

05

File No. 10-93-570-ST

ENVIRONMENTAL
SCIENCE ENGINEERING

RECEIVED
12:59 pm, Feb 29, 2008
Alameda County
Environmental Health

- ① Cont. DMR for P11-6, D, TSB and BTEX
Include 150 in UIC
- ② Were MWS sent for provide to...
(connected to MWS)
- ③ Next send in sig 195

**PRELIMINARY SITE ASSESSMENT OF
CONTAMINATED SOIL AND GROUNDWATER
AT THE PROPERTY
LOCATED AT 525 98TH AVENUE
OAKLAND, CALIFORNIA
APRIL 19, 1995**

**PREPARED FOR:
MR. NISSAN SAIDIAN
5733 MEDALLIAN COURT
CASTRO VALLEY, CALIFORNIA 94552**

**BY:
SOIL TECH ENGINEERING, INC.
298 BROKAW ROAD
SANTA CLARA, CALIFORNIA 95050**

SOIL TECH ENGINEERING, INC.

LIST OF TABLES

- TABLE 1 ... GROUNDWATER MONITORING DATA.
- TABLE 2 ... SOIL SAMPLES ANALYTICAL RESULTS.
- TABLE 3 ... GROUNDWATER SAMPLES ANALYTICAL RESULTS.

LIST OF FIGURES

- FIGURE 1 ... SITE VICINITY MAP SHOWING 525 98TH AVENUE, OAKLAND, CALIFORNIA.
- FIGURE 2 ... SITE PLAN SHOWING LOCATIONS OF FORMER UNDERGROUND STORAGE TANKS, BUILDING, BOREHOLES, MONITORING WELLS AND GROUNDWATER FLOW DIRECTION.

File No. 10-93-570-ST

LIST OF APPENDICES

- APPENDIX "A" ... TABLE 1, TABLE 2 AND TABLE 3.
- APPENDIX "B" ... FIGURE 1 AND FIGURE 2.
- APPENDIX "C" ... STANDARD OPERATION PROCEDURES.
- APPENDIX "D" ... BORING LOGS.
- APPENDIX "E" ... PIEZOMETER SCHEMATIC.
- APPENDIX "F" ... ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS.
- APPENDIX "G" ... ALAMEDA COUNTY-ZONE 7 WATER AGENCY DRILLING
PERMIT APPLICATION AND WELL COMPLETION REPORT.

SOIL TECH ENGINEERING, INC.

TABLE OF CONTENTS	<u>Page No.</u>
LETTER OF TRANSMITTAL	1-2
INTRODUCTION	3
SITE LOCATION AND BACKGROUND	3-4
FIELD ACTIVITIES	
SOIL BORING AND INSTALLATION OF MONITORING WELLS	5-7
SOIL AND GROUNDWATER SAMPLING	
<u>Soil Sampling</u>	7
<u>Groundwater Sampling</u>	7-8
GROUNDWATER DEPTH SURVEY	8
SITE STRATIGRAPHY AND HYDROGEOLOGY	8-9
ANALYTICAL RESULTS	
SOIL RESULTS	9-10
GROUNDWATER RESULTS	10
SUMMARY	10-11
RECOMMENDATION	12
LIMITATIONS AND UNIFORMITY OF CONDITIONS	12-13
<u>APPENDIX "A"</u>	
TABLE 1 - GROUNDWATER MONITORING DATA	T1
TABLE 2 - SOIL SAMPLES ANALYTICAL RESULTS	T2
TABLE 3 - GROUNDWATER SAMPLES ANALYTICAL RESULTS	T3

TABLE OF CONTENTS CONT'D

Page No.

APPENDIX "B"

FIGURE 1 - SITE VICINITY MAP
FIGURE 2 - SITE PLAN

M1
M2

APPENDIX "C"

DRILLING AND SOIL SAMPLING PROCEDURE
MONITORING WELL INSTALLATION
WELL DEVELOPMENT
GROUNDWATER SAMPLING

SOP1-SOP2
SOP3-SOP4
SOP5
SOP6

APPENDIX "D"

BORING LOGS

B1-B9

APPENDIX "E"

PIEZOMETER SCHEMATIC

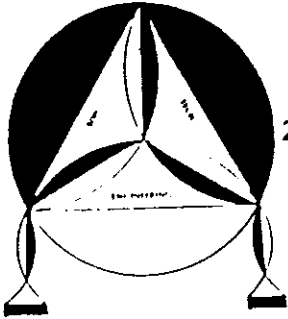
PS1-PS3

APPENDIX "F"

NORTH STATE ENVIRONMENTAL ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY

APPENDIX "G"

ALAMEDA COUNTY-ZONE 7 WATER AGENCY DRILLING PERMIT APPLICATION
WELL COMPLETION REPORT



SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

298 BROOKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

April 19, 1995

File No. 10-93-570-ST

Mr. Nissan Saidian
5733 Medallian Court
Castro Valley, California 94552

SUBJECT: PRELIMINARY SITE ASSESSMENT OF CONTAMINATED
SOIL AND GROUNDWATER AT THE PROPERTY
Located at 525 98th Avenue, in
Oakland, California

Dear Mr. Saidian:

Enclosed is a copy of the preliminary soil and groundwater assessment report, dated April 19, 1995, for your property located at 525 98th Avenue, in Oakland, California.

The report describes the results of field activities conducted to evaluate the extent and concentrations of dissolved hydrocarbons in the soil and groundwater in the vicinity of the former location of two underground gasoline storage tanks and an underground waste oil storage tank.

Soil samples collected by STE during the removal of the two gasoline storage tanks, the waste oil tank, and associated fuel product lines and pumps at the site indicated that the soil had been impacted by past inadvertent spillage and a leak in the tank.

The preliminary site assessment was initiated at the request of Ms. Eva Chu, Hazardous Materials Specialist, Alameda County Health Care Services Agency, in her letters dated January 14, 1994 and July 1, 1994, regarding required investigations at 525 98th Avenue, in Oakland, California, and in subsequent phone conversations with her.

This report presents the results of the preliminary site assessment which involved the installation, development, sampling and laboratory analysis of three groundwater monitoring wells and soil sampling with three additional soil borings.

Recommendations are made to conduct a quarterly monitoring and groundwater sampling program of the on-site wells for at least one year. When we have gathered that information, we can develop a program of soil borings, grab water sampling, and monitoring well installation and analysis to attempt to define the limits of the soil and groundwater contamination plume.

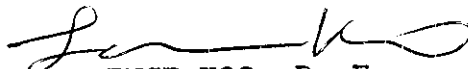
If you have any questions or require additional information, please feel free to contact our office at your convenience.

Sincerely,

SOIL TECH ENGINEERING, INC.



ROBERT BAKER
PROJECT GEOLOGIST



LAWRENCE KOO, P. E.
C. E. #34928



FRANK HAMEDI-FARD
GENERAL MANAGER

PRELIMINARY SITE ASSESSMENT
OF CONTAMINATED SOIL AND
GROUNDWATER AT THE PROPERTY
LOCATED AT 525 98TH AVENUE
OAKLAND, CALIFORNIA
APRIL 19, 1995

INTRODUCTION:

This document presents a preliminary site assessment conducted by Soil Tech Engineering, Inc. (STE) for the property located at 525 98th Avenue, in Oakland, California (Figure 1). The purpose of this investigation was to assess the extent of subsurface petroleum hydrocarbon contamination at the subject site.

The preliminary site assessment was conducted in accordance with Phase II of STE's work plan dated April 1994. The Alameda County Health Care Services Agency (ACHCSA) representative, Ms. Eva Chu, agreed in phone conversations to forgo the proposed Phase I soil excavation and proceed with the Phase II preliminary site assessment as presented in our work plan.

