REPORT ON SOIL REMEDIATION
AT THE PLAZA CAR WASH
400 SAN PABLO AVENUE
ALBANY, CALIFORNIA
MAY 12, 1991

PREPARED FOR:
MR. MURRAY STEVENS
2351 SHORELINE DRIVE
ALAMEDA, CALIFORNIA 94501

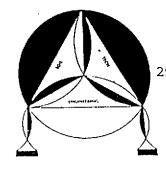
BY:

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

SOIL TECH ENGINEERING, INC.

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Soil, Foundation and Geological Engineers 298 BROKAW ROAD, SANTA CLARA, CA 95050 ■ (408) 866-0919 ■ (415) 791-6406

May 12, 1991

File No. 8-90-421-SI

Kamur Industries 2351 Shoreline Drive Alameda, California 94501

ATTENTION: MR. MURRAY STEVENS

REPORT ON SOIL REMEDIATION AT THE PLAZA CAR WASH SUBJECT:

LOCATED AT 400 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Dear Mr. Stevens:

Soil Tech Engineering, Inc. (STE), developed and implemented a plan to remediate fuel-affected soils excavated from the former underground tank complex at the Plaza Car Wash, 400 San Pablo Avenue, in Albany, California (Figure 4). Approximately 650 cubic yards of fuel-affected soil were remediated on-site by controlled aeration and nutrient treatment.

Enclosed is the report on the remediation of the excavated soil from the Plaza Car Wash.

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

Sincerely,

SOIL TECH ENGINEERING, INC.

LAWRENCE KOO, P. E.

C. E. #34928

FRANK HAMEDI-FARD

A formford

GENERAL MANAGER

# REPORT ON SOIL REMEDIATION AT PLAZA CAR WASH 400 SAN PABLO AVENUE ALBANY, CALIFORNIA MAY 14, 1991

#### **EXCAVATION:**

All excavation activities associated with tank removal are described in STE's report entitled "Underground Tank Soil Sampling and Excavation Report For Kamur Industries, Inc., Plaza Car Wash Site, 400 San Pablo Avenue, Albany, California", dated January 15, 1991.

#### CHARACTERIZATION OF STOCKPILED SOIL:

Approximately 650 cubic yards of fuel-affected soil were excavated, placed on thick plastic visquine, covered with plastic sheeting and stockpiled on-site (Figure 4). The stockpiled soil was divided into 6 smaller piles (F, M, N, P, T and S) for characterization and proper disposal (Figure 4). On November 13, 1990, the stockpiled contaminated soil was sampled by taking three discrete grab samples " randomly from each pile at various depths ranging from 1 to 3 feet The three grab samples from each below the stockpiled surface. stockpile were composited by Anametrix (see Appendix B) and analyzed for Total Petroleum Hydrocarbons as Gasoline (TPHg) and Benzene, Toluene, Ethylbenzene and Xylene (BTEX). In addition, selected samples were analyzed for Volatile Organic Compounds per EPA Methods 601/8010 and Priority Pollutant Metals. The analytical results are summarized in Table 1.

The stockpiled soil analytical results showed elevated levels of TPHg ranging from 160 mg/kg to a maximum of 980 mg/kg. However,

File No. 8-90-421-SI

BTEX levels were low, and no Volatile Organic Compounds (EPA Method 8010) were detected in the three composite samples. None of the Priority Pollutant Metals analyzed exceeded State Department of Health Total Threshold Limit Concentrations (Title 22, Section 66699). Hence, it was determined that the soil is not hazardous and could be remediated on-site by aeration.

#### FIELD ACTIVITIES:

In accordance with Bay Area Air Quality Management District (BAAQMD) Regulation 8, Rule 40, STE notified the BAAQMD of the proposed on-site bio-remediation of gasoline-affected soil five days before work began.

#### BTO-REMEDIATION OF GASOLINE-AFFECTED SOIL:

Gasoline-affected soil was aerated on-site between mid-December 1990 to April 2, 1991. In accordance with BAAQMD requirements, STE gave the BAAQMD at least 72 hours verbal notice before treatment began. Due to the limited area for treatment of soil, STE separated approximately 100 to 200 cubic yards from the stockpile and spread the soil to about 2-3 feet in height. Treatment consisted of aerating the soil twice a week by adding nutrients (bacteria-enriched compost) at a ratio of 5 to 1 by volume. The soil and compost material were then thoroughly blended, and the treated soil was later stockpiled on plastic and covered.

STE conducted field screening of the treated soil with a PID a week after aeration began to monitor its progress. To assess whether remediation of the soil was complete, every two to four weeks after soil treatment began, six random samples were taken from the treated soil. Treated soil was sampled on January 21, 1991, February 1, 1991, February 21, 1991, and April 2, 1991. The grab samples were composited in the laboratory as composite samples and

File No. 8-90-421-SI

analyzed for Total Petroleum Hydrocarbons as Gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Xylene (BTEX).

All samples from the treated stockpiled soil were collected in clean brass tubes and stored in ice-cooled chests for delivery under STE's chain-of-custody procedure to a state-certified laboratory or on-site mobile lab. Treatment of soil was conducted only on dry days and at the end of the day all of the stockpiled soil plus the treated soils were covered with plastic sheets. The treatment of the stockpiled soil was conducted at a rate of 100 to 200 cubic yards at a time. After the soil was sampled, analytical results indicated that the concentration levels of TPHg were less than 100 parts per million, so the treated soil was transported to Redwood Landfill in Novato (Class III landfill) at a rate of 100 to 200 cubic yards at a time.

The analytical results of the soil samples from the treated gasoline affected stockpiled soil are summarized in Table 2. None of the soil samples exceeded 10 ppm for TPHg. Most of the soil showed BTEX to be non-detectable to maximum of 13 ppm.

Copies of all laboratory analyses and documents of disposal to the Redwood Landfill are attached in Appendix "C" of this report.

