

**GROUNDWATER MONITORING  
AND SAMPLING AT THE PROPERTY  
LOCATED AT 2351 SHORELINE DRIVE,  
ALAMEDA, CALIFORNIA  
JANUARY 30, 1997**

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

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

**SOIL TECH ENGINEERING, INC.**

**List Of Figures**

- FIGURE 1**      Site Vicinity Map showing 2351 Shoreline Drive,  
Alameda, California
- FIGURE 2**      Site Plan showing location of buildings, former UST  
excavation areas and monitoring wells

**List of Appendices**

- APPENDIX "A"**      Table 1
- APPENDIX "B"**      Figure 1 and 2
- APPENDIX "C"**      Standard Operation Procedures
- APPENDIX "D"**      Laboratory Report and Chain-of-Custody  
Documentation

**Table of Contents**

**Page Number**

<b>Letter of Transmittal</b>	<b>1-2</b>
<b>Background</b>	<b>3-6</b>
<b>Scope of Present Work</b>	<b>6-7</b>
<b>Field Activities</b>	<b>7-9</b>
<b>Groundwater Monitoring</b>	<b>7</b>
<b>Groundwater Sampling</b>	<b>8</b>
<b>Groundwater Flow</b>	<b>8</b>
<b>Analytical Results</b>	<b>9</b>
<b>Recommendations</b>	<b>9-10</b>
<b>Limitations and Uniformity of Conditions</b>	<b>10-11</b>

**APPENDIX "A"**

<b>TABLE 1</b>	<b>GROUNDWATER MONITORING DATA AND LABORATORY RESULTS</b>	<b>T1</b>
----------------	---	-----------

**APPENDIX "B"**

<b>FIGURE 1</b>	<b>VICINITY MAP</b>	<b>M1</b>
<b>FIGURE 2</b>	<b>SITE MAP</b>	<b>M2</b>

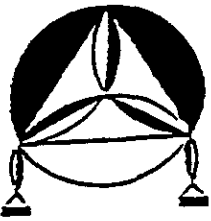
**APPENDIX "C"**

**STANDARD OPERATION PROCEDURES:**

<b>GROUNDWATER SAMPLING</b>	<b>SOP1</b>
-----------------------------	-------------

**APPENDIX "D"**

<b>LABORATORY REPORT AND CHAIN-OF- CUSTODY DOCUMENTATION</b>
--



**SOIL TECH ENGINEERING, INC.**  
**Environmental & Geotechnical Consultants**  
**1761 JUNCTION AVENUE, SAN JOSE, CALIFORNIA 95112**  
**Tel. (408) 441-1881 Fax: (408) 441-0705**

January 30, 1997

File No. 8-90-418-SI

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

**SUBJECT: GROUNDWATER MONITORING AND  
SAMPLING AT THE PROPERTY Located at  
2351 Shoreline Drive, in Alameda, California**

Dear Mr. Stevens:

This report presents the results of groundwater monitoring and sampling conducted by Soil Tech Engineering, Inc. (STE), on December 20, 1996, at the subject site (figure 1).

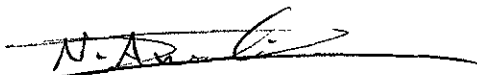
During this phase of investigation, five on-site monitoring wells (STMW-1, STMW-2, STMW-3, STMW-5 and STMW-6) were monitored for depth to groundwater and presence of floating product and/or odor (location -- Figure 2). Groundwater samples were analyzed for presence of Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethyl Benzene, Total Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE). In addition STMW-3 was analyzed for Total Petroleum Hydrocarbons as

diesel (TPHd) and Total Oil & Grease (TOG). Low to moderate TPHg and BTEX concentrations were detected in the water samples. This quarterly monitoring and sampling was conducted in accordance with Alameda County Health Department (ACHD) guidelines.