SITE LOCATION AND BACKGROUND:

The site is located on the northwest side of 98th Avenue between Maddux Drive and Edes Avenue in Oakland, California. The site was formerly used as a gasoline service station. When the current owner purchased the property in May 1986, it was not in

operation as service station. In December 1993, Alpha Geo Services removed a 550 gallon waste oil tank, a 4,000 gallon and a 6,000 gallon underground storage tank (UST). The larger tanks were used to store gasoline. The three tanks were properly manifested and transported by Erickson, Inc. to their facility in Richmond. In addition, the fuel product lines and pump islands were excavated. Soil Tech Engineering, Inc. (STE) was retained by Mr. Nissan Saidian, the current owner of the property, to conduct soil sampling below the former UST's and fuel product lines. Seven soil samples were collected, four from the gasoline tank excavation at approximately 12 feet below grade, one from the waste oil tank excavation at approximately 8 feet below grade and two from the fuel product line excavation at approximately 2 and 3 feet below grade. All sampling was conducted under the supervision of Alameda County Health Department inspector Ms. Eva Chu. Elevated levels of Total Petroleum Hydrocarbons as gasoline (TPHg) ranging from 230 milligrams per kilogram (mg/Kg) to 12,000 mg/Kg, and BTEX were detected in the soil samples collected from the gasoline UST excavation. The detail of the soil sampling is described in the STE's report dated January 5, 1994. Benzene up to 11 ppm at 12'

The soil excavated from fuel tank system was stockpiled on-site and has not been characterized.

FIELD ACTIVITIES:

SOIL BORING AND INSTALLATION OF MONITORING WELLS:

Permits to install groundwater monitoring wells were obtained from the Alameda County Flood Control and Water Conservation District--Zone 7 Water Agency (ACFCWCD-Zone 7) prior to drilling. Copy of the well permit is included in the Appendix "G". of this report.

STE initiated the field work for this phase of investigation between March 6, 1995, and April 10, 1995. Field work included the advancement of six exploratory soil borings STMW-1, STMW-2, STMW-3, SB-4, SB-5 and SB-6, soil sampling, installation of three monitoring wells (STMW-1, STMW-2 and STMW-3), development of the wells, water sampling and chemical analyses of soil and groundwater samples. The approximate locations of the underground storage tanks and the fuel product lines and pump islands are shown in Figure 2.

The exploratory borings were advanced on March 6 and 7 , 1995. Three of the borings (STMW-1, STMW-2 and STMW-3) were converted to groundwater monitoring wells. The drilling, soil sampling and construction of the on-site wells were conducted in accordance with STE's Standard Operating Procedures (SOP) included in Appendix "C" in this report. The remaining three borings were backfilled in accordance with the local agency requirements.

Boring STMW-1 was drilled to a depth of approximately 20 feet below grade, boring STMW-2 to a depth of approximately 22 feet below grade, and boring STMW-3 to a depth of approximately 24 feet below grade. Borings SB-4, SB-5 and SB-6 were drilled to a depth of approximately 11½ feet below grade. During drilling operations, soil samples were collected at approximately 6 feet and 11 feet below grade in each of the six borings. Soil samples were classified in the field according to the Unified Soil Classification System by STE's geologist and were retained for chemical analysis.

During drilling, a moderate to strong gasoline odor was detected in borings STMW-1 and SB-4 in the sample collected from a depth of 11 feet below grade. A slight gasoline odor was detected in boring SB-5 in the soil samples collected from a depth of 11 feet below grade. A rainbow sheen was detected on groundwater from boring STMW-1 during drilling.

Each soil sample was labeled with an identification number, sealed and stored in a chilled ice until delivery to a certified analytical laboratory. The completed exploratory boring logs are included in Appendix "D" of this report.

Three of the soil borings were converted into monitoring wells (STMW-1 to STMW-3). The well heads of STMW-1, STMW-2 and STMW-3 monitoring wells were protected by traffic rated vaults placed flushed with grade.

After the three wells were installed, they were developed by hand bailer, pumping and surging to clean the soil around the well screens. Each well was developed by a surface bailer until at least 6 to 8 well casing volumes were removed and the pH, conductivity and temperature were stabilized.

SOIL AND GROUNDWATER SAMPLING:

Soil Sampling:

A total of 12 soil samples were collected from the six exploratory borings. All the soil samples were submitted to a certified analytical laboratory. Proper chain-of-custody documentation was maintained with the soil samples during transport to the laboratory. All the soil samples were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX).

Groundwater Sampling:

After the three wells were constructed and developed, groundwater samples were collected. Prior to sample collection, wells were purged by removing five well casing volumes of water. The water generated through well development and purging was stored on-site in approved 55-gallon drums pending laboratory analysis to determine a proper disposal method. Prior to purging and sampling the three wells (STMW-1 to STMW-3) were monitored for the presence

of floating product, odor and for water elevation. Very light rainbow sheen spots and a light petroleum odor was detected during sampling of well STMW-1.

The groundwater samples were submitted to a state certified laboratory for analysis of TPHd, TPHg and BTEX. The groundwater sample collected from STMW-3 was also analyzed for Total Oil & Grease and Metals (Cadmium, Chromium, Lead, Nickel and Zinc). Proper chain-of-custody documentation was maintained with the samples during transport to the laboratory.

GROUNDWATER DEPTH SURVEY:

A water level and depth survey was conducted to estimate groundwater gradient and flow direction. To estimate the gradient and flow direction, depths to groundwater were measured relative to an arbitrarily established datum (assumed to be 100 feet above sea level). Well casing and groundwater surface elevations are summarized on Table 1. The groundwater flow direction beneath the site was in a north to northeasterly direction on April 10, 1995. The ground-water flow direction is shown on Figure 2.

SITE STRATIGRAPHY AND HYDROGEOLOGY:

The site is situated on the southwestern portion of a gently south to southwest sloping geomorphic surface near the eastern margin of the San Francisco Bay. The near-surface materials consist of alluvial deposits of Quaternary age.

Our soil boring information indicates the site is underlain by 2½ to 5 feet of very dark grey to black fat clay with approximately 15% sand that is damp and stiff. In the northern half of the site, a brown to dark brown or dark greyish-brown clayey gravel with sand underlies the surficial fat clay. These gravels are damp to moist and medium dense. Below the gravels, at a depth of 6 to 10 feet, there is a grey to greenish-grey flat clay that is damp and stiff to very stiff. In the southern half of the site, dark greyish-brown and greenish-grey fat clay with varying amounts of sand and gravel underlie the surficial fat clay. These fat clays are moist and stiff.

Groundwater was encountered at approximately 12 feet below grade during drilling and had risen to approximately 9½ feet below grade on completion of drilling.

As shown in Figure 2, the gradient of the potentiometric surface (the elevation on that water rises to in a well) is towards the northeast. Figure 2 shows an approximation of the local groundwater flow direction and the location of the monitoring wells and the soil borings.

*were wells
sited
to establish
monitoring*

*should be monthly, but elevation
measurements.*

ANALYTICAL RESULTS:

SOIL RESULTS:

Soil analytical results are summarized in Table 2. TPHg and BTEX were not detected in soil samples collected from borings STMWB-2, STMW-3 and SB-6. Low to moderate levels of TPHg and BTEX

were detected in soil samples collected from 11 feet below grade in borings STMW-1, SB-4 and SB-5. In addition, low levels of TPHg, Ethylbenzene and Total Xylenes were detected in the soil sample collected from 6 feet below grade in SB-5.

GROUNDWATER RESULTS:

Groundwater analytical results are summarized in Table 3. Low to moderate levels of TPHd, TPHg and BTEX were detected in the groundwater sample collected from well STMW-1. No TPHg or BTEX were detected in the samples collected from well STMW-2. In addition, a low level of TPHd [0.054 milligrams per liter (mg/L)] was detected in well STMW-2. No TPH or BTEX was detected in well STMW-3. A low level of TOG was detected in well STMW-3. No metals were detected in water sample from well STMW-3.

SUMMARY:

The data collected during our preliminary investigation indicated the following:

- 1) The soils beneath the site consist of 2½ to 5 feet of fat clay. In the northern half of the site, clayey gravels with sand underlie the surficial fat clay to a depth of approximately 6 to 10 feet. Fat clays underlie the clayey gravels. In the southern half of the site, fat clays with varying amounts of sand and gravel underlie the surficial fat clays.

