File No. 8-90-418-SI

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QUARTERLY GROUNDWATER MONITORING AND SAMPLING FOR KAMUR INDUSTRIES CARWASH LOCATED AT 2351 SHORELINE DRIVE ALAMEDA, CALIFORNIA

MAY 8, 1992

PREPARED FOR:
KAMUR INDUSTRIES
2351 SHORELINE DRIVE
ALAMEDA, CALIFORNIA 94501

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

SOIL TECH ENGINEERING, INC.

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

May 8, 1992

File No. 8-90-418-SI

Kamur Industries, Inc.
2351 ShoreLine Drive
Alameda, California 94501

ATTENTION: MR. MURRAY STEVENS

SUBJECT: QUARTERLY GROUNDWATER MONITORING AND SAMPLING FOR KAMUR INDUSTRIES CAR WASH
Located at 2351 ShoreLine Drive, in Alameda, California

Dear Mr. Stevens:

This report presents the results of the fourth quarterly groundwater sampling conducted by Soil Tech Engineering, Inc. (STE), on April 27, 1992, at the subject site (Figure 1).

Four monitoring wells (STMW-1 to STMW-4) are located on-site. See Figure 2 for the locations of the wells. This quarterly monitoring and sampling was conducted in accordance with STE's recommendations made in "Preliminary Subsurface Environmental Assessment", dated July 2, 1991. During this quarter's reporting period, the following field activities were performed:

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- Measured depth-to-groundwater in all wells.
- Purged each monitoring well prior to sampling.
- Sampled each monitoring well.
- Submitted water samples to a State-Certified laboratory for analysis.
- Reviewed results and prepared a report of the investigation.

We recommend continuing the monitoring and sampling for additional four more quarters.

This report is being sent to Alameda County Health Department (ACHD) and the California Regional Water Quality Control Board (CRWQCB) per your request.

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

Sincerely,

SOIL TECH ENGINEERING, INC.

NOORODDIN AMELI
PROJECT ENGINEER

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

FRANK HAMEDI-FARD
GENERAL MANAGER

File No. 8-90-418-SI

QUARTERLY MONITORING AND SAMPLING REPORT
KAMUR INDUSTRIES, INC.
CAR WASH FACILITY
LOCATED AT 2351 SHORELINE DRIVE
ALAMEDA, CALIFORNIA
MAY 5, 1992

INTRODUCTION:

This report presents the fourth quarterly groundwater monitoring and sampling of the four on-site wells performed by Soil Tech Engineering, Inc. (STE), for Kamur Industries, Inc., car wash facility located at 2351 ShoreLine Drive, Alameda, California (Figure 1). The monitoring and sampling program was conducted in accordance with our recommendation described in STE's report, dated July 2, 1991.

BACKGROUND:

The site is located at 2351 ShoreLine Drive, Alameda, California (Figure 1). 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 Bio-Systems, Inc. (EBS). The soil sample analytical results taken beneath the underground 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 Consultants 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--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) to conduct further investigation for local agency approval. STE performed a preliminary subsurface investigation in February and March 1991 which were as follows:

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.

The preliminary investigation is described in STE's report, dated July 2, 1991, entitled "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) were initiated. The 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 are summarized in STE's report dated November 12, 1991. The third quarterly sampling was conducted in January 17, 1992, and the results are summarized in STE's report dated February 5, 1992.

The site is currently used as a parking lot.

FIELD ACTIVITIES:

GROUNDWATER MONITORING:

The four on-site wells (STMW-1 to STMW-4) were monitored on April 27, 1992, using an electronic probe capable of measuring free-floating product and depth-to-water. A blackish, light petroleum sheen and petroleum odor were detected in well STMW-1 and STMW-3 during the field observation. No petroleum sheen was observed in these two wells after purging of the well for the sampling. Table 1 summarizes the historical monitoring data.

The water elevation data were used to determine groundwater direction. The groundwater flow direction beneath the site was in northwesterly direction as of April 27, 1992 (Figure 2).

GROUNDWATER SAMPLING:

On April 27, 1992, following visual groundwater monitoring, each well was purged and sampled in accordance with STE's Standard Operation Procedures (Appendix "B"), which follows state and local agency guidelines. The samples were submitted for analysis to a state-certified laboratory, accompanied by a chain-of-custody record.

