

**ADDITIONAL SUBSURFACE SOIL
INVESTIGATION AT THE PROPERTY
LOCATED AT 2351 SHORELINE DRIVE
ALAMEDA, CALIFORNIA
JUNE 25, 1998**

**PREPARED FOR:
MR. MURRAY STEVENS
KAMUR INDUSTRIES, INC.
2351 SHORELINE DRIVE
ALAMEDA , CALIFORNIA 94501**

**BY:
SOIL TECH ENGINEERING, INC.
1761 JUNCTION AVENUE
SAN JOSE, CALIFORNIA 95112**

SOIL TECH ENGINEERING, INC.

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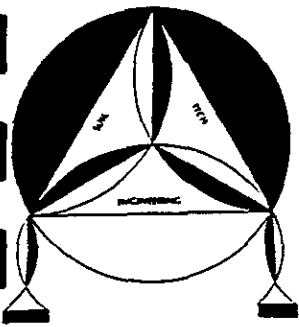
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SOIL TECH ENGINEERING, INC.

Environmental & Geotechnical Consultants

1761 JUNCTION AVENUE, SAN JOSE, CALIFORNIA 95112

Tel.: (408) 441-1881

Fax: (408) 441-0705

June 25, 1998

File No. 8-90-418-SI

Mr. Murray Stevens
Kamur Industries, Inc.
2351 Shoreline Drive
Alameda, California 94501

**SUBJECT: ADDITIONAL SUBSURFACE SOIL
INVESTIGATION AT THE PROPERTY**
Located at 2351 Shoreline Drive, in
Alameda, California

Dear Mr. Stevens:

Enclosed is a copy of the additional subsurface soil investigation report for the property located at 2351 Shoreline Drive, in Alameda, California.

The report describes the results of additional field activities conducted to further evaluate the extent and concentrations of dissolved hydrocarbons in the soil in the vicinity of the former location of underground storage tanks that were removed in July 1980.

The additional subsurface soil investigation was initiated at your authorization in compliance with the request of Alameda County Health Care Services Agency in a letter from Ms. Eva Chu, dated February 3, 1998.

File No. 8-90-418-SI

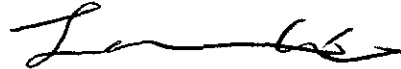
If you have any questions or require additional information, please feel free to contact our office at (408) 441-1881.

Sincerely,

SOIL TECH ENGINEERING, INC.



FRANK HAMEDI-FARD
GENERAL MANAGER



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

**ADDITIONAL SUBSURFACE SOIL
INVESTIGATION AT THE PROPERTY
LOCATED AT 2351 SHORELINE DRIVE
ALAMEDA, CALIFORNIA
JUNE 25, 1998**

INTRODUCTION:

This report presents the results of an additional subsurface soil investigation conducted by Soil Tech Engineering, Inc. (STE) for the property located at 2351 Shoreline Drive, in Alameda, California (Figure 1). The purpose of this investigation was to characterize the extent and magnitude of dissolved petroleum hydrocarbons at the subject site subsurface soil. The additional subsurface investigation was conducted in direct authorization of Mr. Murray Stevens in compliance with the request of Ms. Eva Chu with the Alameda County Health Care Services Agency (ACHCSA) in a letter dated February 3, 1998.

BACKGROUND:

The site is located at 2351 Shoreline Drive, Alameda, California (Figure 1). It is currently used as a car wash facility surrounded by a paved parking lot. The site was formerly used as a gasoline service station and a car wash.

In July 1990, three underground gasoline tanks (10,000 gallon each) were removed by Zacor Corporation. Soil sampling was conducted by Environmental Biosystems, Inc. (EBS). The analytical results of soil samples taken from beneath the underground storage tank showed high concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg) which ranged from 360 parts per million (ppm) to a maximum 9,500 ppm.

In addition to tank removal, EBS used a hand auger to conduct additional shallow soil sampling from the undisturbed area surrounding the former tank excavation. The depth of the soil sampling ranged from 5.1 to 7.1 feet below ground surface. The undisturbed soil analytical results showed moderate levels of TPHg and BTEX. No groundwater investigation was conducted by EBS.