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.**



NOORI AMELI  
PROJECT ENGINEER



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



FRANK HAMEDI-FARD  
GENERAL MANAGER

**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 gallons 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 of 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 (ACHCS - DEH) requested a preliminary soil/groundwater investigation including the removal of contaminated soil and the 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 comprised the following tasks:

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

Details of this preliminary subsurface investigation are described in STE's report dated July 2, 1991, titled "Preliminary Subsurface Environmental Assessment at Kamur Industries, Inc., Car Wash..." The report recommended quarterly monitoring and sampling of 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 titled "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, the results of which are summarized in their June 1, 1994 report titled "Quarterly Groundwater Monitoring..."

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

On February 14, 1995, STE conducted quarterly groundwater monitoring and sampling of STMW-3 and STMW-6 at the subject site. The details of the field activities and laboratory results are summarized in STE's report titled "Quarterly Groundwater Monitoring ..." dated February 22, 1995. Laboratory analytical results detected low to

moderate levels of TPHg and BTEX in both the wells while low levels of TOG were detected in STMW-3.

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.

The results of quarterly monitoring and sampling activities at the subject site conducted by STE on May 9, 1995 are presented in STE's June 12, 1995 report. Low to moderate levels of TPHg and BTEX were detected in STMW-3 and STMW-6 while TOG in STMW-3 was below laboratory detection limit.

**Scope Of Present Work:**

- Measure depth to water table in on-site wells STMW-1, STMW-2, STMW-3, STMW-5 and STMW-6 and monitor for presence of any floating product
- Purge each monitoring well prior to sampling

- Sample monitoring wells STMW-1, STMW-2, STMW-3, STMW-5 and STMW-6 for laboratory analyses
- Submit water samples to a State-Certified laboratory for analyses of Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) and MTBE. In addition, elected water sample (STMW-3) will be tested for TPHd and TOG
- Review results and prepare a report of the investigation

**Field Activities:**

**Groundwater Monitoring:**

On December 20, 1996, STE's staff monitored seven on-site wells to measure water depth and observe presence of sheen and/or odor. No sheen or odor was noted in well STMW-2. Rainbow sheen spots and light petroleum odor was noted in STMW-1 while rainbow sheen spots and mild petroleum odor was noted in STMW-3. STMW-5 noted no sheen and very light sewage odor while STMW-6 noted no sheen and very light petroleum odor.

Table 1 summarizes the groundwater monitoring data and analytical results.

**Groundwater Sampling:**

Following groundwater monitoring, the on-site wells were purged at least five well volumes and sampled in accordance with STE's Standard Operation Procedures (SOP - see Appendix "C"), which defines State and Local guidelines for sampling monitoring wells. The samples were submitted to a California state-certified laboratory for analyses accompanied by appropriate chain-of-custody. Water samples from wells STMW-1, STMW-2, STMW-3, STMW-5 and STMW-6 were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE). In addition, water sample from STMW-3 was analyzed for Total Petroleum Hydrocarbons as diesel (TPHd) and Total Oil & Grease (TOG).

**Groundwater Flow:**

Groundwater elevation data was used to determine groundwater flow direction. (see Table 1). The groundwater flow beneath the site was in northerly direction as of December 20, 1996 (Figure 2).

**Analytical Results:**

The laboratory analytical results of groundwater samples indicate low to moderate levels of TPHg ranging from below laboratory detection limit to a maximum of 46 mg/L and low levels of BTEX. STMW-3 detected low levels of TOG at 3.9 mg/L while TPHd concentrations were below laboratory detection limit.

MTBE was below laboratory detection limits in all five monitoring wells. The laboratory results are summarized in Table 1, and the laboratory report is attached in Appendix "D".

**Recommendations:**

STE recommends quarterly groundwater monitoring and sampling of all five on-site wells for one year and eventual re-evaluation of site condition.

An alternative risk assessment for the subject site is also recommended. This would provide further insight into future remedial measures and the extent of risk involved to human health and biota as a result of the subsurface hydrocarbons plume.

A copy of this report should be sent to Alameda County Health Department and California Regional Water Quality Control Board – San Francisco Bay Region (CRWQCB – SFBR).