TABLE 1 SOIL ANALYTICAL RESULTS FOR STOCKPILED SOIL PRIOR TO AERATION IN MILLIGRAMS PER KILOGRAM (mg/kg)

#### Soil Analytical Results of Volatile Organic Compounds

Date	Composite Sample	ТРНд	В	T	E	X	EPA Methods 601/8010
11/13/90	S-1-4, S-2-7 and S-3-4	160	ND	4.3	4.3	21	NA
	P-1-5, P-2-7 and P-3-4	980	4.4	53.0	26.0	130	NCD
	T-1-4, T-2-7 and T-3-4	230	7.2	5.6	5.8	18	NA
	M-1-4, M-2-6 and M-3-4	270	2.7	7.5	4.8	15	NCD
	N-1-4, N-2-7 and N-3-4	160	4.4	8.8	10.0	25	NA
	F-1-4, F-2-7 and F-3-5	750	12.0	54.0	21.0	110	ИCD

TPHg = Total Petroleum Hydrocarbons as Gasoline

BTEX = Benzene, Toluene, Ethylbenzene, Xylene NCD = No Compounds were Detected above Detection Limits

NA = Not Analyzed

TABLE 2
SOIL ANALYTICAL RESULTS OF
TREATED STOCKPILED SOIL
IN
MILLIGRAMS PER KILOGRAM (mg/kg)

Date	Composite Soil Sample No.	TPHg	В	T	E	x
1/21/91	ST-1-6, 2-6, 3-6	ND	ND	ND	ND	ND
	ST-4, 5-6, 6-6	10	ND	0.075	0.07	0.23
2/01/91	ST-7-3, 8-2	7.1	ND	ND	0.028	0.22
	ST-9-5, 10-3	ND	ND	0.006	ND	0.016
	ST-11-4, 12-3	4.0	ND	ND	ND	0.07
	ST-13-3, 14-3	1.0	0.045	0.025	ND	0.015
2/21/91	A(1-4)	3.4	ND	ND	ND	0.15
	B(1-4)	ND	ND	ND	ND	ND
	C(1-4)	ND	ND	ND	ND	ND
	D(1-4)	ND	ND	ND	ND	ND
4/02/91	ST(1-4)-5	ND	ND	ND	ND	4
	ST(5-8)-5	7.0	ND	ND	ND	13

TPHg = Total Petroleum Hydrocarbons as Gasoline
BTEX = Benzene, Toluene, Ethylbenzene, Xylene
ND = Not Detected (Below Detection Limit)

# LARGE MAP REMOVED

#### NAMETRIX INC



MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9011156
Date Received : 11/16/90
Project ID : 8-90-421-SI

Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis:

ANAMETRIX ID	CLIENT SAMPLE ID
9011156- 1	S-1-4,2-7,3-4
9011156- 2	P-1-5,2-7,3-4
9011156- 3	T-1-4,2-7,3-4
9011156- 4	M-1-4,2-6,3-4
9011156- 5	N-1-4,2-7,3-4
9011156- 6	F-1-4,2-7,3-5

This report is paginated for your convenience and ease of review. It contains 14 pages excluding the cover letter. The report is organized into sections. Each section contains all analytical results and quality assurance data related to a specific group or section within Anametrix. The Report Summary that precedes each section will help you determine which group at Anametrix generated the data. The Report Summary will contain the signatures of the department supervisor and a chemist, both of whom reviewed the analytical data. Please refer all questions to the department supervisor that signed the form.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Burt Sutherland

Laboratory Director

12-07-90

Date

#### REPORT SUMMARY ANAMETRIX, INC. (408) 432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 98 BROKAW ROAD ANTA CLARA, CA 95050 Workorder # : 9011156
Date Received : 11/16/90
Project ID : 8-90-421-SI
Purchase Order: N/A
Department : GC

Sub-Department: VOA

#### SAMPLE INFORMATION:

NAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
<b>0</b> 011156- 2	P-1-5,2-7,3-4	SOIL	11/13/90	8010
9011156- 4	M-1-4,2-6,3-4	SOIL	11/13/90	8010
<b>9</b> 011156- 6	F-1-4,2-7,3-5	SOIL	11/13/90	8010

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI
OIL TECH ENGINEERING
98 BROKAW ROAD
SANTA CLARA, CA 95050

Workorder # : 9011156
Date Received : 11/16/90
Project ID : 8-90-421-SI

Purchase Order: N/A
Department : GC
Sub-Department: VOA

OA/QC SUMMARY :

Due to interfering hydrocarbon peaks, samples P-1-4,2-7,3-4; M-1-4,2-6,3-4; and F-1-4,2-7,3-5 were analyzed at a dilution.

Cornnel ham Department Supervisor

12/07/90

Sulist Ofward 12/7/90 Chemist Date

Simple I.D. M trix : 8-90-421-SI P-1-4,2-7,3-4

: SOIL

Date sampled: 11/13/90 Date analyzed: 11/20/90 Dation: 100

Anametrix I.D. : 9011156-02 Analyst : 000

Analyst

Supervisor : Cy Date released : 12/05/90

Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3 74-83-9 75-71-8 75-01-4 75-00-3 75-09-2 79-69-4 75-35-4 75-34-3 156-59-2 156-60-5 67-66-3 76-13-1 107-06-2 71-55-6 56-23-5 75-27-4 78-87-5 10061-02-6 79-01-6 124-48-1 79-00-5 10061-01-5 110-75-8 75-25-2 127-18-4 79-34-5 108-90-7 95-50-1 541-73-1 106-46-7	* Chloromethane  * Bromomethane  * Dichlorodifluoromethane  * Vinyl Chloride  * Chloroethane  * Methylene Chloride  * Trichlorofluoromethane  * 1,1-Dichloroethene  * 1,1-Dichloroethene  * Trans-1,2-Dichloroethene  * Trichlorotrifluoroethane  * Chloroform  # Trichlorotrifluoroethane  * 1,2-Dichloroethane  * 1,1,1-Trichloroethane  * 1,2-Dichloroethane  * 1,2-Dichloropropane  * Trans-1,3-Dichloropropene  * Trichloroethene  * Dibromochloromethane  * 1,1,2-Trichloroethane  * 1,1,2,2-Tetrachloroethane  * 1,1,2,2-Tetrachloroethane  * 1,1,2-Dichlorobenzene  * 1,3-Dichlorobenzene  * 1,3-Dichlorobenzene  * 1,4-Dichlorobenzene	100 50 100 50 50 50 50 50 50 50 50 50 50 50 50 5	ND N
<b>I</b>	% Surrogate Recovery	33-134%	95%   

Not detected at or above the practical quantitation limit ND:

for the method. A 601/8010 approved compound (Federal Register, 10/26/84).