The groundwater extracted from the wells during purging and sampling process was stored in 55-gallons drums and remain on-site pending proper disposal.

CHEMICAL ANALYSIS AND RESULTS:

The water samples from wells STMW-1, STMW-2, STMW-3 and STMW-4 were analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX), per EPA Methods 5030 and 8015. The samples were also analyzed for Volatile Organic Compounds (VOC) per EPA Methods 601. Water sample STMW-3 was analyzed for Total Petroleum Hydrocarbons as diesel (TPHd) and Total Oil and Grease (TOG) also.

Wells STMW-2 and STMW-4 showed TPHg, Benzene, Toluene, Ethylbenzene and Total Xylenes below detection limit. Low to moderate concentrations of TPHg were detected in wells STMW-1 and STMW-3 ranging from 54 milligrams per liter (mg/L) to a maximum of 120 mg/L. Benzene levels in wells STMW-1 and STMW-3 ranged from 0.66 mg/L to a maximum of 0.72 mg/L; Toluene concentrations ranged from 0.2 mg/L to 0.9 mg/L; Ethylbenzene levels ranged from 0.48 mg/L to 0.5 mg/L; and Total Xylenes were 1.3 mg/L to 1.8 mg/L, respectively. The concentration of TPH as diesel in well STMW-3 was 3 mg/L, and TOG concentration level was 4.7 mg/L.

No Volatile Organic Compounds were detected in any of the wells.

The analytical results are summarized in Table 2. The laboratory results and chain-of-custody records are in Appendix "C".

SUMMARY:

A comparison of the recent results with the last quarter (January 1992) results showed a substantial decrease in the concentrations of TPHg and BTEX in wells STMW-1, STMW-3 and STMW-4. Wells STMW-2 continued to show non-detectable levels of TPHg and BTEX levels. TOG concentrations in well STMW-3 decrease from 7.9 mg/L to 4.7 mg/L. Wells STMW-1, STMW-3 and STMW-4 continued to show VOC's below detection limit. Trichloroethene and Tetrachloroethene detected in well STMW-2 in January 1992 decreased below detection limit.

RECOMMENDATION:

The decrease in the aromatic hydrocarbons and VOC's could be a result of the dissolved contaminant plume migrating beyond the existing monitoring point due to flushing effect or due to soil absorption and product degradation.

At this time, the dissolve contamination beneath the site is relatively low to non-detectable. Significant impact due to minor dissolved plum migration is considered remote. Dilution and natural bio-degradation may reduce contamination over time, thus reducing potential impacts. Therefore, we recommend continual of quarterly monitoring and sampling of the on-site wells for additional four more quarters. The proposed program will be re-evaluated at the end of fourth quarters, unless a point agreement is reached with the adjacent owner to do an interim remediation.

Next quarterly monitoring and sampling program is scheduled in July 1992.

A copy of this report is being sent to Alameda County Health Department and to California Regional Water Quality Control Board, San Francisco Bay Region per the request of Mr. Murray Stevens.

LIMITATIONS:

This report was prepared in accordance with the currently accepted standards for environmental investigations. The contents

of this report reflect the conditions of the subject site at this particular time. No other warranties, expressed or implied, as to the professional advice provided are made.

TABLE 1
GROUNDWATER MONITORING DATA

Date	Well #	Well Head Elevation (feet)	Depth-to Water (feet)	Water Elevation (feet)	Petroleum Thickness	Petroleum Odor
7/08/91	STMW-1	99.46	7.54	91.92	Sheen	Strong
	STMW-2	98.12	6.23	91.89	None	None
	STMW-3	99.90	7.96	91.94	None	Mild
	STMW-4	98.78	6.90	91.88	None	None
10/21/91	STMW-1	99.46	7.63	91.83	L. Sheen	Strong
	STMW-2	98.12	6.33	91.79	None	None
	STMW-3	99.90	7.83	92.07	Sheen	Strong
	STMW-4	98.78	6.54	92.24	None	None
1/17/92*	STMW-1	8.10	6.96	1.14	Sheen	Strong
	STMW-2	7.01	5.69	1.32	None	None
	STMW-3	8.33	6.71	1.62	Sheen	Strong
	STMW-4	7.45	6.00	1.45	None	None
4/27/92	STMW-1	8.10	6.69	1.41	Sheen	Mild
	STMW-2	7.01	5.52	1.49	None	None
	STMW-3	8.33	6.86	1.47	Sheen	Strong
	STMW-4	7.45	5.84	1.61	None	None