**Limitations and Uniformity of Conditions:**

This report and the associated work have been provided in accordance with the general principles and practices currently employed in the environmental consulting profession. The contents of this report reflect the condition of the site at this particular time. The findings of this reports are based on:

1. The observations of field personnel.
2. The results of laboratory analyses performed by a state-certified laboratory.

It is possible that variations in the soil and groundwater could exist beyond the points explored in this investigation. Also, changes in groundwater conditions of a property can occur with the passage of time due to variations in rainfall, temperature, regional water usage and other natural processes or the works of man on this property or adjacent properties.

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 Local Environmental Agency.

Services performed by STE have been in accordance with generally accepted environmental professional practices for the nature and conditions of the work completed in the same or similar localities at the time the work was performed. This report is not meant to represent a legal opinion. No other warranty, express or implied is made.

A P P E N D I X "A"



**TABLE 1**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHd	TPHg	B	T	E	X	MTBE	TOG
07/08/91	STMW-1 (99.46)	15	5	7.54	91.92	Rainbow sheen spots Strong pet. odor	NA	58	14	7	2.7	8.3	NA	NA
10/21/91				7.63	91.83	Rainbow sheen spots Strong pet. odor	NA	112.6	19.6	19	ND	16.4	NA	NA
01/17/92*	(8.10)			6.96	1.14	Rainbow sheen spots Strong pet. odor	NA	160	16	6.8	2.6	16	NA	NA
04/27/92				6.69	1.41	Rainbow sheen spots Mild pet. odor	NA	54	0.72	0.2	0.5	1.3	NA	NA
07/30/92				7.40	0.70	Rainbow sheen spots Mild pet. odor	NA	73	1.2	0.77	1.1	2.74	NA	NA
02/08/93				6.23	1.87	Rainbow sheen spots Strong pet. odor	NA	66	0.21	0.48	0.51	1.2	NA	NA
04/27/94				6.55	1.55	No sheen Strong pet. odor	NA	90	3.6	3.2	1.2	5.3	NA	NA
10/18/94				N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA
02/14/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
05/09/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
11/10/95				7.59	0.51	No sheen Light sewage odor	NA	18.0	0.082	0.022	0.037	0.047	NA	NA
12/20/96	resurveyed (8.10)			6.48	1.62	Rainbow sheen spots Light pet. odor	NA	46.0	0.18	0.33	0.14	0.30	ND	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHd	TPHg	B	T	E	X	MTBE	TOG
07/08/91	S1MW-2 (98.12)	15	5	6.23	91.89	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
10/21/91				6.33	91.79	No sheen or odor	NA	ND	0.004	ND	ND	ND	NA	NA
01/17/92*	(7.01)			5.69	1.32	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
01/27/92				5.52	1.49	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
07/30/92				6.20	0.81	No sheen or odor	NA	0.05	ND	0.0025	0.0009	0.011	NA	NA
02/08/93				4.90	2.11	No sheen or odor	NA	NA	NA	NA	NA	NA	NA	NA
04/27/94				5.52	1.49	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
10/18/94				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
02/14/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
05/09/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
11/10/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
12/20/96	(7.01)			5.37	1.64	No sheen or odor	NA	ND	ND	ND	ND	ND	ND	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHd	TPHg	B	T	E	X	MTBE	TOG
07/08/91	S1MW-3 (99 90)	15	5	7.96	91.94	No sheen Mild pet. odor	11	66	11	17	1.9	8.9	NA	ND
10/21/91				7.83	92.07	Brown sheen spots Strong pet. odor	ND	165	48.5	19	ND	46	NA	20
01/17/92*	(8 33)			6.71	1.62	Brown sheen spots Strong pet. odor	ND	390	21	41	6.4	4.7	NA	7.9
04/27/92				6.86	1.47	Brown sheen spots Strong pet. odor	3	120	0.66	0.9	0.48	1.8	NA	4.7
07/30/92				7.71	0.62	Brown sheen spots Strong pet. odor	1.5	340	1.2	2.2	1.4	9.3	NA	6
02/08/93				5.96	2.37	Brown NMFP Strong pet. odor	ND	330	0.62	1.9	2.2	6.0	NA	3.9
04/27/94				6.96	1.37	Brown sheen spots Strong pet. odor	NA	160	1.3	6.3	1.4	12	NA	NA
10/18/94				8.00	0.33	Brown sheen spots Strong pet. odor	NA	77	5.2	6.2	2.2	13	NA	ND
02/14/95				5.64	2.69	Brown NMFP Strong pet. odor	NA	68	0.12	0.2	0.18	0.71	NA	2.3
05/09/95				6.48	1.85	Brown NMFP Strong pet. odor	NA	16.0	0.071	0.13	0.11	0.2	NA	ND
11/10/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
12/20/96	resurveyed (8 33)			6.28	2.05	Rainbow sheen spots Mild pet. odor	ND	20.0	0.015	0.045	0.026	0.059	ND	3.9