# A compound added by Anametrix, Inc.

mple I.D. : 8-90-421-SI M-1-4,2-6,3-4

Anametrix I.D.: 9011156-04
Analyst : 500
Supervisor : CP
Date released : 12/05/90 trix : SOIL

Date sampled: 11/13/90 Date analyzed: 11/20/90 Date analyzed: 100

Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3 74-83-9 75-71-8 75-01-4 75-00-3 75-09-2 79-69-4 75-35-4 75-34-3 156-59-2 156-60-5 67-66-3 76-13-1 107-06-2 71-55-6 56-23-5 75-27-4 78-87-5 10061-02-6 79-01-6 124-48-1 79-00-5 10061-01-5 110-75-8 75-25-2 127-18-4 79-34-5 108-90-7 95-50-1 541-73-1 106-46-7	* Chloromethane  * Bromomethane  * Dichlorodifluoromethane  * Vinyl Chloride  * Chloroethane  * Methylene Chloride  * Trichlorofluoromethane  * 1,1-Dichloroethene  * 1,1-Dichloroethene  * Trans-1,2-Dichloroethene  * Chloroform  # Trichlorotrifluoroethane  * 1,2-Dichloroethane  * 1,1,1-Trichloroethane  * 1,1,1-Trichloroethane  * Carbon Tetrachloride  * Bromodichloromethane  * 1,2-Dichloropropane  * Trans-1,3-Dichloropropene  * Trichloroethene  * Dibromochloromethane  1,1,2-Trichloroethane  * 1,1,2-Trichloroethane  * 1,1,2-Trichloroethane  * 1,1,2-Trichloroethane  * 1,1,2-Trichloroethane  * 1,1,2-Tetrachloroethane  * Chlorobenzene  * 1,1,2,2-Tetrachloroethane  * Chlorobenzene  * 1,3-Dichlorobenzene  * 1,3-Dichlorobenzene  * 1,4-Dichlorobenzene	100 50 100 50 50 50 50 50 50 50 50 50 50 50 50 5	ND N
<b>-</b>	% Surrogate Recovery	33-134%	84

ND: Not detected at or above the practical quantitation limit

for the method.

A 601/8010 approved compound (Federal Register, 10/26/84).

A compound added by Anametrix, Inc.

mple I.D. : 8-90-421-SI F-1-4,2-7,3-5

: SOIL

Date sampled: 11/13/90 Date analyzed: 11/20/90 Dation: 100

lution

#

trix

Anametrix I.D.: 9011156-06 Analyst : 9011156-06 Supervisor : 9011156-06

Date released : 12/05/90 Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3 74-83-9 75-71-8 75-01-4 75-00-3 75-09-2 79-69-4 75-35-4 75-34-3 156-59-2 156-60-5 67-66-3 76-13-1 107-06-2 71-55-6 56-23-5 75-27-4 78-87-5 10061-02-6 79-01-6 124-48-1 79-00-5 10061-01-5 110-75-8 75-25-2 127-18-4 79-34-5 108-90-7 95-50-1 541-73-1 106-46-7	* Chloromethane  * Bromomethane  * Dichlorodifluoromethane  * Vinyl Chloride  * Chloroethane  * Methylene Chloride  * Trichlorofluoromethane  * 1,1-Dichloroethene  * 1,1-Dichloroethene  * 1,1-Dichloroethene  * Trans-1,2-Dichloroethene  * Chloroform  # Trichlorotrifluoroethane  * 1,2-Dichloroethane  * 1,1,1-Trichloroethane  * Carbon Tetrachloride  * Bromodichloromethane  * 1,2-Dichloropropane  * Trans-1,3-Dichloropropene  * Trichloroethene  * Dibromochloromethane  * 1,1,2-Trichloroethane  * cis-1,3-Dichloropropene  * 2-Chloroethylvinylether  * Bromoform  * Tetrachloroethene  * 1,1,2,2-Tetrachloroethane  * Chlorobenzene  * 1,3-Dichlorobenzene  * 1,3-Dichlorobenzene  * 1,4-Dichlorobenzene  * 1,4-Dichlorobenzene	100 50 100 50 50 50 50 50 50 50 50 50 50 50 50 5	ND N
<b>-</b>	% Surrogate Recovery	33-134% 	82%

Not detected at or above the practical quantitation limit ND: for the method.

A 601/8010 approved compound (Federal Register, 10/26/84).

A compound added by Anametrix, Inc.

#### ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS (GASOLINE WITH BTEX) ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9011156 atrix : SOIL ate Sampled : 11/13/90

Date Analyzed

RLMF

Project Number: 8-90-421-SI Date Released : 12/05/90

	Reporting Limit	Sample I.D.# F-1-4,2	Sample I.D.#	Sample I.D.#	
		-7,3-5	08B1127A	12B1126A	
COMPOUNDS	(mg/Kg)	-06	BLANK	BLANK	
<u></u>					 
Benzene	0.005	12	ND	ND	
Toluene	0.005	54	ND	ND	
Ethylbenzene	0.005	21	ND	ND	
Total Xylenes	0.005	110	ND	ИD	
TPH as Gasoline	e 0.5	750	ND	ND	
% Surrogate Red Instrument I	covery .D.	106% HP8	106% HP8	82% HP12	

ND - Not detected at or above the practical quantitation limit for the method.

11/27/90 11/27/90 11/26/90

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

RLMF - Reporting Limit Multiplication Factor.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Vorgt 12/6/90

#### REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 98 BROKAW ROAD ANTA CLARA, CA 95050 Workorder # : 9011156
Date Received : 11/16/90
Project ID : 8-90-421-SI
Purchase Order: N/A
Department : GC
Sub-Department: TPH

#### SAMPLE INFORMATION:

NAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
011156- 1	S-1-4,2-7,3-4	SOIL	11/13/90	TPHg/BTEX
9011156- 2	P-1-5,2-7,3-4	SOIL	11/13/90	TPHg/BTEX
011156- 3	T-1-4,2-7,3-4	SOIL	11/13/90	TPHg/BTEX
9011156- 4	M-1-4,2-6,3-4	SOIL	11/13/90	TPHg/BTEX
011156- 5	N-1-4,2-7,3-4	SOIL	11/13/90	TPHg/BTEX
9011156- 6	F-1-4,2-7,3-5	SOIL	11/13/90	TPHg/BTEX

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9011156
Date Received : 11/16/90
Project ID : 8-90-421-SI
Purchase Order: N/A

Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this workorder.

Cheugh Balman Department Supervisor

12/6/90 Date Hord Vocat 12/6/90
Chemist Date

GC/TPH - PAGE 2

mple I.D. : METHOD BLANK

trix : SOIL Date sampled: N/A

Date analyzed: 11/20/90 Illution : NONE

Anametrix I.D.: 24B1120H02 Analyst : CC Supervisor : CC Analyst Supervisor

Date released : 12/05/90

Instrument ID : HP24

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3 74-83-9 75-71-8 75-01-4 75-00-3 75-09-2 79-69-4 75-35-4 75-34-3 156-59-2 156-60-5 67-66-3 76-13-1 107-06-2 71-55-6 56-23-5 75-27-4 78-87-5 10061-02-6 79-01-6 124-48-1 79-00-5 10061-01-5 110-75-8 75-25-2 127-18-4 79-34-5 108-90-7 95-50-1 541-73-1 106-46-7	* Chloromethane  * Bromomethane  * Dichlorodifluoromethane  * Vinyl Chloride  * Chloroethane  * Methylene Chloride  * Trichlorofluoromethane  * 1,1-Dichloroethene  * 1,1-Dichloroethene  * Trans-1,2-Dichloroethene  * Chloroform  # Trichlorotrifluoroethane  * 1,2-Dichloroethane  * 1,1,1-Trichloroethane  * 1,1,1-Trichloroethane  * 1,2-Dichloromethane  * 1,2-Dichloromethane  * 1,2-Dichloromethane  * 1,2-Dichloromethane  * 1,2-Trichloroethane  * Dibromochloromethane  * 1,1,2-Trichloroethane  * 2-Chloroethylvinylether  * Bromoform  * Tetrachloroethene  * 1,1,2,2-Tetrachloroethane  * 1,1,2,2-Tetrachloroethane  * 1,1,2,2-Tetrachloroethane  * 1,1,2,2-Tetrachloroethane  * 1,2-Dichlorobenzene  * 1,2-Dichlorobenzene  * 1,3-Dichlorobenzene  * 1,4-Dichlorobenzene	15155555555555555555555555555555555555	ND N
	% Surrogate Recovery	33-134%	88%

Not detected at or above the practical quantitation limit ND: for the method.