- 2) Low to moderate levels of TPHg and BTEX were detected in soil samples collected near the top of the groundwater table in borings STMW-1, SB-4 and SB-5. Low levels of TPHg, Ethylbenzene and Total Xylenes were also detected in the soil sample collected at 6 feet below grade in SB-5. No TPHg or BTEX was detected in soil samples collected from borings STMW-2, STMW-3 or SB-6.
- 3) Low to moderate levels of TPHd, TPHg and BTEX were detected in the groundwater sample collected from well STMW-1. Low levels of TPHd were detected in well STMW-2. Low levels of TOG were detected in well STMW-3.
- 4) Groundwater was encountered at approximately 12 feet below grade during drilling. It stabilized to approximately 9½ feet below grade at completion of the boring. The groundwater gradient is toward the north or northeast.
- 5) Groundwater has been impacted due to the past inadvertent spillage or leakage from the former underground storage tanks at the site.
- 6) No measurable floating product was detected in any of the three new wells, except very light rainbow sheen spots were noted in well STMW-1 only.

RECOMMENDATION:

Initiate a quarterly monitoring and sampling program of the three on-site monitoring wells for a year. The next quarterly sampling event will be in mid-July 1995. Per State and Local Regulatory Agencies requirements, additional investigation may be necessary to define the extent of the dissolved plume, based on the results of one year of quarterly monitoring and sampling.

This report must be submitted to the Alameda County Health Care Services Agency (ACHCSA) and the Regional Water Quality Control Board (RWQCB).

LIMITATIONS AND UNIFORMITY OF CONDITIONS:

The monitoring well installation services or soil and water sampling for pollution on this project was a direct request by Soil Tech Engineering, Inc.'s client. These installations were performed to meet the existing requirements for fuel leak regulations.

This service does not make Soil Tech Engineering, Inc. liable for future maintenance, repairs, damage, injury to third parties or any other elements causing future problems.

The locations of these monitoring wells are approximate and should not be used for any reference point, surveying, or any other uses except studying groundwater.

File No. 10-93-570-ST

Any recommendations that were made in this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the borings.

This report is issued with the understanding that it is the responsibility of the owner or his/her representative to ensure that the information and recommendations contained herein are called to the attention of the State and Local Environmental Agency.

The findings of this report are based on the results of an independent laboratory and are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man, on this property or adjacent properties.

TABLE 1
GROUNDWATER MONITORING DATA
(Measured in Feet)

Date	Well No./ Elevation	Depth-to- Water	Groundwater Elevation	FFP Thickness	Odor
4/10/95	STMW-1 (99.51)	9.69	89.82	Very Light Rainbow Sheen	Light Petroleum
	STMW-2 (98.95)	9.16	89.79	None	None
	STMW-3 (98.54)	8.68	89.86	None	None

FFP - Free Floating Product

TABLE 2
SOIL SAMPLES ANALYTICAL RESULTS
IN
MILLIGRAMS PER KILOGRAM (mg/Kg)

Date	Sample No.	Depth feet	TPHg	B	T	E	X
3/06/95	STMW-1-6	6	ND	ND	ND	ND	ND
	STMW-1-11	11	46	0.034	0.036	0.09	0.21
	STMW-2-6	6	ND	ND	ND	ND	ND
	STMW-2-11	11	ND	ND	ND	ND	ND
	STMW-3-6	6	ND	ND	ND	ND	ND
	STMW-3-11	11	ND	ND	ND	ND	ND
3/07/95	SB-4-6	6	ND	ND	ND	ND	ND
	SB-4-11	11	34	0.044	0.039	0.036	0.097
	SB-5-6	6	1.3	ND	ND	0.0064	0.017
	SB-5-11	11	25	0.03	0.027	0.011	0.044
	SB-6-6	6	ND	ND	ND	ND	ND
	SB-6-11	11	ND	ND	ND	ND	ND

TPHg - Total Petroleum Hydrocarbons
 BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
 ND - Not Detected (Below Laboratory Detection Limit)

TABLE 3
GROUNDWATER SAMPLES ANALYTICAL RESULTS
IN
MILLIGRAMS PER LITER (mg/l)

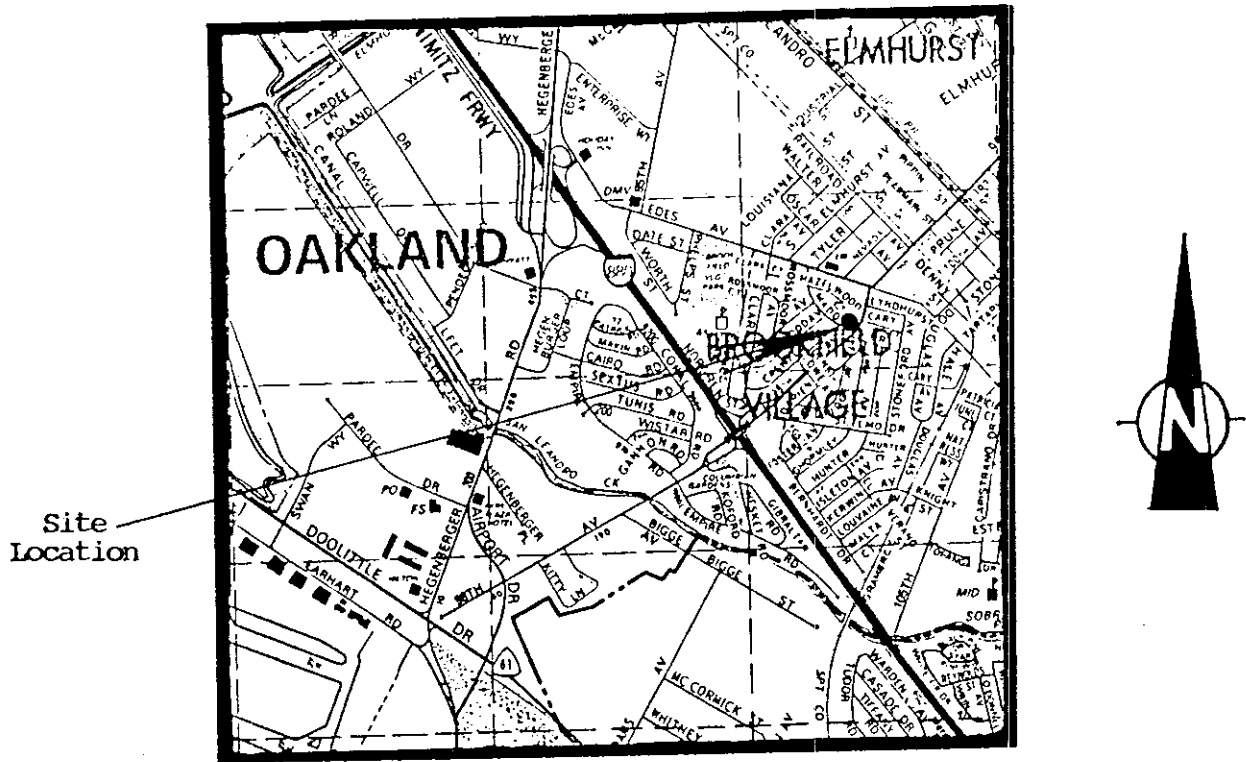
A. TPHd, TPHg, BTEX and TOG Results

Date	Well No.	TPHd	TPHg	B	T	E	X	TOG
4/10/95	STMW-1	0.067	13	0.0059	0.0069	0.15	0.25	NA
	STMW-2	0.054	ND	ND	ND	ND	ND	NA
	STMW-3	ND	ND	ND	ND	ND	ND	15

B. Cadmium, Chromium, Lead, Nickel and Zinc Results

Date	Well No.	Cd	Cr	Pb	Ni	Zn
4/10/95	STMW-1	NA	NA	NA	NA	NA
	STMW-2	NA	NA	NA	NA	NA
	STMW-3	ND	ND	ND	ND	ND

TPHd - Total Petroleum Hydrocarbons as diesel
 TPHg - Total Petroleum Hydrocarbons as gasoline
 BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
 ND - Not Detected (Below Laboratory Detection Limit)
 NA - Not Analyzed