* Well casing elevation surveyed by the other consultant.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS

. Dissolved Petroleum Hydrocarbons in Milligrams Per Liter (mg/L)

Well #	Date	TPHd	TPHg	B	T	E	X	TOG
STMW-1	4/05/91	NA	180	11	20	3.2	18	NA
	7/04/91	NA	58	14	7	2.7	8.3	NA
	10/31/91	NA	112.6	19.6	19	ND	26.4	NA
	1/17/92	NA	160	16	6.8	2.6	16	NA
	4/27/92	NA	54	0.72	0.2	0.5	1.3	NA
STMW-2	4/05/91	NA	ND	ND	ND	ND	ND	NA
	7/0491	NA	ND	ND	ND	ND	ND	NA
	10/21/91	NA	ND	0.004	ND	ND	ND	NA
	1/17/92	NA	ND	ND	ND	ND	ND	NA
	4/27/92	NA	ND	ND	ND	ND	ND	ND
STMW-3	4/05/91	NA	260	20	34	3.6	19	NA
	7/04/91	11	66	11	17	1.9	8.9	ND
	10/21/91	ND	165	48.5	19	ND	46	20
	1/17/91	ND	390	21	41	6.4	47	7.9
	4/27/92	3	120	0.66	0.9	0.48	1.8	4.7

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

TABLE 2 CONT'D
GROUNDWATER ANALYTICAL RESULTS

I. Dissolved Petroleum Hydrocarbons in (mg/L) Cont'd

Well #	Date	TPHd	TPHg	B	T	E	X	TOG
STMW-4	4/05/91	NA	ND	0.3	0.3	ND	0.7	NA
	7/04/91	NA	ND	ND	ND	ND	ND	NA
	10/21/91	NA	0.186	0.011	0.005	ND	0.037	NA
	1/17/92	NA	0.06	0.0008	0.0024	0.0005	0.004	NA
	4/27/92	NA	ND	ND	ND	ND	ND	NA

II. Volatile Organic Compounds (VOC's) Results

Date	Monitoring Well Number	VOC Compounds Detected Per EPA Method 601 Results in Parts Per Billion (ppb)		DHS-DWS (ppb)
4/05/91	STMW-1	1,2-Dichloroethane Trichloroethylene 1,1,2-Trichloroethane (PEC) Tetrachloroethene cis-1,2-Dichloroethene	350 4 0.5 0.9 1	0.5 5 32 5 6
7/04/91	STMW-1	1,2-Dichloroethane	290	
10/21/91	STMW-1	Carbon Tetrachloride	48	
1/17/92	STMW-1	None Detected		
4/27/92	STMW-1	None Detected		

DHS-DWS - Department of Health Services--Drinking Water Standards
TPHd - Total Petroleum Hydrocarbons as diesel
TPHg - Total Petroleum Hydrocarbons as gasoline
BTEX - Benzene, Toluene, Ethylbenzene, Total Xylenes
TOG - Total Oil and Grease
ND - Not Detected (Below Laboratory Detection Limit)
NA - Not Analyzed