A compound added by Anametrix, Inc.

A 601/8010 approved compound (Federal Register, 10/26/84).

#### ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS (GASOLINE WITH BTEX) ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9011156 : SOIL Matrix | te Sampled : 11/13/90 Project Number: 8-90-421-SI Date Released: 12/05/90

i .	Reporting Limit	Sample I.D.# S-1-4,2 -7,3-4	Sample I.D.# P-1-5,2 -7,3-4	Sample I.D.# T-1-4,2 -7,3-4	Sample I.D.# M-1-4,2 -6,3-4	Sample I.D.# N-1-4,2 -7,3-4
COMPOUNDS	(mg/Kg)	-01	-02	-03	-04	<b>-</b> 05
Benzene	0.005	ND	4.4	7.2	2.7	4.4
Toluene	0.005	4.3	53	5.6	7.5	8.8
Ethylbenzene	0.005	4.3	26	5.8	4.8	10
Total Xylenes	0.005	21	130	18	15	25
TPH as Gasolin	e 0.5	160	980	230	270	160
Surrogate Re	.D.	88%	116%	103%	164%	89%
Instrument I		HP8	HP8	HP12	HP12	HP12
Date Analyze		11/27/90	11/27/90	11/26/90	11/26/90	11/27/90
RLMF		100	250	100	50	250

ND - Not detected at or above the practical quantitation limit for the method.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Cheyl Balmer 12/7/40 Supervisor Date

PHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

LMF - Reporting Limit Multiplication Factor.

## REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 98 BROKAW ROAD ANTA CLARA, CA 95050 Workorder # : 9011156
Date Received : 11/16/90
Project ID : 8-90-421-SI

Purchase Order: N/A
Department : METALS
Sub-Department: METALS

#### SAMPLE INFORMATION:

NAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
011156- 1	S-1-4,2-7,3-4	soil	11/13/90	T 22-MET
9011156- 3	T-1-4,2-7,3-4	SOIL	11/13/90	T 22-MET
011156- 5	N-1-4,2-7,3-4	SOIL	11/13/90	T 22-MET

# REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI BOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9011156 Date Received : 11/16/90 Project ID : 8-90-421-SI

Purchase Order: N/A
Department : METALS
Sub-Department: METALS

#### QA/QC SUMMARY :

Arsenic digests were subcontracted to Mid-Pacific Environmental Laboratory.

- Sample  $\bar{T}$ -1-4,2-7,3-4 was diluted 1:2 for EPA Method 6010 due to matrix interferences.

Manny Lauren 12-06-90 Department Supervisor Date 12-06-90
hemist Date

METALS/METALS - PAGE 2

### ANALYSIS DATA SHEET - TITLE 22 METALS ANAMETRIX, INC. - (408) 432-8192

nametrix W.O.: 9011156
Matrix : SOIL
Date Sampled : 11/13/90
roject Number: 8-90-421-SI

Date Prepared : 11/28/90 Date Analyzed : 11/29/90 Date Released : 12/06/90 Instrument I.D.: AA1/ICP1

		Reporting Limit	I.D.# S-1-4,2		I.D.# METHOD	 
ELEMENTS		(mg/Kg)	-01	-05	MB1128S	 
Copper (Cu) Mercury (Hg) Molybdenum (Mo) Nickel (Ni) Lead (Pb) Antimony (Sb) Selenium (Se) Thallium (T1)	6010 6010 6010 6010 6010 7471 6010 6010 6010 7740 7841	5.0 0.25 0.25 2.5 0.5 1.25	0.73 ND 15.1 61.5 28.3 0.11 ND 92.9 15.6 ND ND	ND 24.6 55.6 26.2 0.17 ND 89.1 9.03 ND ND ND ND	ND	

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Administrative Code Title 22, Section 66699.

Manuflylyer 12-06-90 Chemist Date

Chemist Date

## ANALYSIS DATA SHEET - TITLE 22 METALS ANAMETRIX, INC. - (408) 432-8192

hametrix W.O.: 9011156

Matrix : SOIL

Date Sampled : 11/13/90

roject Number: 8-90-421-SI

Date Prepared : 11/28/90 Date Analyzed : 11/29/90 Date Released : 12/06/90 Instrument I.D.: AA1/ICP1

	77.1			Sample I.D.#		
<b></b>	EPA Method#	Reporting Limit		BLANK	 	
ELEMENTS		(mg/Kg)	-03	MB1128S	 	
Silver (Ag)	6010	1.0	ND	ND		
Barium (Ba)	6010	10.0	77.6	ND		
Beryllium (Be) Cadmium (Cd)	6010	0.50 0.50	ND ND	ND ND		
Cobalt (Co) Total Cr	6010 6010	5.0 1.0	5.8 23.8	ND ND		
Copper (Cu) Mercury (Hg)	6010 7471	2.5 0.025	10.7	ND ND		
Molybdenum (Mo)	6010	1.0	ИД	ИD		
Nickel (Ni) ∎Lead (Pb)	6010 6010	4.0 4.0	37.2 7.9	ND ND		
Antimony (Sb) Selenium (Se)	6010 7740	6.0 0.25	ND ND	ND ND		
Thallium (Tl)	7841	0.5	ND	ND		,
Vanadium (V) Zinc (Zn)	6010 6010	5.0 2.0	15.9 24.4			

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Administrative Code Title 22, Section 66699.