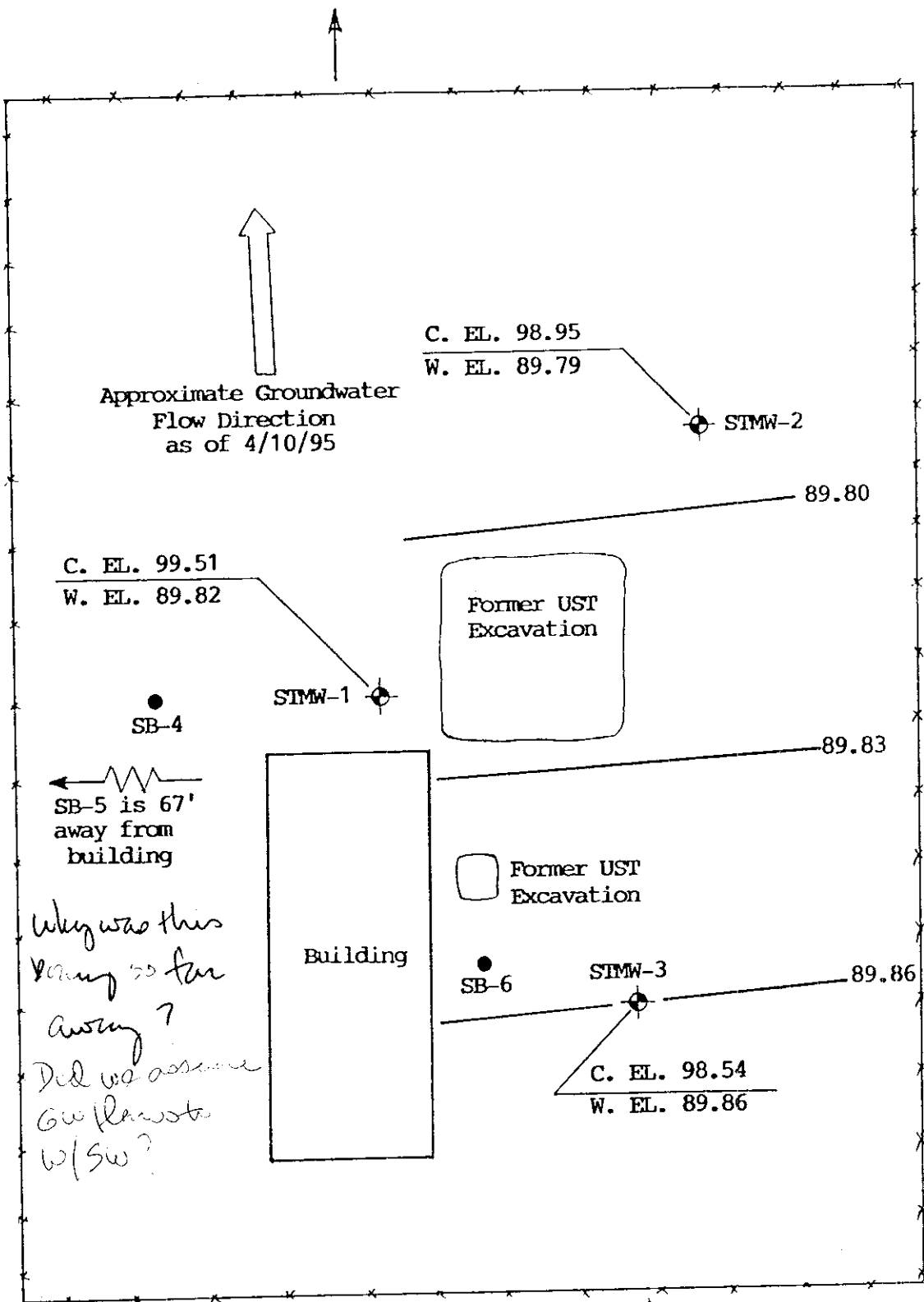


Thomas Brothers Map 1993 Edition
San Francisco, Alameda
and Contra Costa Counties

Page 22 E3

Figure 1

EDES ST.



98TH AVE.

Monitoring Well
Soil Boring
C. EL. Casing Elevation
W. EL. Water Elevation

MADDUX DR.

SCALE: 1"=20'

Figure 2

*Why was this boring so far away?
Did we assume GW flow w/SW?*

DRILLING AND SOIL SAMPLING PROCEDURE

A Mobile drill rig B-40L, using a continuous, solid-flight, hollow stem auger was used in drilling the soil borings to the desired depths.

Prior to drilling, all drilling equipment (auger, pin, drilling head) were thoroughly steam-cleaned to minimize the possibility of cross-contamination and/or vertical migration of possible contaminants.

In addition, prior to obtaining each individual soil sample, all sampling tools, including the split-spoon sampler and brass liners were thoroughly washed in a Trisodium Phosphate (TSP) solution followed by a rinse in distilled water.

During the drilling operation, relatively undisturbed soil samples were taken from the required depth by forcing a 2-inch I.D. split-spoon sampler insert with a brass liner into the ground at various depths by means of a 140-lb. hammer falling 30-inches or by hydraulic forces.

The samplers were contained relatively undisturbed soil. In general, the first section of soil from the sampler (shoe) was used in the field for lithologic inspection and evidence of contamination. The selected brass liner was immediately trimmed, the ends of the brass liner were covered tightly with aluminum foil and

plastic caps, sealed with tape, labelled, placed in a plastic bag and stored in a cold ice chest in order to minimize the escape of any volatiles present in the samples. Soil samples for analysis were then sent to a state-certified hazardous waste laboratory accompanied by a chain-of-custody record.

Soil samples collected at each sampling interval were inspected for possible contamination (odor or peculiar colors). Soil vapor concentrations was measured in the field by using a Photoionization Detector (PID), PhotoVac Tip Air Analyzer. The soil sample was sealed in a Zip-Loc plastic bag and placed in the sun to enhance volatilization of the hydrocarbons from the sample. The purpose of this field analysis is to qualitatively determine the presence or absence of hydrocarbons and to establish which soil samples will be analyzed at the laboratory. The data was recorded on the drilling log at the depth corresponding to the sampling point.

Other soil samples may be collected to document the stratigraphy and estimate relative permeability of the subsurface materials.

Soil tailings that are obtained during drilling are stored at the site, pending the analytical test results to determine proper disposal.

MONITORING WELL INSTALLATION

The boreholes for the monitoring wells were hand augered with a diameter of at least two inches larger than the casing outside diameter (O.D.).

The monitoring wells were cased with threaded, factory-perforated and blank, schedule 40 P.V.C. The perforated interval consisted of slotted casing, generally 0.010 to 0.040 inch wide by 1.5 inch long slot size, with 42 slots per foot (slots which match formation grain size as determined by field grain-size distribution analysis). A P.V.C. cap was fastened to the bottom of the casing (no solvents, adhesive, or cements were used), the well casing was thoroughly washed and steam-cleaned.

After setting the casing inside the borehole, kiln-dried sand or gravel-filter material was poured into the annular space to fill from the bottom of the boring to two feet above the perforated interval. A one to two feet thick bentonite plug was placed above this filter material to prevent grout from infiltrating down into the filter material. Approximately one to two gallons of distilled water were added to hydrate the bentonite pellets. Then the well was sealed from the top of the bentonite seal to the surface with concrete or neat cement containing about 5% bentonite (see Well Construction Detail).

File No. 10-93-570-ST

To protect the well from vandalism and surface water contamination, Christy boxes with a special type of Allen screw were installed around the well head, (for wells in parking lots, driveways and building areas). Steel stove pipes with padlocks were usually set over well-heads in landscaped areas.

In general, groundwater monitoring wells extend to the base of the upper aquifer, as defined by the consistent (less than 5 feet thick) clay layer below the upper aquifer, or at least 10 to 15 feet below the top of the upper aquifer, whichever is shallower. The wells do not extend through the laterally extensive clay layer below the upper aquifer. The wells are terminated one to two feet into such a clay layer.

WELL DEVELOPMENT

For all newly installed groundwater monitoring wells, the well casing, filter pack and adjacent formations were cleared of disturbed sediment and water.

Well development techniques included pumping, bailing, surging, swabbing, jetting, flushing or air lifting by using a stainless steel or Teflon bailer, a submersible stainless steel pump, or air lift pump. The well development continued until the discharged water appeared to be relatively free of all turbidity.