TABLE 2 CONT'D
GROUNDWATER ANALYTICAL RESULTS

II. Volatile Organic Compounds (VOC's) Results Cont'd

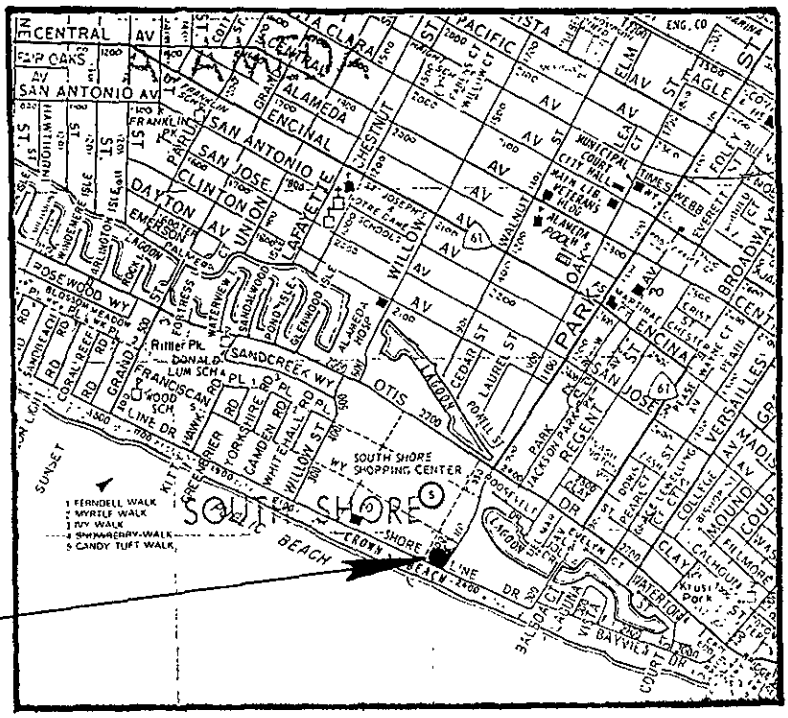
Date	Monitoring Well Number	VOC Compounds Detected Per EPA Method 601 Results in Parts Per Billion (ppb)		DHS-DWS (ppb)
4/05/91	STMW-2	1,2-Dichloroethane Trichloroethylene Tetrachloroethene	8 4 27	0.5 5 5
7/04/91	STMW-2	Trichloroethene (Trichloroethylene) Tetrachloroethene	1.3 18	
10/21/91	STMW-2	None Detected		
1/17/92	STMW-2	Trichloroethene Tetrachloroethene	0.0028 0.011	
4/27/92	STMW-2	None Detected		
4/05/91	STMW-3	1,2-Dichloroethane	450	0.5
7/04/91	STMW-3	Methylene Chloride Trichloroethene (Trichloroethylene)	9 230	
10/21/91	STMW-3	Carbon Tetrachloride	40	
1/17/91	STMW-3	None Detected		
4/27/92	STMW-3	None Detected		
4/05/91	STMW-4	None Detected		
7/04/91	STMW-4	None Detected		
10/21/91	STMW-4	None Detected		
1/17/92	STMW-4	None Detected		
4/27/92	STMW-4	None Detected		

DHS-DWS = Department of Health Services--Drinking Water Standards

File No. 8-90-418-SI

A P P E N D I X "A"

SOIL TECH ENGINEERING, INC.