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHd	TPHg	B	T	E	X	MTBE	TOG
07/08/91	STMW-4 (98 78)	15	5	6.90	91.88	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
10/21/91				6.54	92.24	No sheen or odor	NA	0.186	0.011	0.005	ND	0.037	NA	NA
01/17/92*	(7 45)			6.00	1.45	No sheen or odor	NA	0.06	0.0008	0.0024	0.0005	0.004	NA	NA
04/27/92				5.84	1.61	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
07/30/92				6.64	0.81	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
02/08/93				4.93	2.52	No sheen or odor	NA	NA	NA	NA	NA	NA	NA	NA
04/27/94				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
10/18/94				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
02/14/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHd	TPHg	B	T	E	X	MTBE	TOG
02/08/93	STMW-5 (a)	15	3	8.67	N/A	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
04/27/94				8.88	N/A	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
10/18/94				9.51	N/A	No sheen or odor	NA	ND	ND	ND	ND	ND	NA	NA
02/14/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
05/09/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
11/10/95				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
12/20/96	resurveyed (9.52)			8.91	0.61	No sheen V. light sewage odor	NA	0.33	ND	ND	0.0008	0.0046	ND	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

Date	Well No./ Elevation	Depth of Well	Depth to Perf.	Depth to Water	GW Elev.	Well Observation	TPHd	TPHg	B	T	E	X	MTBE	TOG
02/08/93	STMW-6 (a)			7.88	N/A	No sheen Light sewage odor	NA	33	0.1	0.23	0.27	0.5	NA	NA
04/27/94				N/A	8.13	No sheen Mild pet. odor	NA	38	3.0	1.2	0.71	2.0	NA	NA
10/18/94				N/A	N/A	N/A	NA	NA	NA	NA	NA	NA	NA	NA
02/14/95				7.87	N/A	No sheen Light sewage odor	NA	4.1	0.053	0.021	0.02	0.046	NA	NA
05/09/95				8.15	N/A	No sheen Mild sewage odor	NA	8.9	0.18	0.048	0.061	0.15	NA	NA
11.10/95				8.97	N/A	No sheen Light sewage odor	NA	6.0	0.026	0.0017	0.011	0.0047	NA	NA
12/20/96	re-surveyed (9 31)			8.11	1.2	Rainbow sheen spots Mild pet. odor	NA	20.0	0.054	0.027	0.022	0.031	ND	NA

