRON ASPHALT PLANT & TERMINAL

Piles

HOLLIS STREET PROJECT

Hawley Sch

PROJECT SITE AND INFERRED DIRECTION OF GROUND WATER FLOW

Pile

SHERWIN WILLIAMS SITE

Mud

FORMER DEL MONTE PLANT

Emer High Sch

Mud

S LANE

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

DOYLE STREET

STANFORD AVENUE

REPORTED DIRECTION OF
GROUND WATER FLOW
(see Figure 3)

PAVED STORAGE AREA

EXISTING
BUILDING
(5521 SOYLE STREET)

APPROXIMATE LOCATION OF
FORMER UNDERGROUND
STORAGE TANKS AND
LIMITS OF EXCAVATION

MONITORING WELL
MW-1

EXISTING BUILDING



CLEMENTINA PROPERTY		
DATE 5/3/93	SCALE 1"=20'	DRAWN BY dcb
MONITORING WELL LOCATION		
		Figure 4



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 5521 Doyle Street
Emeryville, CA

PERMIT NUMBER 93139
LOCATION NUMBER _____

CLIENT
Name Clementina Ltd.
Address 2177 Jerrold Ave Phone (415) 282-7725
City San Francisco, CA Zip 94124

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name Geo Plexus, Inc.
Address 1900 Wyatt Drive #1 Phone (408) 987-0210
City Santa Clara, CA Zip 95054
Fax.. (408) 988-0815

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT
Well Construction _____ Geotechnical Investigation _____
Cathodic Protection _____ General _____
Water Supply _____ Contamination _____
Monitoring xy Well Destruction _____

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE
Domestic _____ Industrial _____ Other _____
Municipal _____ Irrigation _____

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:
Mud Rotary _____ Air Rotary _____ Auger XX
Cable _____ Other _____

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

DRILLER'S LICENSE NO. C57 554979

E. WELL DESTRUCTION. See attached.

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum _____
Casing Diameter 2 in. Depth 20 ft.
Surface Seal Depth 5 ft. Number 1

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum _____
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 4/8/93
ESTIMATED COMPLETION DATE 4/8/93

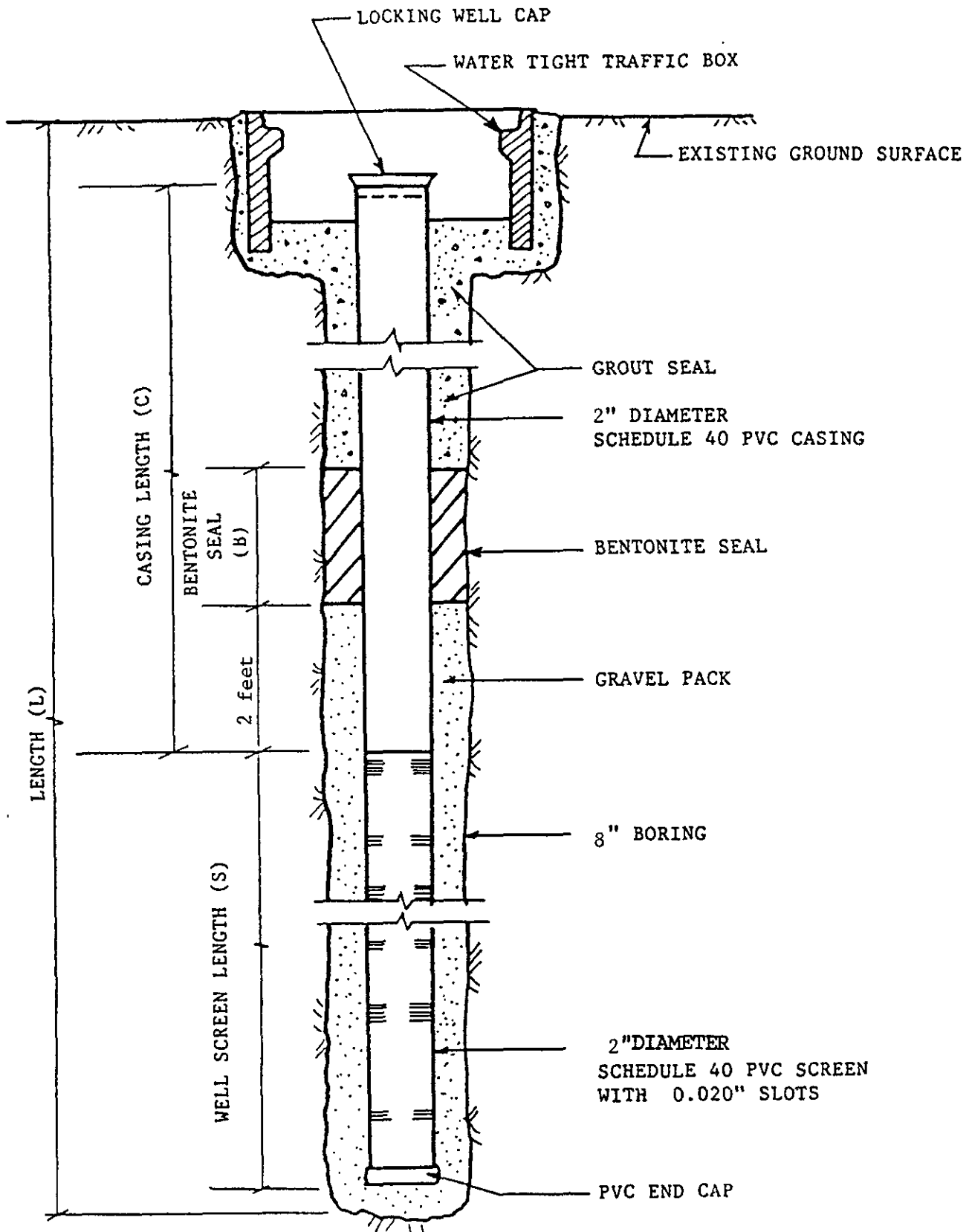
Approved Wyman Hong Date 18 Mar 93
Wyman Hong