Transfigue 12/07/90
Chemist Date

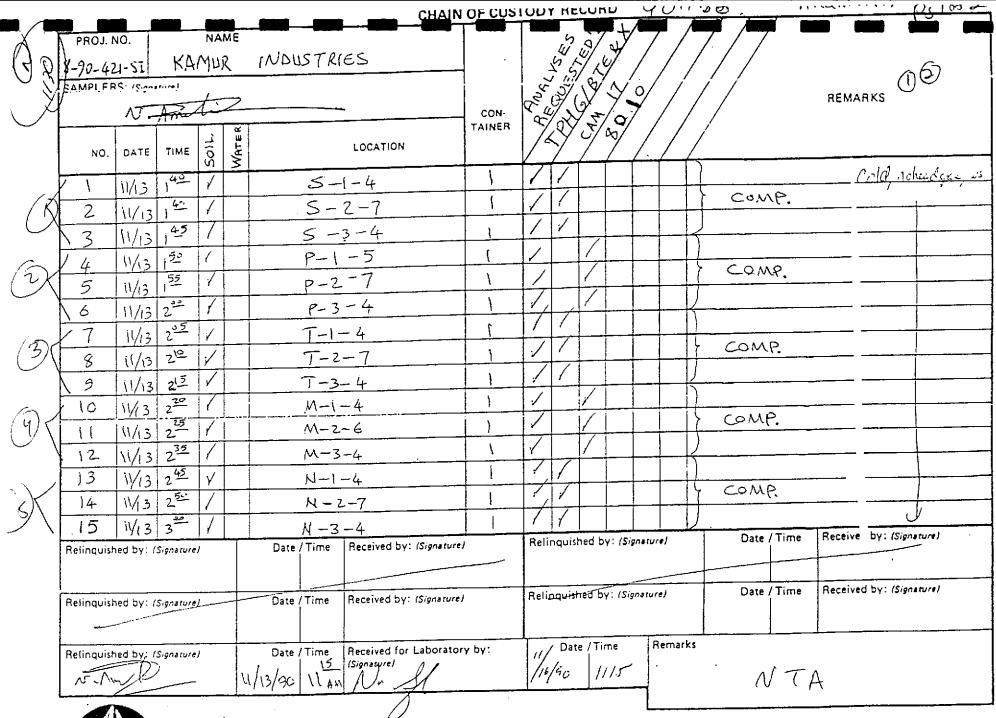
Oley Nemcherol 12-07-90
Chemist Date



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SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers





## SOIL TECH ENGINEERING

-Soil, Foundation and Geological Engineers

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# SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

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# SOIL TECH ENGINEERING Soil, Foundation and Geological Engineers



1961 Concourse Drive, Suite F San Jose, CA 95131 (408) 432-8192 • Fax (408) 432-8198

December 13, 1990

Mr. Frank Hamedi SOIL TECH ENGINEERING 298 Brokaw Road Santa Clara, CA 95050

Dear Mr. Hamedi:

Enclosed are the results of work from your Project Number 8-90-421-SI, received by Anametrix, Inc. on November 16, 1990. The following analysis, Arsenic (EPA Method 7060), was performed by a laboratory sub-contracted by Anametrix, Inc.

Client I.D. #
S-1-4,2-7,3-4
T-1-4,2-7,3-4
N-1-4,2-7,3-4

If you have any questions concerning this workorder, please call me at (408)432-8192.

Sincerely,

ANAMETRIX, INC.

Jennifer Payne

Client Services Representative

Jennifer Payne

JP/mh/4251

Enclosures

#### Table 2. Metals Results

#### Anametrix Sample ID

		9011156 -01	9011156 -03	9011156 -05	<i>-</i>	Method Blank	
Parameter	EPA Method	mg/kg	mg/kg	mg/kg	% Recov	mg/L	
Arsenic	7060	5.0	2.8	3.8	71	<0.005	

#### Table 2. Metals Results

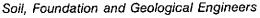
Anametrix Sample ID

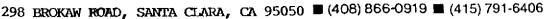
Parameter	EPA Method	Method Detection Limit  mg/kg
Arsenic	7060	2.5

RECORD CHAIN-OF-CUSTODY ANAMETRIX

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January 29, 1991

Redwood Sanitary Landfill, Inc. 8950 Redwood Highway P.O. Box 793 Novato, California 94948

Attention: Mr. Blair Virgin

Dear Mr. Virgin:

Enclosed is information regarding petroleum hydrocarbon contaminated soil that we wish to dispose of at your site.

The soil stockpile is a result of the removal of three underground gasoline storage tanks from the property owned by Kamur Industries, Inc., located at 400 San Pablo Avenue, Albany, California. No other tanks are or ever have been on the site.

In total, the soil stockpile is approximately 650 yards. The stockpile is currently stored on-site and is being treated by aeration and bio-remediation. However, due to limited space, we are only able to treat 100 yards at a time; we are proposing to dispose of the soil in the same manner.

After treatment of the first 100 yards of soil, samples were taken at a depth of approximately 2 and 3 feet, with the aid of a hand sampler, in a brass tube. The ends of the tube were capped and sealed, and the tube was labeled and placed in an ice chest for

delivery to Anametrix, in San Jose, accompanied by the proper chain-of-custody form. Eight samples were taken from the stockpile into four brass tubes and composited into two samples by the laboratory.

The samples were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPHg), Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX) and Organic Lead. Analytical results showed non-detectable levels of all constituents tested in the first composite sample and low levels of Toluene (0.075 mg/kg), Ethylbenzene (0.070 mg/kg), Total Xylenes (0.23 mg/kg), TPHg (10 mg/kg) and Lead levels were non-detectable in the second composite sample.

Thank you for your consideration.

....