Site Location

Thomas Brothers Map 1982 Edition
Alameda - Contra Costa Counties

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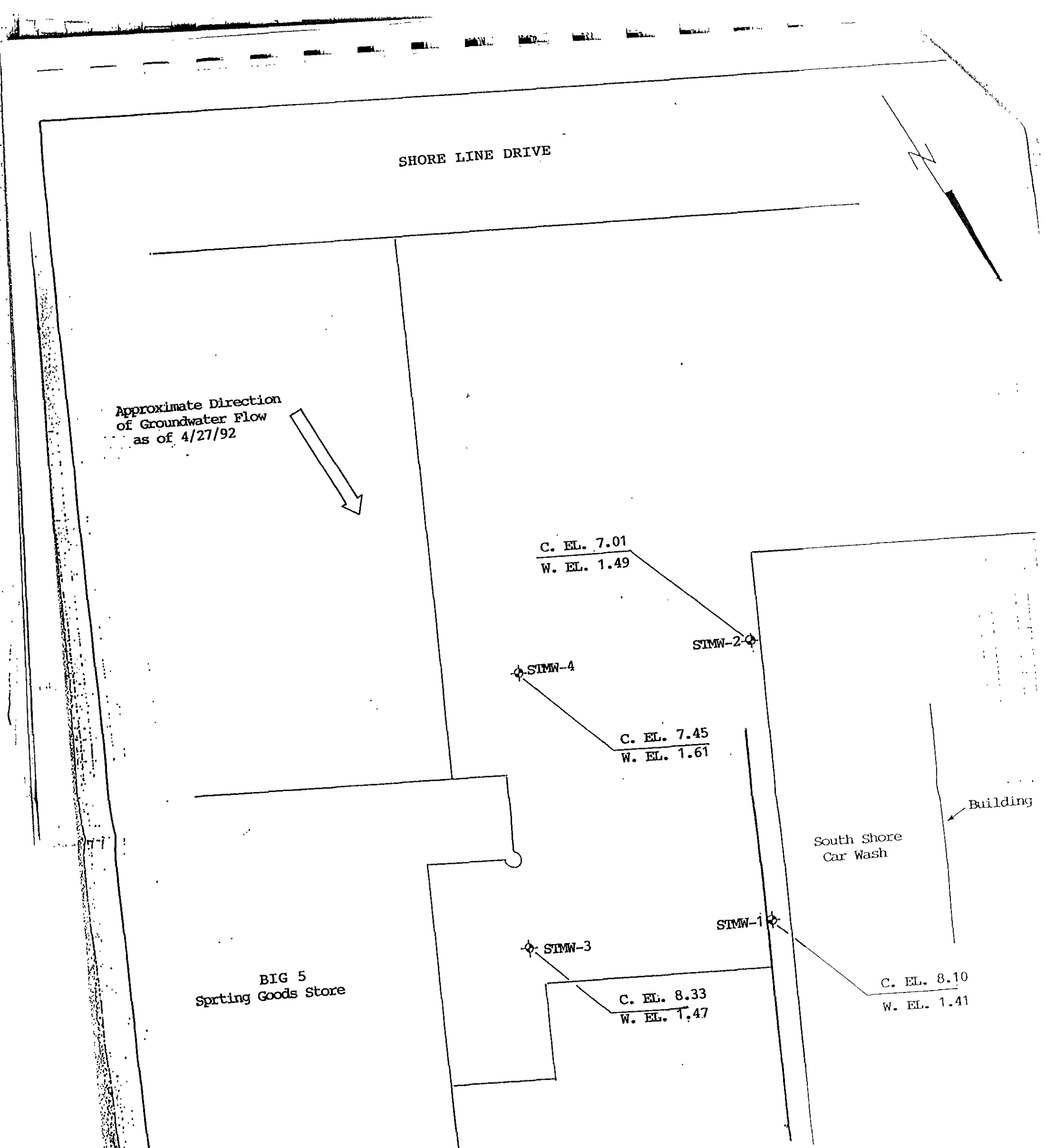
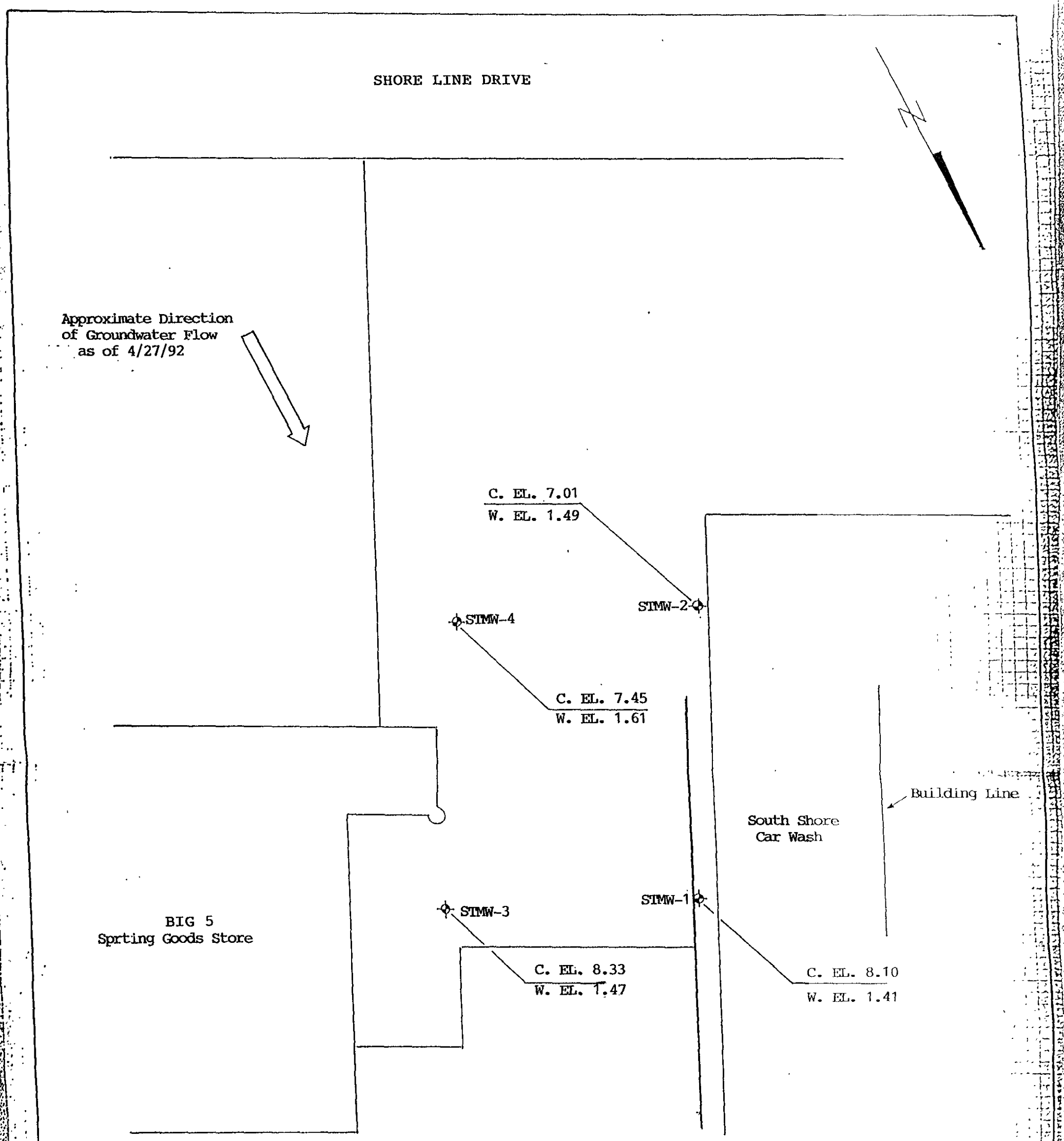
Figure 1