**TABLE 1 CONT'D**  
**GROUNDWATER MONITORING DATA (feet) AND**  
**ANALYTICAL RESULTS (mg/L)**

**TPHd** - Total Petroleum Hydrocarbons as Diesel

**TPHg** - Total Petroleum Hydrocarbons as Gasoline

**B** - Benzene

**E** - Ethyl Benzene

**ND** - Not Detected

**N/A** - Not Applicable

**MTBE** - Methyl Tertiary Butyl Ether

**GW Elev.** - Groundwater Elevation

**NMFP** - Non Measurable Floating Product

**@** - Data Not Available

**\*** - Well casing elevation surveyed by the other consultant

**T** - Toluene

**X** - Total Xylenes

**NA** - Not Analyzed

**Pet.** - Petroleum

**TOG** - Total Oil & Grease

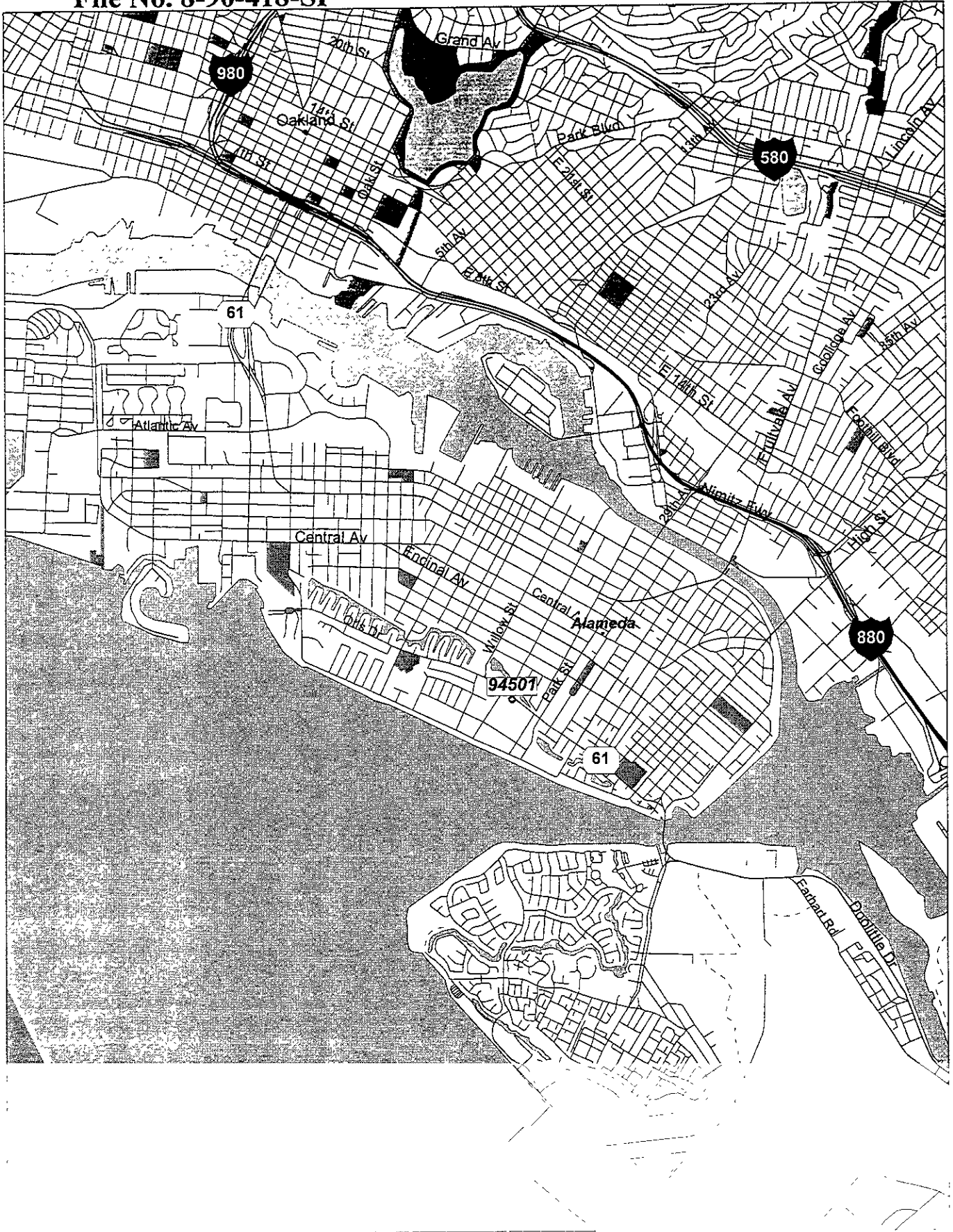
**Perf.** - Perforation

**V.** - Very

Note: **STMW-4** was decommissioned on February 17, 1995 since it was damaged

A P P E N D I X "B"





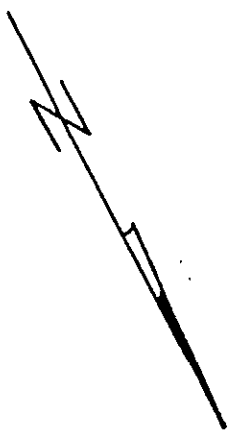
▲ San Jose Oakland [CA]  
N Map data Copyright © Etak, Inc., 1984-1995. All rights reserved.  
Microsoft Automap Streets Copyright © and (p) 1988-1995 Microsoft Corporation

Figure 1

SOIL TECH ENGINEERING, INC.