Alameda County Health Care Services Agency-Department of Environmental Health (ACHCSA-DEH) requested a preliminary soil/groundwater investigation including the removal of contaminated soil and further delineation of the extent of petroleum hydrocarbons in the soil and groundwater.

In August 1990, Kamur Industries, Inc. retained STE to conduct further investigations as requested by the ACHCS-DEH. STE prepared a work plan (dated August 30, 1990) for conducting further investigation for local agency approval. STE performed a preliminary subsurface investigation in February and March 1991 which consisted of the following tasks:

- Task 1: Removed contaminated soil to the depth feasible and arranged for proper disposal.
- Task 2: Drilled ten exploratory borings.
- Task 3: Installed four monitoring wells.

The details of the preliminary subsurface investigation are described in STE's report entitled "Preliminary Subsurface Environmental Assessment at Kamur Industries, Inc., Car Wash...", dated July 2, 1991. The report recommended quarterly monitoring and sampling the four on-site wells.

In July 1991, quarterly groundwater monitoring and sampling of the four wells (STMW-1 to STMW-4) was initiated. Results of the first quarterly sampling are summarized in STE's report dated July 30, 1991. The second quarterly sampling was conducted in October 1991, and the results summarized in STE's report dated November 12, 1991. The third quarterly sampling was conducted on January 17, 1992, and the results summarized in STE's report dated February 5, 1992. The fourth quarterly sampling was conducted on April 27, 1992, and the results summarized in STE's report dated May 8, 1992.

On January 26, 1993, STE installed two additional monitoring wells (STMW-5 and STMW-6). The details of newly installed wells are described in STE's report entitled "Installation of Two Additional Monitoring Wells for Southshore Car Wash Property..." dated March 15, 1993.

On April 27, 1994, STE conducted quarterly monitoring and sampling at the subject site, and the results are summarized in STE's report entitled "Quarterly Groundwater Monitoring..." dated June 1, 1994.

STE conducted quarterly groundwater monitoring and sampling of 2 on-site wells (STMW-3 and STMW-5) on October 18, 1994. Monitoring well STMW-3 indicated low to moderate levels of TPHg and BTEX which the hydrocarbons contaminant levels in monitoring well STMW-5 were below laboratory detection limit. The details of this activities are presented in STE's report dated October 27, 1994.

On February 14, 1995, STE conducted quarterly groundwater monitoring and sampling of wells STMW-3 and STMW-6. The laboratory analytical results detected low to moderate levels of TPHg and BTEX in both of the wells while low levels of TOG concentrations were detected only in monitoring well STMW-3. The details of the field activities and laboratory results are summarized in STE's report entitled "Quarterly Groundwater Monitoring ..." dated February 22, 1995.

On February 17, 1995, monitoring well STMW-4 was decommissioned since it showed considerable damage and hence was incapable of serving the purpose of groundwater monitoring and sampling.

On May 9, 1995, STE conducted quarterly groundwater monitoring and sampling of wells STMW-3 and STMW-6. The details of the field activities and laboratory results are summarized in STE's report dated June 12, 1995.

On November 10, 1995, STE conducted quarterly groundwater monitoring and sampling of wells STMW-1 and STMW-6. The details of the field activities and laboratory results are presented in STE's report dated November 17, 1995.

On December 20, 1996, STE conducted groundwater monitoring and sampling of monitoring wells STMW-1, STMW-2, STMW-3, STMW-5 and STMW-6. The details of groundwater monitoring and sampling are described in STE's report entitled "Groundwater Monitoring and Sampling..." dated January 30, 1997.

FIELD ACTIVITIES:

SOIL BORING:

STE initiated the field work for this phase of investigation on March 30, 1998. Field work included drilling of five exploratory soil borings, soil sampling and chemical analyses of soil samples. The approximate location the soil borings are shown in Figure 2.