All water and sediment generated by well development were collected in 55-gallon steel drums (Department of Transportation approved), closed-head (17-H) for temporarily storage, and were then disposed of properly, depending on analytical results.

To assure that cross-contamination did not occur between wells, all well development tools were steam-cleaned or thoroughly washed in a Trisodium Phosphate (TSP) solution followed by a rinse in distilled water before each well development.

GROUNDWATER SAMPLING

Prior to collection of groundwater samples, all of the sampling equipment (i.e. bailer, cables, bladder pump, discharge lines and etc...) were cleaned by pumping TSP water solution followed by distilled water.

Prior to purging, the well "Water Sampling Field Survey Forms" was filled out (depth to water and total depth of water column were measured and recorded). The well was then bailed or pumped to remove four to ten well volumes or until the discharged water temperature, conductivity and pH stabilized. "Stabilized" is defined as three consecutive readings within 15% of one another.

The groundwater sample was collected when the water level in the well recovered to 80% of its static level.

Forty milliliter (ml.), glass volatile organic analysis (VOA) vials with Teflon septa were used as sample containers. The groundwater sample was decanted into each VOA vial in such a manner that there was a meniscus at the top. The cap was quickly placed over the top of the vial and securely tightened. The VOA vial was then inverted and tapped to see if air bubbles were present. If none were present, the sample was labeled and refrigerated for delivery under chain-of-custody to the laboratory. The label information would include a sample identification number, job identification number, date, time, type of analysis requested, and the sampler's name.

Logged By: Robert Baker		Exploratory Boring Log		Boring No. STMW-1	
Date Drilled: 3/06/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L			Sampling Method		
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1				CH	2-inch asphalt on 4-inch baserock. Very dark grey fat clay with sand, damp, stiff, 15% subangular medium to coarse grained sand. Munsell Soil Color: 5YR 3/1
2					
3					
4					
5				GC	Dark brown clayey gravel with sand, damp, medium dense, 25% lean clay fines, 30% fine to coarse grained sand, 45% gravel clasts to 2-inch diameter. Munsell Soil Color: 10YR 3/3
6	STMW-1-6		325 psi		
7					
8					
9					▼ Static groundwater encountered at 9½ feet.
10				CH	Grey with yellowish-brown mottles fat clay, damp, very stiff, moderate gasoline odor, rainbow sheen on water. Munsell Soil Color: 10YR 5/1 with 5/6
11	STMW-1-11		325 psi		
12					▽ First groundwater encountered at 12 feet.
13					
14					
15					
16					
Remarks					

File No. 10-93-570-ST

Logged By: Robert Baker		Exploratory Boring Log		Boring No. SIMW-1	
Date Drilled 3/06/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L				Sampling Method	
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/Ft.	Unified Soil Classification	DESCRIPTION
17				CH	Grey with yellowish-brown mottles fat clay, damp, very stiff, moderate gasoline odor, rainbow sheen on water. Munsell Soil Color: 10YR 5/1 with 5/6
18					Caved to 18'4".
19					
20					Boring terminated at 20 feet.
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
Remarks					

Logged By: Robert Baker		Exploratory Boring Log		Boring No. STMW-2	
Date Drilled: 3/06/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L			Sampling Method		
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1				CH	2-inch asphalt on 4-inch baserock. Very dark grey fat clay with sand, damp, stiff, 15% medium grained sand. Munsell Soil Color: 5YR 3/1
2					
3					
4					
5				GC	Brown clayey gravel with sand, damp to moist, medium dense, 25% clayey fines, 30% fine to coarse grained sand, 45% subangular gravel clasts to 1½-inch diameter. Munsell Soil Color: 10YR 4/3
6	STMW-2-6		350 psi		
7					
8					
9					▼ Static groundwater encountered at 9½ feet.
10				CH	Greenish-grey fat clay, damp, stiff. Munsell Soil Color: 5GY 5/1
11	STMW-2-11		350 psi		
12					▽ First groundwater encountered at 12 feet.
13					
14					
15					
16					
Remarks					

Logged By: Robert Baker		Exploratory Boring Log		Boring No STMW-2	
Date Drilled: 3/06/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L			Sampling Method		
Depth, Ft.	Sample No	Field Test for Total Ionization	Penetration Resistance Blows/Ft.	Unified Soil Classification	DESCRIPTION
17				CH	Greenish-grey fat clay, damp, stiff. Munsell Soil Color: 5GY 5/1
18				CH	Light olive-brown sandy fat clay with gravel, moist, stiff, 20% medium grained sand, 10% gravel clasts to 2-inch diameter.
19					Munsell Soil Color: 5YR 3/3
20					Caved to 20 feet.
21					
22					Boring terminated at 22 feet.
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
Remarks					

Logged By: Robert Baker	Exploratory Boring Log	Boring No. STMW-3
Date Drilled: 3/06/95	Approx. Elevation	Boring Diameter 8-inch
Drilling Method Mobile drill rig B-40L		Sampling Method

Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1				CH	2-inch asphalt on 4-inch baserock. Very dark greyish-brown sandy fat clay, damp, stiff, 25% medium grained sand. Munsell Soil Color: 10YR 3/2
2					Becomes dark greyish-brown sandy fat clay, damp, stiff, 25% medium grained sand.
3					Munsell Soil Color: 10YR 4/3
4					
5					Becomes gravelly.
6	STMW-3-6		375 psi		
7					
8				CH	Greenish-grey fat clay, moist, stiff. Munsell Soil Color: 5GY 6/1
9					
10					
11	STMW-3-11		350 psi		
12					<u>∇</u> First groundwater encountered at 12 feet.
13					
14					
15				CH	Brown sandy fat clay with gravel, moist, stiff, 20% medium grained sand, 20% gravel clasts to 1-inch diameter. Munsell Soil Color: 10YR 5/3
16					