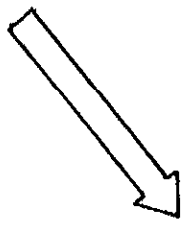
MI

SHORELINE DRIVE



LION RESTAURANT

PARKING LOT



Approximate Direction  
of Groundwater Flow  
as of 12/20/96

⊕ SIMW-2

Former  
Excavation Area

South Shore  
Carwash

← Building Line

BIG 5  
Sporting Goods Store

⊕ SIMW-3

⊕ SIMW-1

Parking Lot

⊕ SIMW-6

Landscaping

⊕ SIMW-5

2351 SHORELINE DRIVE, ALAMEDA, CALIFORNIA

DRAWN BY: N.A.

PROJECT NO. 8-90-418-SI

FIGURE 2

SCALE: 1"=30'

12/20/96

SOIL TECH ENGINEERING, INC.

1761 Junction Ave. , SAN JOSE , CALIFORNIA 95112

A P P E N D I X "C"

## GROUNDWATER SAMPLING

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

Prior to purging, the well "Water Sampling Field Survey Forms" were 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.

SOP1

A P P E N D I X "D"



# PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

December 30, 1996

PEL # 9612047

SOIL TECH ENGINEERING

Attn: Noori Ameli

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

Project name: 2351 Shoreline Dr., - Alameda

Project number: 8-90-418-SI

Date sampled: Dec 20, 1996

Date submitted: Dec 23, 1996

Date extracted: Dec 23-26, 1996

Date analyzed: Dec 23-26, 1996

## RESULTS:

SAMPLE I.D.	MTBE (ug/L)	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	N.D.	46000	---	180	330	140	300	---
STMW-2	N.D.	N.D.	---	N.D.	N.D.	N.D.	N.D.	---
STMW-3	N.D.	20000	N.D.	15	45	26	59	3.9
STMW-5	N.D.	330	---	N.D.	N.D.	0.8	4.6	---
STMW-6	N.D.	20000	---	54	27	22	31	---
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	---	98.9%	81.2%	97.7%	104.7%	88.9%	100.4%	---
Detection limit	0.5	50	50	0.5	0.5	0.5	0.5	0.5
Method of Analysis	602	5030 / 8015	3510 / 8015	602	602	602	602	5520 C & F

David Duong  
Laboratory Director

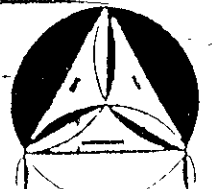
PROJ NO. 8-90-418-57 NAME 2351 Shoreline Dr. ALAMEDA

SAMPLERS (Signature) N. Ameli

ANALYSES REQUESTED (3)  
 TPHG/BTEX  
 TPHD  
 TOXG  
 MTBE  
 PEL # 9612047  
 INV # 27487

NO	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	ANALYSES REQUESTED (3)	TPHG/BTEX	TPHD	TOXG	MTBE
1	12/20/96	11:50		✓	STMW-1	1	✓		✓		
2		10:15		✓	STMW-2	1	✓		✓		
3		14:20		✓	STMW-3	3	✓	✓	✓	✓	
4		11:25		✓	STMW-5	1	✓		✓		
5		13:30		✓	STMW-6	1	✓		✓		

Relinquished by: (Signature) N. Ameli	Date / Time 12/23/96 9:50	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) Victor Blong PER	Date / Time 12/23/96 9:50	Remarks	



**SOIL TECH ENGINEERING**  
 Environmental and Geotechnical Engineers  
 1761 Junction Ave. San Jose CA 95112 (408)441-1881