Prior to initiating of drilling, USA Underground Alert was notified for clearances. The five exploratory boring was advanced on March 30, 1998. Drilling and soil sampling were conducted in accordance with STE's Standard Operating Procedures (SOP) included in Appendix "C" in this report

Soil boring #1 was drilled to a depth of approximately 4 feet below grade with mobile drill rig B-40L. Due to inaccessibility, soil borings #2, #3, #4 and #5 were drilled by hand auger to the depth of approximately 4 feet. During drilling operations, soil samples were collected at approximately 3 and 4 feet below grade.

Each soil sample was labeled with an identification number, sealed and stored in a chilled ice chest until delivery to a certified analytical laboratory.

SOIL SAMPLING:

A total of 5 soil samples were collected from the five 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, Total Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE).

ANALYTICAL RESULTS:

All five soil samples detected Total Petroleum Hydrocarbons (TPHg), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE) concentrations below laboratory detection limit. Due to the peculiar odor in the samples, one of the sample (#2-4) was also analyzed for EPA Method 8010. The laboratory results are summarized in Table 1.

SUMMARY:

The data collected during our additional subsurface soil investigation indicated that all soil samples detected TPHg, BTEX and MTBE concentrations below laboratory detection limit. Soil sample #2-4 also detected EPA Method 8010 below laboratory detection limit.

RECOMMENDATION:

For the following reasons, the site can be categorized as a low risk site:

- 1) Recent additional site investigation did not indicate presence of TPHg, BTEX and MTBE in the soil samples beneath the site. The five soil samples were collected in the suspected areas where elevated levels of petroleum chemicals had been reported previously.
- 2) The results site specific risk assessment conducted by SOMA Environmental Engineering did not indicate the unacceptable human health risks to the current and future site workers.
- 3) The results of chemical fate and transport modeling conducted by SOMA Environmental Engineering indicated that none of the petroleum chemical plume beneath the site will be reach to the nearby lagoon within the next 30 years. Therefore, it was concluded that the plume of petroleum chemicals is not an expanding plume.
- 4) The petroleum chemical plume beneath the site has not and will not impact beneficial use of water resources in the conceivable future.

Based on the above facts, the subject site is recommended for no further action unless require by the state and local regulatory agencies.

This report must be submitted to the Alameda County Health Care Services Agency (ACHCSA).

LIMITATIONS AND UNIFORMITY OF CONDITIONS:

The services of soil sampling for pollution on this project was a direct request by Soil Tech Engineering, Inc.'s client.

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.