NOORODDIN AMELI STAFF ENGINEER

RICHARD DOWNS

ENVIRONMENTAL EDITOR

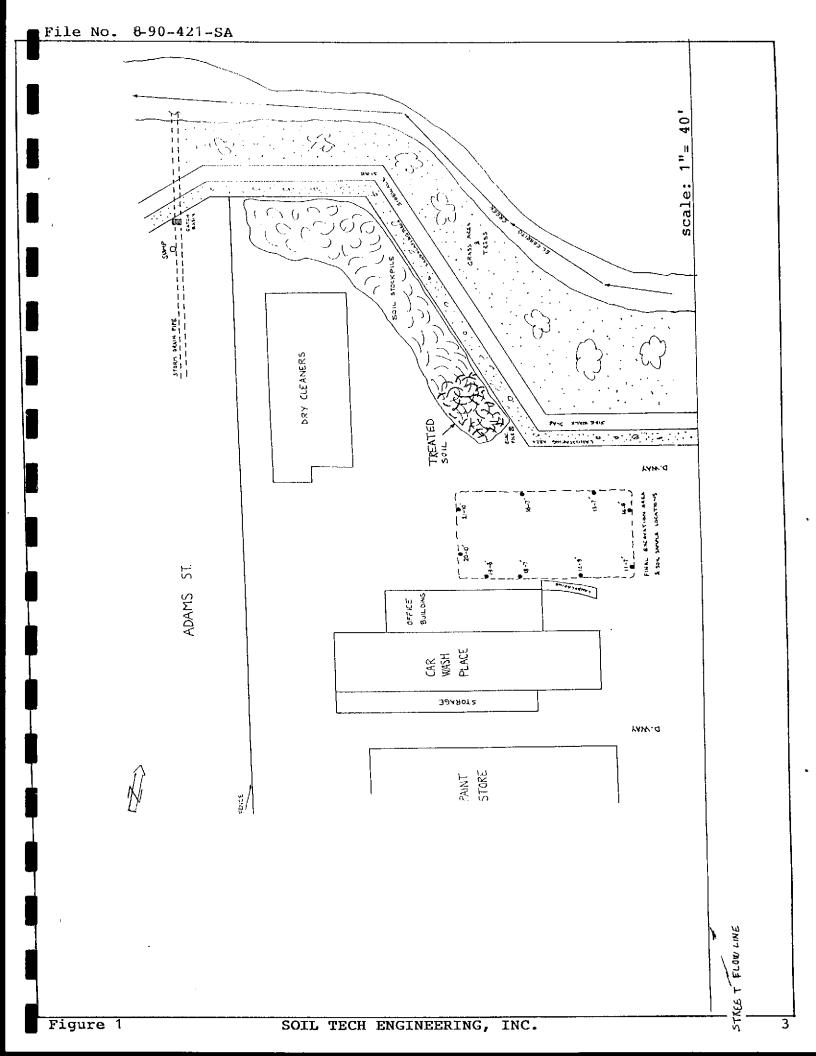
Sincerely,

LAWRENCE KOO, P. E.

C. E. #34928

FRANK HAMEDI-FARD

GENERAL MANAGER



#### **ANAMETRIX** INC

vironmental & Analytical Chemistry id Concourse Drive, Suite E, San Jose, CA 95131 38) 432-8192 • Fax (408) 432-8198



MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050

Workorder # : 9101207 Date Received : 01/22/91 Project ID : 8-90-421-SI

Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9101207- 1	ST-1-6,2-6,3-6
9101207- 2	ST-4-6,5-6,6-6

This report consists of 6 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Burt Sutherland

Laboratory Director

1-29-91

Date

### REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9101207 Date Received : 01/22/91 Project ID : 8-90-421-SI

Purchase Order: N/A
Department : GC
Sub-Department: TPH

#### SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9101207- 1	ST-1-6,2-6,3-6	SOIL	01/21/91	TPHg/BTEX
9101207- 2	ST-4-6,5-6,6-6	SOIL	01/21/91	TPHg/BTEX

### REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9101207 Date Received : 01/22/91 Project ID : 8-90-421-SI

Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Department Supervisor

Date

Chemist 70-cgt 1/28/01
Date

# ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS (GASOLINE WITH BTEX) ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9101207
Matrix : SOIL
Date Sampled : 01/21/91

Project Number: 8-90-421-SI Date Released: 01/28/91

Date Released : 01/28/91

	Reporting Limit		Sample I.D.# ST-4-6, 5-6,6-6		
COMPOUNDS	(mg/Kg)	-01	-02	BLANK	 
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasolin	0.005 0.005 0.005 0.005 e 0.5	ND ND ND ND	ND 0.075 0.070 0.23 10	ND ND ND ND	
% Surrogate Re- Instrument I Date Analyze RLMF	.D.	114% HP21 01/23/91	117% HP21 01/23/91 2	97% HP21 01/23/91 1	

ND - Not detected at or above the practical quantitation limit for the method.

Analyst, Wat 1/28/9/

Charles Bulma 1/2 /5,
Supervisor Date

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

RLMF - Reporting Limit Multiplication Factor.

Anametrix Control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

### REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050

Workorder # : 9101207 Date Received : 01/22/91 Project ID : 8-90-421-SI

Purchase Order: N/A
Department : METALS
Sub-Department: METALS

#### SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	метнор
9101207- 1	ST-1-6,2-6,3-6	SOIL	01/21/91	Org Pb
9101207- 2	ST-4-6,5-6,6-6	SOIL	01/21/91	Org Pb

### REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9101207
Date Received : 01/22/91
Project ID : 8-90-421-SI

Purchase Order: N/A
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department/Supervisor

1/29/9/

Oley New dead 01-29-91
Chemist Date.

METALS/METALS - PAGE 2

#### ANALYSIS DATA SHEET - ORGANIC LEAD ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9101207 Matrix : SOIL

Date Sampled : 01/21/91 Project Number: 8-90-421-SI

Date Prepared : 01/28/91 Date Analyzed : 01/28/91 Date Released : 01/29/91

Instrument I.D.: AA1

		ELEMENTS	Organic Lead	 
		EPA METHOD	LUFT	
		REPORTING LIMIT	0.08	
ANAMETRIX ID	CLIENT I	D	(mg/Kg)	 
9101207-01 9101207-02 OMB0128S	ST-1-6, ST-4-6, METHOD	5-6,6-6	ND ND ND	

ND: Not detected at or above the practical quantitation limit for the method.

Organic Lead by Leaking Underground Fuel Tank (LUFT) Manual, 1987 California State Water Resources Control Board.

annyhquya 12919

Oleg Voulleiof 01-29-91
Chemist Date

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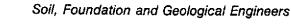
SOIL TECH ENGINEERING
Soil, Foundation and Geological Engineers

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### SOIL TECH ENGINEERING





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

February 6, 1991

Redwood Sanitary Landfill, Inc. 8950 Redwood Highway P.O. Box 793 Novato, California 94948

Attention: Mr. Blair Virgin

Dear Mr. Virgin:

Enclosed is information regarding petroleum hydrocarbon contaminated soil that we wish to dispose of at your site.

The soil stockpile is a result of the removal of three underground gasoline storage tanks from the property owned by Kamur Industries, Inc., located at 400 San Pablo Avenue, Albany, California. No other tanks are or ever have been on the site.

In total, the soil stockpile is approximately 650 yards. The stockpile is currently stored on-site and is being treated by aeration and bio-remediation. Previously, approximately 100 to 150 yards from this stockpile was treated, tested and disposed of at your facility. At present, we are proposing to dispose of an additional 200 yards of soil.

After treatment, soil samples were taken at a depth of approximately 2 and 3 feet, with the aid of a hand sampler, in a brass tube. The ends of the tube were capped and sealed, and the tube was labeled and placed in an ice chest for delivery to Anametrix,

in San Jose, accompanied by the proper chain-of-custody form. Sixteen samples were taken from the stockpile into eight brass tubes and composited into four samples by the laboratory.

The samples were composited and analyzed for Total Petroleum Hydrocarbons as Gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX). Analytical results showed TPHg ranged from <0.5 parts per million (ppm) to 7.1 ppm, Benzene (<0.005 ppm to 0.045 ppm), Toluene (0.006 ppm to 0.025 ppm), Ethylbenzene (<0.005 ppm to 0.028 ppm) and Xylenes (0.015 ppm to 0.22 ppm).