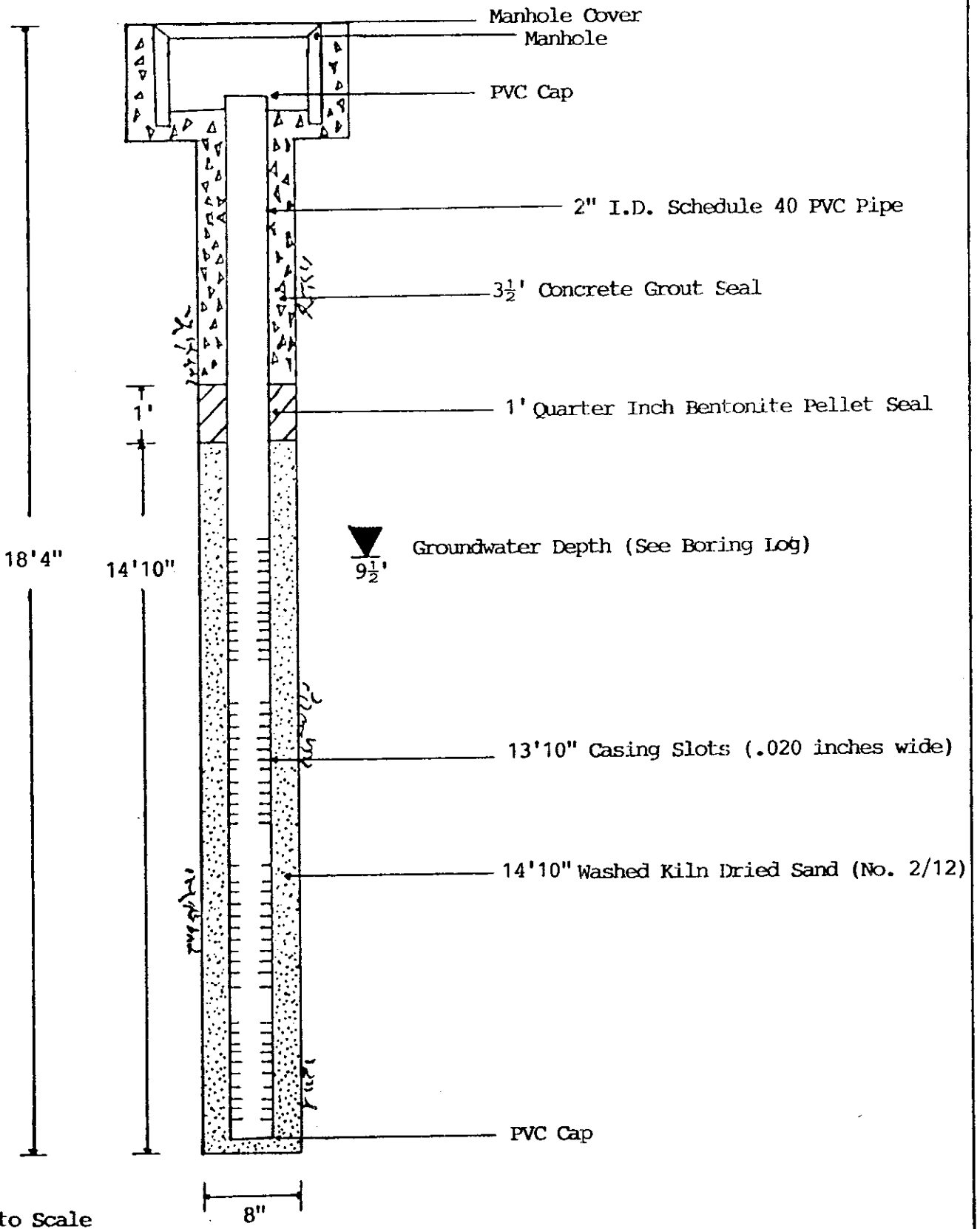
Remarks

Logged By: Robert Baker		Exploratory Boring Log			Boring No. STMW-3	
Date Drilled 3/06/95		Approx. Elevation			Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L				Sampling Method		
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/Ft.	Unified Soil Classification	DESCRIPTION	
17				CH	Brown sandy fat clay with gravel, moist, stiff, 20% medium grained sand, 20% gravel clasts to 1-inch diameter. Munsell Soil Color: 10YR 5/3	
18						
19						
20						
21					Caved to 21 feet.	
22						
23						
24					Boring terminated at 24 feet.	
25						
26						
27						
28						
29						
30						
31						
32						
Remarks						

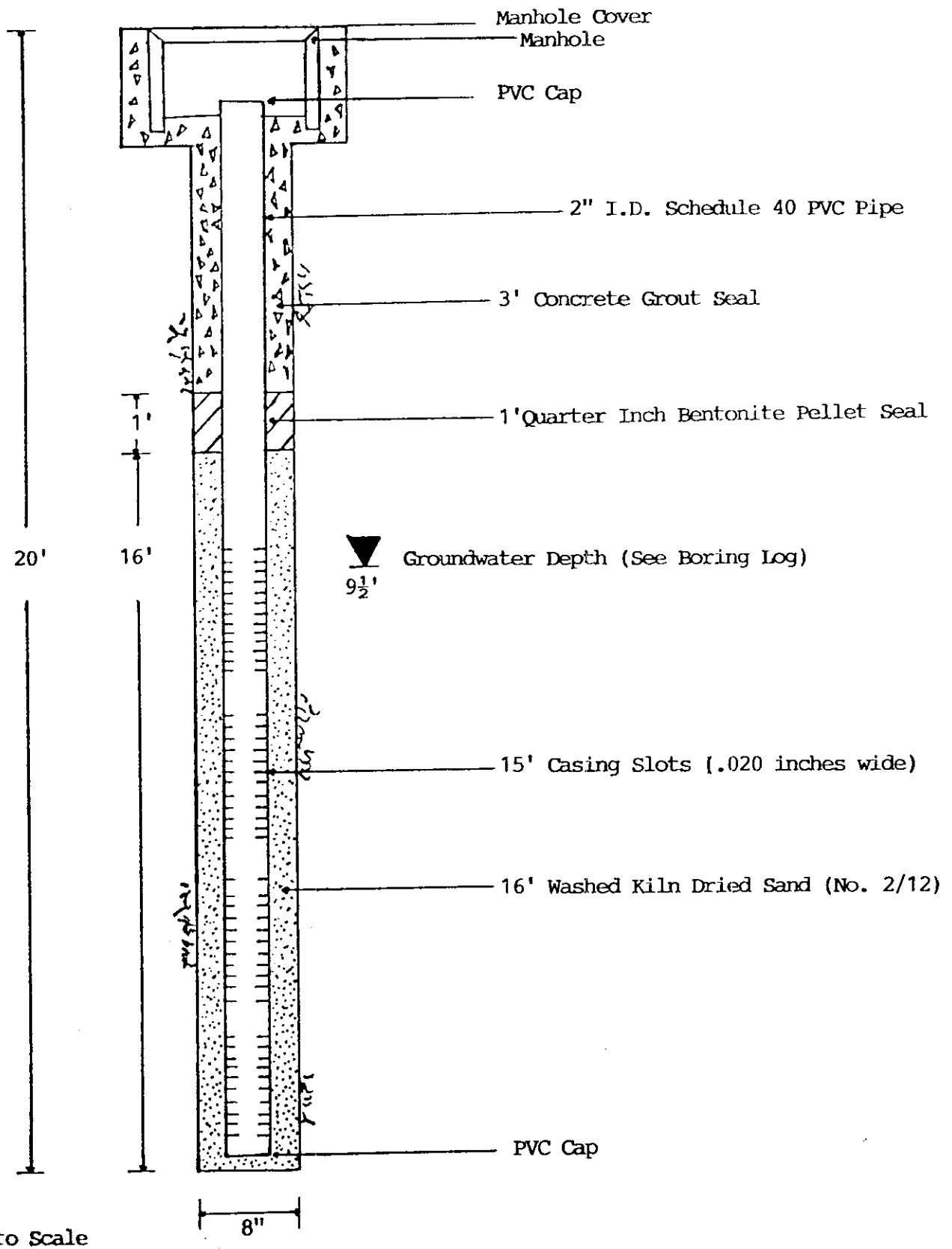
Logged By: Robert Baker		Exploratory Boring Log		Boring No. SB-4	
Date Drilled: 3/07/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L			Sampling Method		
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1				CH	2-inch asphalt on 4-inch baserock. Black fat clay with sand, damp, stiff, 15% fine to medium grained sand. Munsell Soil Color: 10YR 2/1
2					
3				GC	Dark brown clayey gravel with sand, damp, medium dense, 40% clayey fines, 25% fine to coarse grained sand, 35% subangular gravel clasts to 1-inch diameter. Munsell Soil Color: 10YR 3/3
4					
5					
6	SB-4-6		350 psi	SP-SC	Dark brown poorly graded sand with clay, damp to moist, medium dense, 90% fine to medium grained sand, 10% clayey fines. Munsell Soil Color: 10YR 3/3
7					
8				CH	Dark yellowish-brown with grey mottles fat clay, damp, stiff, moderate to strong gasoline odor at 10 feet sample. Munsell Soil Color: 10YR 4/4 with 5/1
9					▼ Static groundwater encountered at 9½ feet.
10					
11	SB-4-11		350 psi		Boring terminated at 11½ feet.
12					
13					
14					
15					
16					
Remarks					

Logged By: Robert Baker		Exploratory Boring Log		Boring No. SB-5	
Date Drilled: 3/07/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L			Sampling Method		
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1				CH	2-inch asphalt on 4-inch baserock. Black fat clay with sand, damp, stiff, 15% fine to medium grained sand. Munsell Soil Color: 10YR 2/1
2					
3				GC	Very dark greyish-brown clayey gravel with sand, damp, medium dense, 30% clayey fines, 40% gravel clasts to 1-inch diameter, 30% fine to coarse grained sand. Munsell Soil Color: 10YR 3/2
4					
5					
6	SB-5-6		350 psi	CH	Very dark greyish-brown fat clay, damp, very stiff. Munsell Soil Color: 10YR 3/2
7					
8				CH	Greenish-grey fat clay, moist, stiff. Munsell Soil Color: 5GY 5/1
9					▼ Static groundwater encountered at 9½ feet.
10					
11	SB-5-11		350 psi		Slight gasoline odor in sample. Boring terminated at 11½ feet.
12					
13					
14					
15					
16					
Remarks					