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

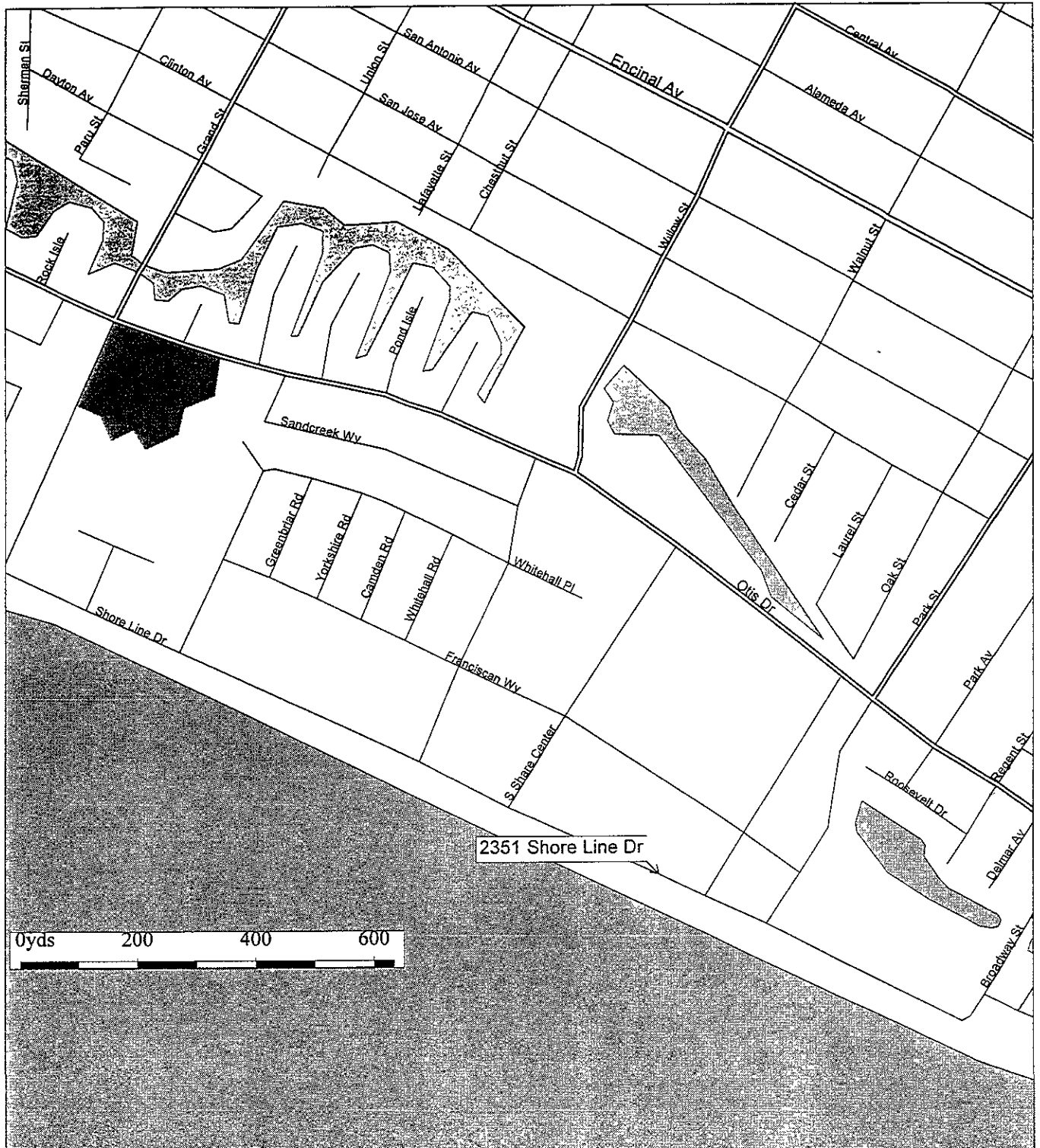
A P P E N D I X "A"

TABLE 1
SOIL SAMPLES ANALYTICAL RESULTS
IN MILLIGRAMS PER KILOGRAM (mg/Kg)

Date	Sample Number	Depth feet	TPHg	B	T	E	X	MTBE	8010
3/30/98	1-4	4	ND	ND	ND	ND	ND	ND	NA
	2-4	4	ND	ND	ND	ND	ND	ND	ND
	3-3	3	ND	ND	ND	ND	ND	ND	NA
	4-3	3	ND	ND	ND	ND	ND	ND	NA
	5-3	3	ND	ND	ND	ND	ND	ND	NA

TPHg - Total Petroleum Hydrocarbons as gasoline
 BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
 MTBE - Methyl Tertiary Butyl Ether
 ND - Not Detected (Below Laboratory Detection Limit)
 NA - Not Analyzed

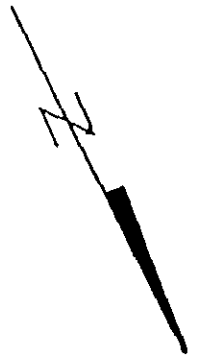
A P P E N D I X "B"