Thank you for your consideration.

Sincerely,

NOORODDIN AMELI

STAFF ENGINEER

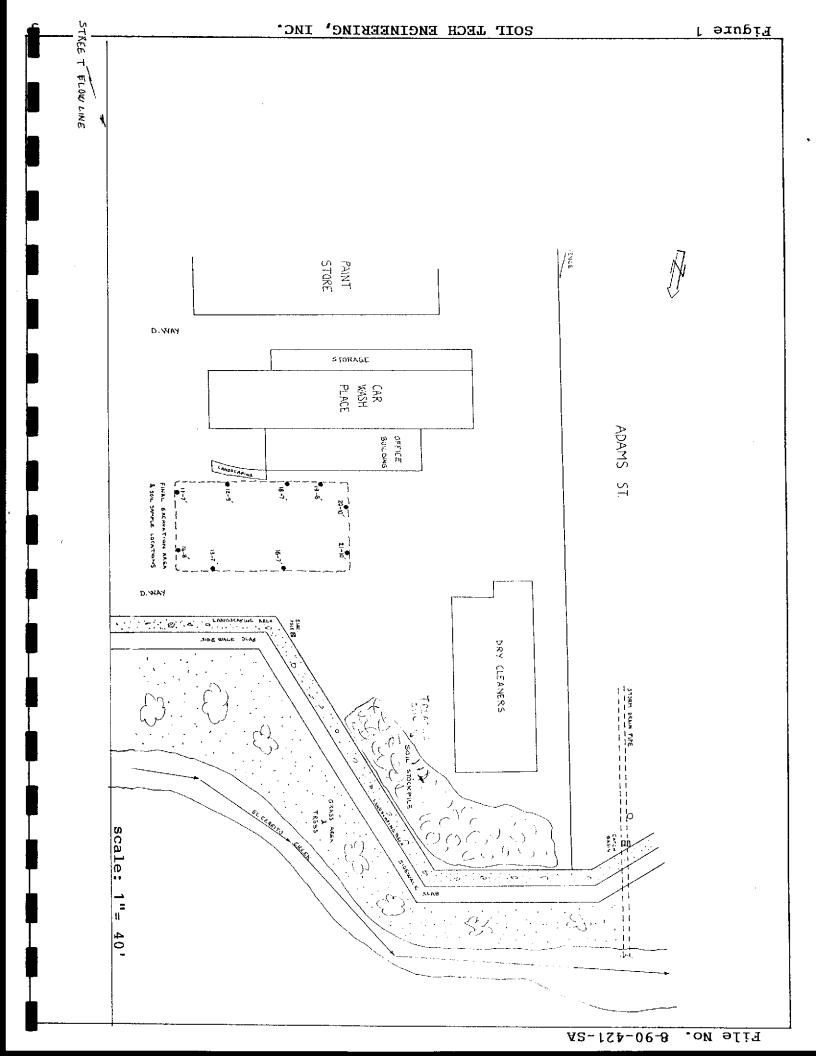
RICHARD DOWNS

ENVIRONMENTAL EDITOR

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

С. Е. #34928

FRANK HAMEDI-FARD GENERAL MANAGER



#### ANAMETRIX INC

vironmental & Analytical Chemistry 51 Concourse Drive, Suite E. San Jose, CA 95131 58) 432-8192 • Fax (408) 432-8198



MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9102019
Date Received : 02/01/91
Project ID : 8-90-421-SI

Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis:

ANAMETRIX ID	CLIENT SAMPLE ID
9102019- 1	ST-7-3,8-2
9102019- 2	ST-9-5,10-3
9102019- 3	ST-11-4,12-3
9102019- 4	ST-13-3,14-3

This report consists of 3 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Burt Sutherland

Laboratory Director

2-6-91

Date

## REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI SOIL TECH ENGINEERING 298 BROKAW ROAD SANTA CLARA, CA 95050 Workorder # : 9102019
Date Received : 02/01/91
Project ID : 8-90-421-SI

Purchase Order: N/A Department : GC Sub-Department: TPH

#### AMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9102019- 1	ST-7-3,8-2	SOIL	02/01/91	TPHg/BTEX
9102019- 2	ST-9-5,10-3	SOIL	02/01/91	TPHg/BTEX
9102019- 3	ST-11-4,12-3	SOIL	02/01/91	TPHg/BTEX
9102019- 4	ST-13-3,14-3	SOIL	02/01/91	TPHg/BTEX

#### REPORT SUMMARY ANAMETRIX, INC. (408)432-8192

MR. FRANK HAMEDI

SOIL TECH ENGINEERING

298 BROKAW ROAD

SANTA CLARA, CA 95050

Workorder # : 9102019

Date Received: 02/01/91 Project ID: 8-90-421-SI

Purchase Order: N/A Department : GC Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Department Supervisor

Date

Date 2.6-91

GC/TPH - PAGE 2

#### ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS (GASOLINE WITH BTEX) ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9102019 : SOIL Matrix

Date Sampled : 02/01/91

Project Number: 8-90-421-SI Date Released: 02/06/91

	Reporting Limit	Sample I.D.# ST-7- 3,8-2	Sample I.D.# ST-9-5 ,10-3	Sample I.D.# ST-11- 4,12-3	Sample I.D.# ST-13- 3,14-3	Sample I.D.#
COMPOUNDS	(mg/Kg)	-01	-02	-03	-04	BLANK
		~~			<b>_</b>	
Benzene	0.005	ND	ND	ND	0.045	ND
Toluene	0.005	ND	0.006	ND	0.025	ИD
Ethylbenzene	0.005	0.028	ND	ND	ND	ND
Total Xylenes	0.005	0.22	0.016	0.070	0.015	ND
TPH as Gasoline	€ 0.5	7.1	ND	4.0	1.0	ND
% Surrogate Rec Instrument I Date Analyze	.D	109% HP4 02/05/91	82% HP4 02/05/91	94% HP4 02/05/91	85% HP4 02/05/9	104% HP4 102/05/91
RLMF		2	1	2	1	1

ND - Not detected at or above the practical quantitation limit for the method.