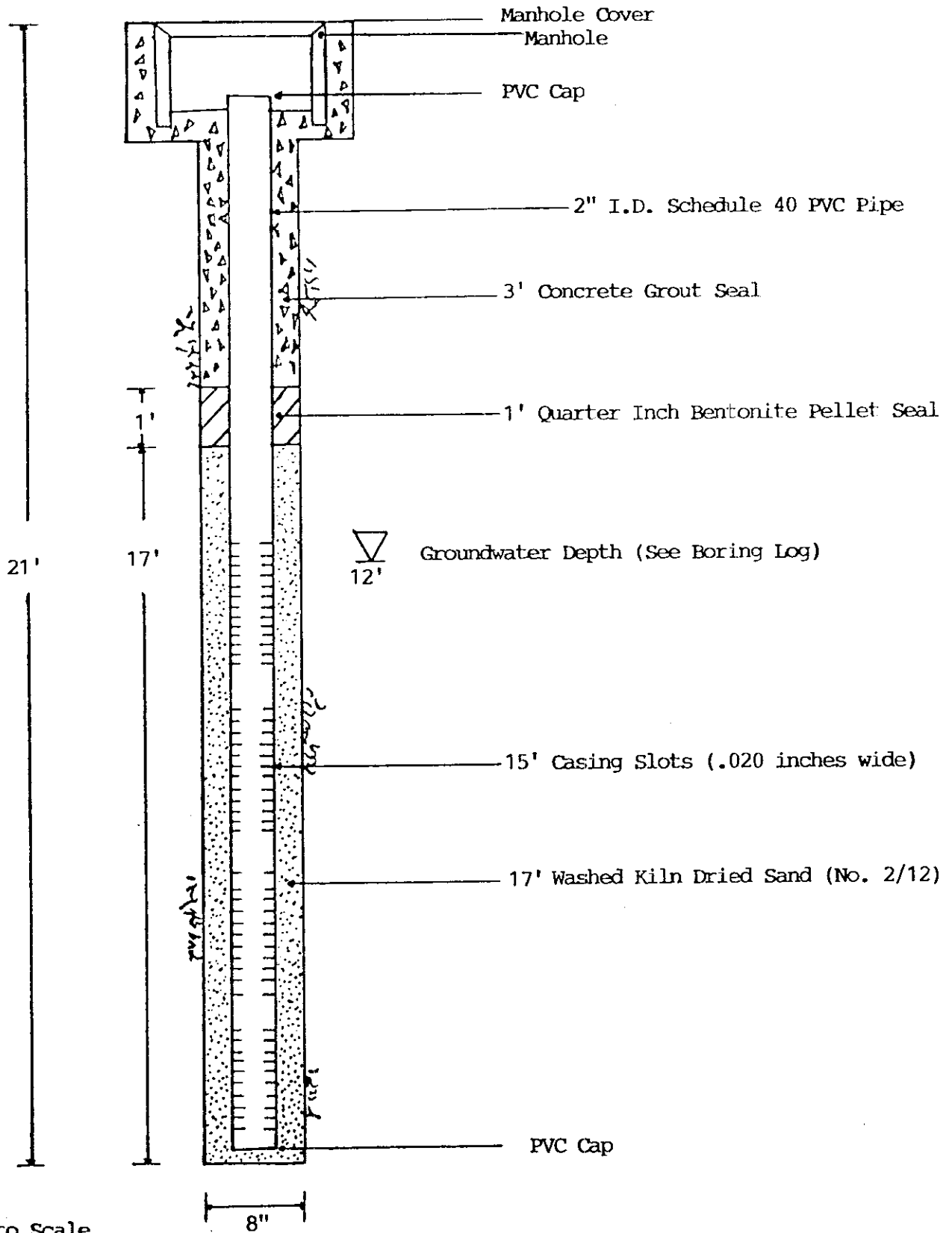
Logged By: Robert Baker		Exploratory Boring Log		Boring No. SB-6	
Date Drilled: 3/07/95		Approx. Elevation		Boring Diameter 8-inch	
Drilling Method Mobile drill rig B-40L			Sampling Method		
Depth, Ft.	Sample No.	Field Test for Total Ionization	Penetration Resistance Blows/6"	Unified Soil Classification	DESCRIPTION
1				CH	2-inch asphalt on 4-inch baserock.
2					Black fat clay, damp, stiff, with 10% subangular coarse grained sand.
3				CH	Munsell Soil Color: 10YR 2/1
4					Dark greyish-brown sandy fat clay, moist, stiff, 40% fine to coarse grained angular sand.
5					Munsell Soil Color: 10YR 4/2
6	SB-6-6		350 psi		
7					
8				CH	Greenish-grey fat clay, moist, stiff.
9					Munsell Soil Color: 5GY 5/1
10					▼ Static groundwater encountered at 9.8 feet.
11	SB-6-11		350 psi		
12					Boring terminated at 11½ feet.
13					
14					
15					
16					
Remarks					



SIMW-1



SIMW-2



SIMW-3



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

March 10, 1995

PEL # 9503019

SOIL TECH ENGINEERING

Attn: Robert Baker

Re: Twelve soil samples for Gasoline/BTEX analysis.

Project name: 525 98th Ave

Project number: 570

Date sampled: Mar 07, 1995

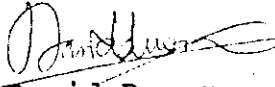
Date submitted: Mar 07, 1995

Date extracted: Mar 07-09, 1995

Date analyzed: Mar 07-09, 1995

RESULTS:

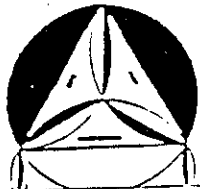
SAMPLE I.D.	Gasoline (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylene (ug/Kg)
STMW-1-6	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-1-11	46	34	36	90	210
STMW-2-6	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-2-11	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-3-6	N.D.	N.D.	N.D.	N.D.	N.D.
STMW-3-11	N.D.	N.D.	N.D.	N.D.	N.D.
SB-4-6	N.D.	N.D.	N.D.	N.D.	N.D.
SB-4-11	34	44	39	36	97
SB-5-6	1.3	N.D.	N.D.	6.4	17
SB-5-11	25	30	27	11	44
SB-6-6	N.D.	N.D.	N.D.	N.D.	N.D.
SB-6-11	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked					
Recovery	99.7%	108.9%	91.2%	100.3%	109.4%
Detection limit	1.0	5.0	5.0	5.0	5.0
Method of Analysis	5030 / 8015	8020	8020	8020	8020


David Duong
Laboratory Director

CHAIN OF CUSTODY RECORD

PROJ. NO.		NAME																			
570		52598 TH Ave																			
SAMPLERS (Signature)				Robert Baker				CON-TAINER		ANALYSES REQUESTED (2)		7/1/8		+3/1/EX						REMARKS	
NO.	DATE	TIME	SOIL	WATER	LOCATION																
1	3/6	11:55	X		STMW-1-6	1	✓														
2	3/6	12:05	X		STMW-1-11	1	✓														
3	3/6	13:35	X		STMW-2-6	1	✓														
4	3/6	13:40	X		STMW-2-11	1	✓														
5	3/6	14:40	X		STMW-3-6	1	✓														
6	3/6	14:45	X		STMW-3-11	1	✓														
7	3/7	10:30	X		SB-4-6	1	✓														
8	3/7	10:40	X		SB-4-11	1	✓														
9	3/7	11:00	X		SB-5-6	1	✓														
10	3/7	11:10	X		SB-5-11	1	✓														
11	3/7	11:45	X		SB-6-6	1	✓														
12	3/7	11:55	X		SB-6-11	1	✓														

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Robert Baker	3/7/8 15:50	[Signature]			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
		[Signature]			
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
	3/7/8 16:10	PEL			



SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406

CHAIN OF CUSTODY RECORD

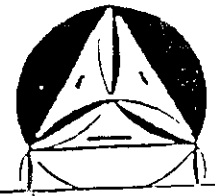
PROJ NO. 570	NAME 52598TH Ave
SAMPLERS: (Signature) Robert Baker	