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE David C. Glick Date 3/14/93
David C. Glick CEG 1338

SUBSURFACE DATA LOG

DRY DENSITY (lbs cu. ft.)	MOISTURE (% of dry wt.)	"N" VALUE (blows/ft.)	OVM READING (ppm)	SAMPLE TYPE	DEPTH (ft.)	LOG	U.S.C.	LOG No. <u>MW-1</u> DATE: <u>4/29/93</u> <u>Clementina Equipment</u> LOCATION: <u>5521 Doyle Street, Emeryville</u> EQUIPMENT: <u>Mobile B61</u> PROJECT No. _____
								4" AC/6" Aggregate Base
						SM		SILTY SAND, dark gray, moist, medium dense
	21	n/a	S1	5				
						SM		SILTY SAND WITH GRAVEL, orange-brown, moist, dense
	19	n/a	S2	10		SP		GRAVELLY SAND, orange-brown, saturated, dense Sample S2 not retained due to high gravel/void content.
	14	n/a	S3	15		SM		SILTY SAND, mottled orange-brown, moist, dense
					20			Boring terminated at 17 feet. Ground water encountered at 14 feet and stabilized at 11.5 feet. 2-inch diameter monitoring well constructed.



L = 17 feet
 S = 10 feet
 C = 7 feet
 B = 1 foot

MONITORING WELL MW-1		
DATE 4/29/93	SCALE n/a	DRAWN BY dcg
CLEMENTINA PROPERTY		
		Figure 7

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

ANALYST

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis				Condition of Samples	Initial
C93011		CLEMENTINA DOYLE STOSSET						TPHG	TPHD	BTEX	Oil & Grease		
Send Report Attention of:		Report Due		Verbal Due									
DAVID GHELL		/ /		/ /									
Sample Number	Date	Time	Comp	Grab	Station Location								
MW1-51	4/29/93	905		1	MON WELL 1 4.5-6'	1EA	6" BRASS TUBE	✓	✓	✓		GOOD	PH
MW1-53	4/29/93	915		1	MON WELL 1 14-15'	1EA	6" BRASS TUBE	✓	✓	✓		↓	↓
30344													
30345													
ICE/° ✓ PRESERVATIVE ✓													
GOOD CONDITION ✓ APPROPRIATE CONTAINERS ✓													
KMS O & G NEWS OTHER													

Relinquished by: (Signature) <i>Paul Gill</i>	Date/Time 4/29/93 13:20	Received by: (Signature) <i>James R. Hamilton</i>	Date/Time 4/29/93 13:20
Relinquished by: (Signature) <i>James R. Hamilton</i>	Date/Time 4/29/93 14:42	Received by: (Signature) <i>Paul Gill</i>	Date/Time 4-29-93 14:42
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Remarks: Purchase Order No.: 93-3024
STANDARD TURNAROUND

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553

Tele: 510-798-1620 Fax: 510-798-1622

GEO Plexus, Inc. 1900 Wyatt Drive, #1 Santa Clara, CA 95054	Client Project ID: #C93011; Clementina, Doyle Street	Date Sampled: 04/29/93
	Client Contact: David Glick	Date Received: 04/29/93
	Client P.O: 93-3026	Date Extracted: 05/04/93
		Date Analyzed: 05/05-05/06/93

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
30344	MW1-S1	S	ND	ND	ND	ND	ND	104
30345	MW1-S3	S	ND	ND	ND	ND	ND	108
Detection Limit un- less otherwise stated; ND means Not Detected	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 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

McCAMPBELL ANALYTICAL INC.