NOTE: New well elevations are tied with the off-site well elevations.

2351 SHORE LINE DR ALAMED		
1"=30'	PROJECT NO 8-90-418-51	
DRAWN BY N.A.		
SOILTECH ENGINEERING INC. 298 BROKAW Rd. SANTA CLARA CA		



NOTE: New well elevations are tied with the off-site well elevations.

2351 SHORE LINE DR ALAMEDA CA		
1"=30'	PROJECT NO 8-90-418-51	FIG-2
DRAWN BY N.A.		4-27-92
SOILTECH ENGINEERING INC. 298 BROKAW Rd. SANTA CLARA CA 95050		

File No. 8-90-418-SI

A P P E N D I X "B"

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.

File No. 8-90-418-SI

A P P E N D I X "C"

SOIL TECH ENGINEERING, INC.

GEOCHEM LABS
Precision Environmental Analytical Laboratory

GCL # 0492057

Date: Apr. 30, 1992

SOIL TECH ENGINEERING

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

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

Date sampled: Apr. 27, 1992
Date extracted: Apr. 28-30,1992
Date submitted: Apr. 28, 1992
Date analyzed: Apr. 28-30,1992

RESULTS:

SAMPLE I.D.	Gasoline (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)	Oil & Grease (mg/L)
STMW-1	54000	----	720	200	500	1300	----
STMW-2	N.D.	----	N.D.	N.D.	N.D.	N.D.	----
STMW-3	120000	3000	660	900	480	1800	4.7
STMW-4	N.D.	----	N.D.	N.D.	N.D.	N.D.	----
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	98.6%	88.5%	89.3%	87.2%	91.5%	103.2%	---
Duplicate Spiked Recovery	101.6%	104.2%	96.0%	87.5%	109.1%	101.7%	---
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

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

GEOCHEM LABS

Precision Environmental Analytical Laboratory

Date:May. 05, 1992
GCL #: 0492057

SOIL TECH ENGINEERING
Project Name:2351 Shoreline Dr. -Alameda

Attn:Noori Ameli
Project Number:8-90-418-SI

Sample I.D.: STMW-1

Date Sampled: Apr. 27, 1992
Date Analyzed: May. 01-02, 1992

Date Submitted:Apr. 28, 1992

Method of Analysis: EPA 601

Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION (ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	87.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	96.3
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	104.5
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	-----
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.	95.9
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	101.6
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