PEL # 9503019
INV # 25743

ANALYSES REQUESTED (2)
TPH
X-BTEX

NO.	DATE	TIME	SOIL	WATER	LOCATION	CON-TAINER						
1	3/6	11:55	X		STMW-1-6	1	✓					
2	3/6	12:05	X		STMW-1-11	1	✓					
3	3/6	13:35	X		STMW-2-6	1	✓					
4	3/6	13:40	X		STMW-2-11	1	✓					
5	3/6	14:40	X		STMW-3-6	1	✓					
6	3/6	14:45	X		STMW-3-11	1	✓					
7	3/7	10:30	X		SB-4-6	1	✓					
8	3/7	10:40	X		SB-4-11	1	✓					
9	3/7	11:00	X		SB-5-6	1	✓					
10	3/7	11:10	X		SB-5-11	1	✓					
11	3/7	11:45	X		SB-6-6	1	✓					
12	3/7	11:55	X		SB-6-11	1	✓					

Relinquished by: (Signature) Robert Baker	Date / Time 3/7/95 15:50	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature) THOMAS	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time 3/7/95 4:10	Received for Laboratory by: (Signature) PEL	Date / Time	Remarks	



SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

April 15, 1995

PEL # 9504027

SOIL TECH ENGINEERING

Attn: Noori Ameli

Re: Three water samples for Gasoline/BTEX, Diesel, and Oil & Grease analyses.

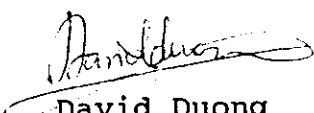
Project number: 525 98th Ave., - Oakland
Project number: 10-93-570-ST

Date sampled: Apr 10, 1995
Date extracted: Apr 11-15, 1995

Date submitted: Apr 11, 1995
Date analyzed: Apr 11-15, 1995

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylene (ug/L)	Oil & Grease (mg/L)
STMW-1	13000	67	5.9	6.9	150	250	---
STMW-2	N.D.	54	N.D.	N.D.	N.D.	N.D.	---
STMW-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	15
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	89.8%	84.0%	93.5%	92.1%	87.1%	102.6%	---
Detection limit	50	50	0.5	0.5	0.5	0.5	0.5
Method of Analysis	5030 / 8015	3510 / 8015	602	602	602	602	5520 C & F


David Duong
Laboratory Director



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

April 13, 1995

PEL # 9504027

SOIL TECH ENGINEERING

Attn: Noori Ameli

Re: One water sample for Cadmium, Chromium, Lead, Nickel, and Zinc analyses.

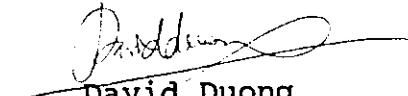
Project name: 525 98th Ave., - Oakland
Project number: 10-93-570-ST

Date sampled: Apr 10, 1995
Date extracted: Apr 11-13, 1995

Date submitted: Apr 11, 1995
Date analyzed: Apr 11-13, 1995

RESULTS:

SAMPLE I.D.	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Nikel (mg/L)	Zinc (mg/L)
STMW-3	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.
Detection limit	0.1	0.1	0.05	0.1	0.1
Method of Analysis	7130	7190	7420	7520	7950


David Duong
Laboratory Director

CHAIN OF CUSTODY RECORD

PROJ. NO. 10-93-570-ST		NAME 525 98th. Av. OAKLAND																																							
SAMPLERS (Signature) <i>[Signature]</i>																																									
NO.	DATE	TIME	SOIL	WATER	LOCATION	CON-TAINER	ANALYSES REQUESTED (2)		TPHG/BTE&X		TPMD		TO&G		Cd, Cr, Pb, Zn, Ni		REMARKS																								
1	4/10/95	13 ⁵⁰		✓	STMW-1	2	✓	✓																																	
2	4/10/95	12 ³⁵		✓	STMW-2	2	✓	✓																																	
3	4/10/95	13 ¹⁰		✓	STMW-3	4	✓	✓	✓	✓																															
<table border="1"> <tr> <td>Relinquished by: (Signature) <i>[Signature]</i></td> <td>Date / Time 4/11/95 12⁴⁵</td> <td>Received by: (Signature)</td> <td>Relinquished by: (Signature)</td> <td>Date / Time</td> <td>Received by: (Signature)</td> </tr> <tr> <td>Relinquished by: (Signature)</td> <td>Date / Time</td> <td>Received by: (Signature)</td> <td>Relinquished by: (Signature)</td> <td>Date / Time</td> <td>Received by: (Signature)</td> </tr> <tr> <td>Relinquished by: (Signature)</td> <td>Date / Time</td> <td>Received for Laboratory by: (Signature) <i>[Signature]</i></td> <td>Date / Time 04/11/95 12:45 PM</td> <td colspan="2">Remarks</td> </tr> </table>																								Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 4/11/95 12 ⁴⁵	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) <i>[Signature]</i>	Date / Time 04/11/95 12:45 PM	Remarks	
Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 4/11/95 12 ⁴⁵	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)																																				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)																																				
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) <i>[Signature]</i>	Date / Time 04/11/95 12:45 PM	Remarks																																					



SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406

CHAIN OF CUSTODY

PROJ. NO. 10-93-572-ST 525 NAME 98th. Av. OAKLAND

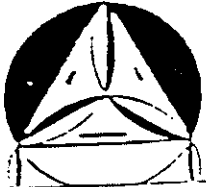
SAMPLERS (Signature) *[Signature]*

ANALYSES REQUESTED
 TPHG/BTE&X
 TPHD
 TO&G
 Cd, Cr, Pb, Zn, Ni

PEL # 9504027
 INV # 25850

NO.	DATE	TIME	SOIL	WATER	LOCATION	CON-TAINER									
1	4/10/95	13 ⁵⁰		✓	STMW-1	2	✓	✓							
2	4/14/95	12 ³⁵		✓	STMW-2	2	✓	✓							
3	4/10/95	13 ¹⁵		✓	STMW-3	4	✓	✓	✓	✓					

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 4/11/95 12 ⁴⁵	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) <i>[Signature]</i>	Date / Time 04/11/95 12:45 PM	Remarks	



SOIL TECH ENGINEERING
 Soil, Foundation and Geological Engineers

298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406

OCT-24-94 MON 8:44

ZONE 7 WATER AGENCY

FAX NO. 5104623914



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2000
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 525 98th Av.
OAKLAND CA

PERMIT NUMBER 94680
LOCATION NUMBER _____

CLIENT

Name NISSAN SAIDIAN
Address 2733 Medallion Ct. Voice (510) 835-1176
City Castro Valley CA Zip 94552

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT

Name Alpha Geo Services
Address 298 Brockaw Rd. Fax (408) 988-3343
City SANTA CLARA Voice (408) 288-1032
Zip 95050

TYPE OF PROJECT

Well Construction	_____	Geotechnical Investigation	_____
Cathodic Protection	_____	General	_____
Water Supply	_____	Contamination	_____
Monitoring	<u>X</u>	Well Destruction	_____

PROPOSED WATER SUPPLY WELL USE

Domestic	_____	Industrial	_____	Other	<u>X</u>
Municipal	_____	Irrigation	_____		

DRILLING METHOD:

Rotary	_____	Air Rotary	_____	Auger	<u>X</u>
Table	_____	Other	_____		

DRILLER'S LICENSE NO. 507520 C57

WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum	
Casing Diameter	<u>2</u> in.	Depth	<u>25</u> ft.
Surface Seal Depth	<u>8</u> ft.	Number	<u>3</u>

GEOTECHNICAL PROJECTS

Number of Borings	<u>5</u>	Maximum	
Hole Diameter	<u>8</u> in.	Depth	<u>15</u> ft.

ESTIMATED STARTING DATE 11/7/94
ESTIMATED COMPLETION DATE 11/8/94

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-88.

APPLICANT'S SIGNATURE A. Saidian Date 10/20/94

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 Driller's 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.

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 60 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.

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.

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

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 21 Oct 94
Wyman Hong

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

**STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)**

REMOVED