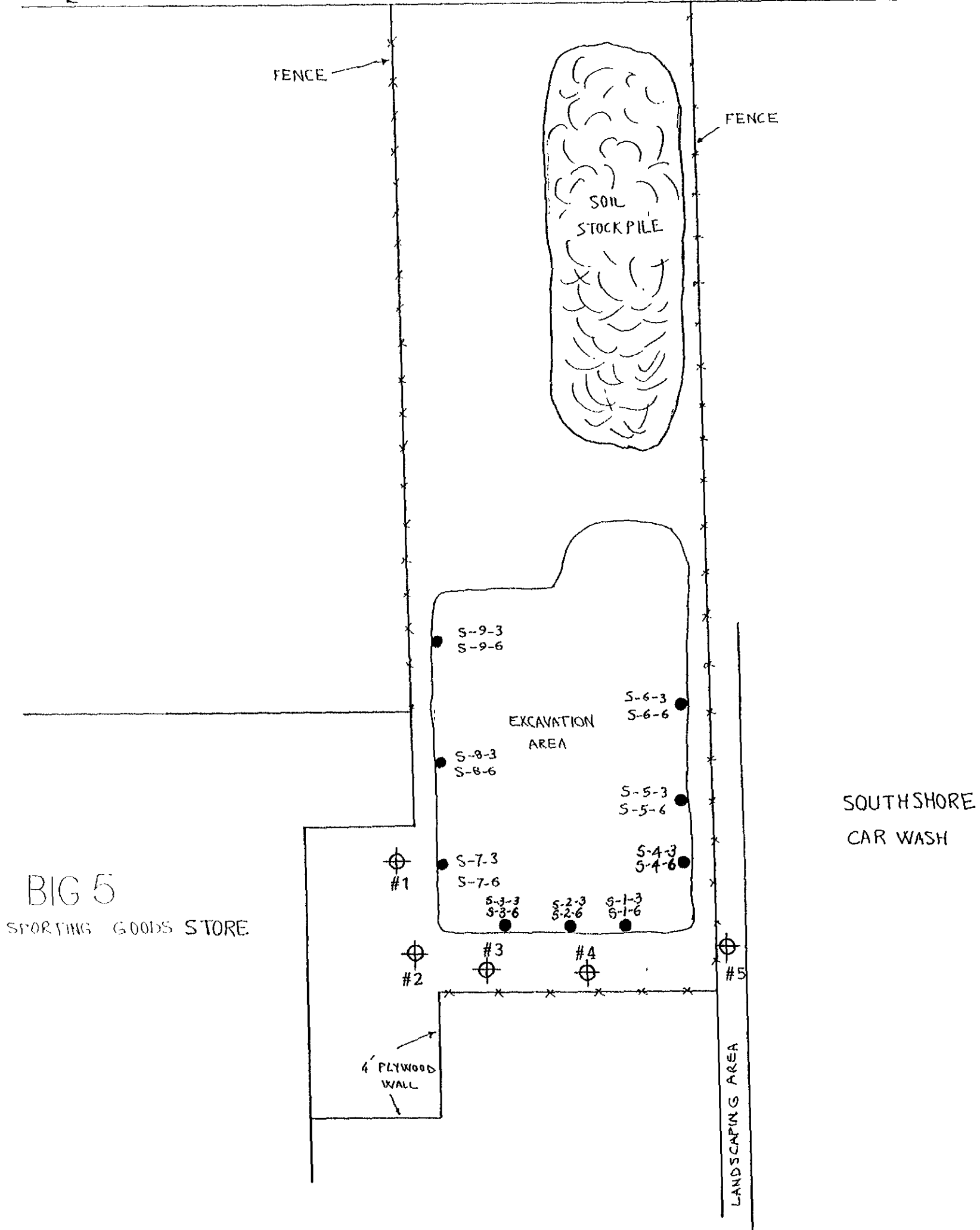
San Jose Oakland [CA]
Map data Copyright © Etak, Inc., 1984-1995. All rights reserved.
Microsoft Automap Streets Copyright © and (p) 1988-1995 Microsoft Corporation

SOIL TECH ENGINEERING, INC.

SHORE LINE DR



STREET FLOW LINE



● Soil Sample Locations Taken Previously During Over-Excavation as reported 2/11/91
 First # is # of sample;
 Second # is it's depth

⊕ Locations of Borings Drilled on 3/30/98

2351 SHORE LINE DR ALAMEDA CA

1" = 30'
 DRAWN BY N.A.