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

GEOCHEM LABS

Precision Environmental Analytical Laboratory

Date:May. 05, 1992
GCL #: 0492057

SOIL TECH ENGINEERING
Project Name:2351 Shoreline Dr. -Alameda

Attn:Noori Ameli
Project Number:8-90-418-SI

Sample I.D.: STMW-2

Date Sampled: Apr. 27, 1992
Date Analyzed: May. 01-02, 1992

Date Submitted:Apr. 28, 1992

Method of Analysis: EPA 601

Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION (ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	87.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	96.3
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	104.5
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	-----
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.	95.9
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	101.6
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

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

GEOCHEM LABS

Precision Environmental Analytical Laboratory

Date:May. 05, 1992
GCL #: 0492057

SOIL TECH ENGINEERING
Attn:Noori Ameli
Project Name:2351 Shoreline Dr. -Alameda
Project Number:8-90-418-SI

Sample I.D.: STMW-3

Date Sampled: Apr. 27, 1992
Date Submitted:Apr. 28, 1992
Date Analyzed: May. 01-02, 1992

Method of Analysis: EPA 601
Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION (ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	87.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	96.3
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	104.5
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	-----
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.	95.9
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	101.6
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

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

GEOCHEM LABS

Precision Environmental Analytical Laboratory

Date:May. 05, 1992
GCL #: 0492057

SOIL TECH ENGINEERING
Project Name:2351 Shoreline Dr. -Alameda

Attn:Noori Ameli
Project Number:8-90-418-SI

Sample I.D.: STMW-4

Date Sampled: Apr. 27, 1992
Date Analyzed: May. 01-02, 1992

Date Submitted:Apr. 28, 1992

Method of Analysis: EPA 601

Detection limit: 0.5 ug/L

COMPOUND NAME	CONCENTRATION (ug/L)	SPIKE RECOVERY (%)
Chloromethane	N.D.	-----
Vinyl Chloride	N.D.	87.4
Bromomethane	N.D.	-----
Chloroethane	N.D.	-----
Trichlorofluoromethane	N.D.	-----
1,1-Dichloroethene	N.D.	-----
Methylene Chloride	N.D.	96.3
1,2-Dichloroethene (TOTAL)	N.D.	-----
1,1-Dichloroethane	N.D.	-----
Chloroform	N.D.	104.5
1,1,1-Trichloroethane	N.D.	-----
Carbon Tetrachloride	N.D.	-----
1,2-Dichloroethane	N.D.	-----
Trichloroethene	N.D.	-----
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.	95.9
Dibromochloromethane	N.D.	-----
Chlorobenzene	N.D.	-----
Bromoform	N.D.	101.6
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

1764 Houret Court Milpitas, CA. 95035 Tel: 408-946-9636 Fax: 408-946-9663

CHAIN OF CUSTODY RECORD

GTS CHEM

PROJ NO. 8-90-418-51 | NAME 2351 Shoreline Dr. Alameda

SAMPLERS (Signature)

NO	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested ② TPHG/BTEX	TPHD	TOG	8010/601	REMARKS
1	4/27/92	15[10]		✓	STMW-1	5	✓		✓		
2	4/27/92	15[45]		✓	STMW-2	5	✓		✓		
3	4/27/92	16[10]		✓	STMW-3	5	✓	✓	✓	✓	
4	4/27/92	15[25]		✓	STMW-4	5	✓		✓		

Relinquished by (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Receive by: (Signature)
[signature]	4/28/92 9[45]	VICTOR DUONG			
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	
		GEO COLEM	4/28/92 9[48]		

SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers
298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 496-0265 OR (408) 496-0266

GEO CHEM

CHAIN OF CUSTODY RECORD

PROJ NO	NAME
8-90-418-51	2351 Shoreline Dr. Alameda

SAMPLERS (Signature)

GCL # 0492057

INV # 22785

NO	DATE	TIME	SOIL	WATER	LOCATION	CONTAINER	Analyses Requested: TPHG	BTEXX	TPHD	TOG	8010
1	4/27/92	15:10		✓	STMW-1	5	✓			✓	
2	4/27/92	15:45		✓	STMW-2	5	✓			✓	
3	4/27/92	16:10		✓	STMW-3	5	✓	✓	✓	✓	
4	4/27/92	15:25		✓	STMW-4	5	✓			✓	

Relinquished by (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Receive by: (Signature)
	4/28/92 9:45	VICTOR DUONG			
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)	Date / Time	Remarks	
		GEO CHEM	4/28/92 9:48		

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