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

GEO Plexus, Inc. 1900 Wyatt Drive, #1 Santa Clara, CA 95054	Client Project ID: #C93011; Clementina, Doyle Street	Date Sampled: 04/29/93
	Client Contact: David Glick	Date Received: 04/29/93
	Client P.O: 93-3026	Date Extracted: 05/04/93
		Date Analyzed: 05/04/93

Medium Boiling Point (C10-C23) TPH* 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) ⁺
30344	MW1-S1	S	ND
30345	MW1-S3	S	ND
Detection Limit un- less otherwise stated; ND means Not Detected	W	50 ug/L	
	S	10 mg/kg	

*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 diesel; b) diesel range compounds predominate; no recognizable pattern; c) diesel range compounds together with gasoline range compounds; d) gasoline range compounds predominate; e) medium boiling point pattern that does not match diesel(); f) one to a few isolated peaks present; g) oil range compounds predominate.

 Edward Hamilton, Lab Director

PROJECT NUMBER		PROJECT NAME				Number of Containers	Type of Containers	Type of Analysis				Condition of Samples	Initial	
Send Report Attention of:		Report Due	Verbal Due		TPHG			TPHD	BTEX	Oil & Grease				
Sample Number	Date	Time	Comp	Grab	Station Location									
C93011	CLEMENTINA DOYLE STREET													
DAVID GLICK		1 1	1 1											
MW1-WS1A,B	5/12/93	1500		1	MW Well 1	2ea	40 ml VOA ACID, 1ea	✓	✓			good 1H		
MW1-WS2A,B	5/12/93	1500		1	MW Well 1	2ea	1 LTR ATMBST	✓				1		
												30526		
												30527		
KEPT <input checked="" type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> HEAD SPACE ADJUST <input checked="" type="checkbox"/>					PRESERVE <input checked="" type="checkbox"/> APPROPRIATE CONTAINERS <input checked="" type="checkbox"/>					NGS / O & G / MINOR DEL.				
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Date/Time	Remarks: Purchase Order No.: 93-3029 STANDARD TRANSMOMED									
<i>[Signature]</i>	5/13/93 1035	<i>[Signature]</i>		5/13/93 1035										
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Date/Time										
<i>[Signature]</i>	5/13/93 5135	<i>[Signature]</i>		5-13-93	COMPANY: Geo Plexus, Inc.	ADDRESS: 1900 Wyatt Drive, Suite 1 Santa Clara, CA 95054								
Relinquished by: (Signature)	Date/Time	Received by: (Signature)		Date/Time										

MCCAMPBELL ANALYTICAL INC.

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

GEO Plexus, Inc. 1900 Wyatt Drive, #1 Santa Clara, CA 95054	Client Project ID: #C93011; Clementina, Doyle Street	Date Sampled: 05/12/93
	Client Contact: David Glick	Date Received: 05/13/93
	Client P.O: 93-3029	Date Extracted:
		Date Analyzed: 05/15/93

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
30526	MW1-WS1A	W	ND	ND	ND	ND	ND	99
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

McCAMPBELL ANALYTICAL INC.	110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622
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GEO Plexus, Inc. 1900 Wyatt Drive, #1 Santa Clara, CA 95054	Client Project ID: #C93011; Clementina, Doyle Street	Date Sampled: 05/12/93
	Client Contact: David Glick	Date Received: 05/13/93
	Client P.O: 93-3029	Date Extracted: 05/17/93
		Date Analyzed: 05/17/93

Medium Boiling Point (C10-C23) TPH* 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) ⁺
30527	MW1-WS2A	W	ND

Detection Limit unless otherwise stated; ND means Not Detected	W	50 ug/L
	S	10 mg/kg

*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 diesel; b) diesel range compounds predominate; no recognizable pattern; c) diesel range compounds together with gasoline range compounds; d) gasoline range compounds predominate; e) medium boiling point pattern that does not match diesel(); f) one to a few isolated peaks present; g) oil range compounds predominate.

 Edward Hamilton, Lab Director