PROJECT NO 8-90-418-S1

FIGURE 2
 3/30/98

SOIL TECH ENGINEERING INC.
 298 BROKAW RD. SANTA CLARA CA 95050

A P P E N D I X "C"

DRILLING AND SOIL SAMPLING PROCEDURE

Mobile drill rig B-40L, using a continuous, solid-flight, hollow stem auger and hand auger were 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 will be 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) were 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, labeled, placed in a plastic bag and stored in a cold ice chest in order to minimize the escape of any volatile 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 were 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.

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

A P P E N D I X "D"



PRIORITY ENVIRONMENTAL LABS

Residue Environmental Analytical Laboratory

April 02, 1998

PEL # 9803036

SOIL TECH ENGINEERING

Attn: Frank Hamedi

Re: Five soil samples for Gasoline/BTEX with MTBE analysis.

Project name: 2351 Shoreline Dr., - Alameda

Project number: 8-90-418-SI

Date sampled: Mar 30, 1998

Date submitted: Mar 30, 1998

Date extracted: Mar 30-Apr 01, 98

Date analyzed: Mar 30-Apr 01, 98

RESULTS:

SAMPLE I.D.	Gasoline (ug/Kg)	MTBE (ug/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylene (ug/Kg)
1-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
2-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
5-3	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	89.3%	---	81.6%	93.5%	88.7%	102.4%
Detection limit	1.0	5.0	5.0	5.0	5.0	5.0
Method of Analysis	5030 / 8015	8020	8020	8020	8020	8020

David Duong
Laboratory Director



PRIORITY ENVIRONMENTAL LABS

Environmental & Industrial Analysis Laboratory

April 03, 1998

PEL # 9803036

SOIL TECH ENGINEERING

Attn: Frank Hamedi

Project name: 2351 Shoreline drive, Alameda. Project number: 8-90-418-SI

Sample I.D.: 2-4

Date Sampled: March 30, 1998

Date Submitted: March 30, 1998

Date Analyzed: April 02-03, 1998

Method of Analysis: EPA 8010

Detection limit: 5.0 ug/Kg

COMPOUND NAME	CONCENTRATION (ug/Kg)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	83.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	-----
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	92.8
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	101.0
1,2-Dichloropropane	N.D.	-----
Bromodichloromethane	N.D.	-----
2-Chloroethylvinylether	N.D.	-----
Trans-1,3-Dichloropropene	N.D.	-----
Cis-1,3-Dichloropropene	N.D.	-----
1,1,2-Trichloroethane	N.D.	-----
Tetrachloroethene	N.D.	97.7
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	-----
1,1,2,2-Tetrachloroethane	N.D.	-----
1,3-Dichlorobenzene	N.D.	-----
1,4-Dichlorobenzene	N.D.	-----
1,2-Dichlorobenzene	N.D.	-----

David Duong
Laboratory Director

PROJ NO 890118.01 NAME 5501 Morzine Drive, Alameda

SAMPLERS (Signature) *Richard Mander*

CON-TAINER

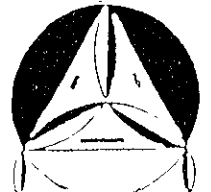
ANALYSES REQUESTED (2)
 TPH, DIBEX
 MVB

PEL # 9803036

INV # 28265

NO	DATE	TIME	SOIL	WATER	LOCATION	CON-TAINER								
1	3/30/98	17:00	✓		1-4	1	✓	✓						
2	↓	17:00	✓		2-4	1	✓	✓						
3	↓	10:20	✓		3-3	1	✓	✓						
4	↓	11:10	✓		4-3	1	✓	✓						
5	↓	12:00	✓		5-3	1	✓	✓						

Relinquished by (Signature) <i>Richard Mander</i>	Date / Time 3/30/98	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 3/30/98	16:05	Remarks



SOIL TECH ENGINEERING

Environmental and Geotechnical Engineers

1761 Junction Ave. San Jose CA 95112 (408)441-1881