TPHq - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

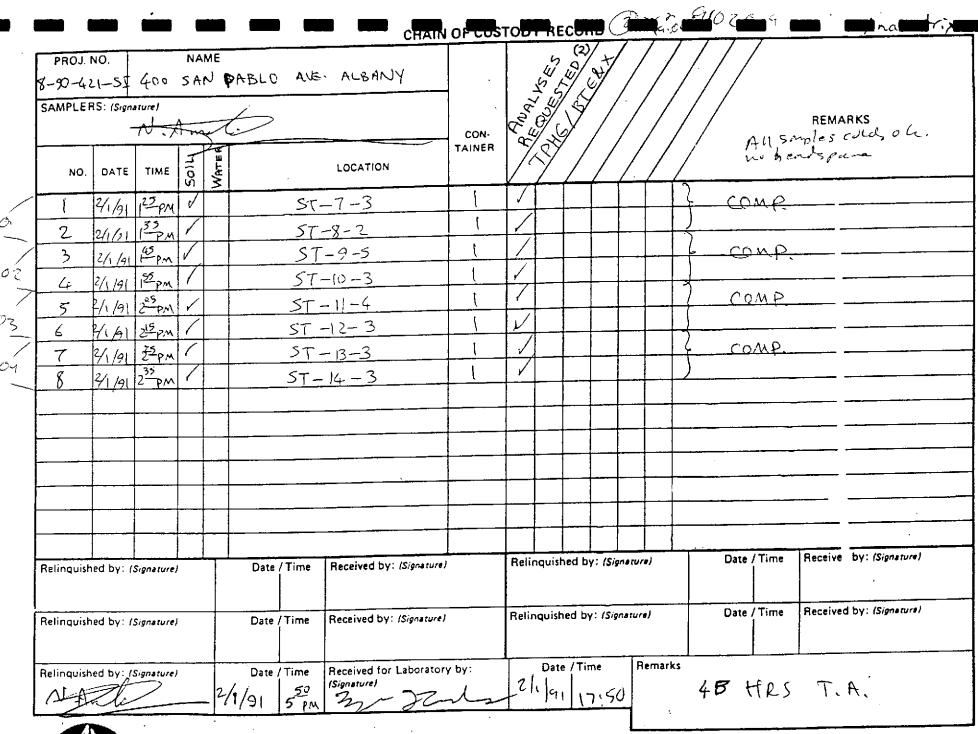
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Results - TPH - Page 1





SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

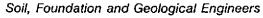
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SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

CLARA, CA 95050 # (408) 866-0919 # (415) 791-6406





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

February 22, 1991

Redwood Sanitary Landfill, Inc. 8950 Redwood Highway P.O. Box 793 Novato, California 94948

Attention: Mr. Blair Virgin

Dear Mr. Virgin:

Enclosed is information regarding petroleum hydrocarbon contaminated soil that we wish to dispose of at your site.

The soil stockpile is a result of the removal of underground gasoline storage tanks located at 400 San Pablo Avenue, Albany, California. The soil stockpile is approximately 250 yards and is currently stored on-site.

Four samples were taken every 50 yards at a depth of approximately 2 and 3 feet, with the aid of a hand sampler, in a brass tube. The ends of the tube were capped and sealed, the tube was labeled and analyzed on-site by Mobile Chem Labs on February 21, 1991.

Please review this information as soon as possible. We would like to start transporting the soil as soon as possible.

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

NOORODDIN AMELI STAFF ENGINEER

RICHARD DOWNS

ENVIRONMENTAL EDITOR

Sincerely,

LAWRENCE KOO, P. E.

100

C. E. #34928

FRANK HAMEDI-FARD

GENERAL MANAGER



5021 Blum Road, Suite 3 • Martinez, CA 94553 Phone (415) 372-3700 • Fax (415) 372-6955

8-90-421-SI/011669

Soil Tech Engineering, Inc.

298 Brokaw Road

Santa Clara, CA 95050

Attn: Frank Hamedi

Project Geologist

Date Sampled: 02-21-91 Date Received: 02-21-91

Date Reported: 02-21-91

Sample Number

V021076

Sample Description

Project # 8-90-421-SI

400 San Pablo Ave. - Albany

A(1-4) SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	3.9
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	0.15
Ethylbenzene	0.005	<0.005

QA/QC:

Sample blank was none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 8020 used for BTX distinction.

(ppm) = (mg/kg)

MOBILE CHEM LABS



5021 Blum Road, Suite 3 • Martinez, CA 94553 Phone (415) 372-3700 • Fax (415) 372-6955

8-90-421-SI/011669

Soil Tech Engineering, Inc.

298 Brokaw Road

Santa Clara, CA 95050

Attn: Frank Hamedi

Project Geologist

Date Sampled: 02-21-91 Date Received: 02-21-91

Date Reported: 02-21-91

Sample Number

V021077

Sample Description

Project # 8-90-421-SI

400 San Pablo Ave. - Albany

B(1-4)

SOIL

#### ANALYSIS

\_\_\_\_\_

	Detection Limit	Sample Results
	ppm	mqq
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC:

Sample blank was none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 8020 used for BTX distinction.

(ppm) = (mg/kg)

MOBILE CHEM LABS



5021 Blum Road, Suite 3 • Martinez, CA 94553 Phone (415) 372-3700 • Fax (415) 372-6955

8-90-421-SI/011669

Soil Tech Engineering, Inc.

298 Brokaw Road

Santa Clara, CA 95050

Attn: Frank Hamedi

Project Geologist

Date Sampled: 02-21-91 Date Received: 02-21-91

Date Reported: 02-21-91

Sample Number

V021078

Sample Description

Project # 8-90-421-SI

400 San Pablo Ave. - Albany

C(1-4) SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC:

Sample blank was none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 8020 used for BTX distinction.

(ppm) = (mg/kg)

MOBILE CHEM LABS



5021 Blum Road, Suite 3 • Martinez, CA 94553 Phone (415) 372-3700 • Fax (415) 372-6955

8-90-421-SI/011669

Soil Tech Engineering, Inc.

298 Brokaw Road

Santa Clara, CA 95050

Attn: Frank Hamedi

Project Geologist

Date Sampled: 02-21-91 Date Received: 02-21-91

Date Reported: 02-21-91

Sample Number

V021079

Sample Description

Project # 8-90-421-SI

400 San Pablo Ave. - Albany

D(1-4)SOIL

ANALYSIS

	Detection Limit	Sample Results  ppm
	ppm	PPm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC: Sample blank was none detected

Note:

Analysis was performed using EPA methods 5030 and TPH

LUFT with method 8020 used for BTX distinction.

(ppm) = (mg/kg)

MOBILE CHEM LABS

PSHOULANDER Ronald G. Evans Lab Director



5021 Blum Road, Suite 3 • Martinez, CA 94553 Phone (415) 372-3700 • Fax (415) 372-6955

8-90-421-SI/011669

Soil Tech Engineering, Inc.

298 Brokaw Road

Santa Clara, CA 95050

Attn: Frank Hamedi

Project Geologist

Date Sampled: 02-21-91 Date Received: 02-21-91

Date Reported: 02-21-91

Sample Number

V021080

Sample Description

Project # 8-90-421-SI

400 San Pablo Ave. - Albany

E(1-4)

SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

QA/QC:

Sample blank was none detected

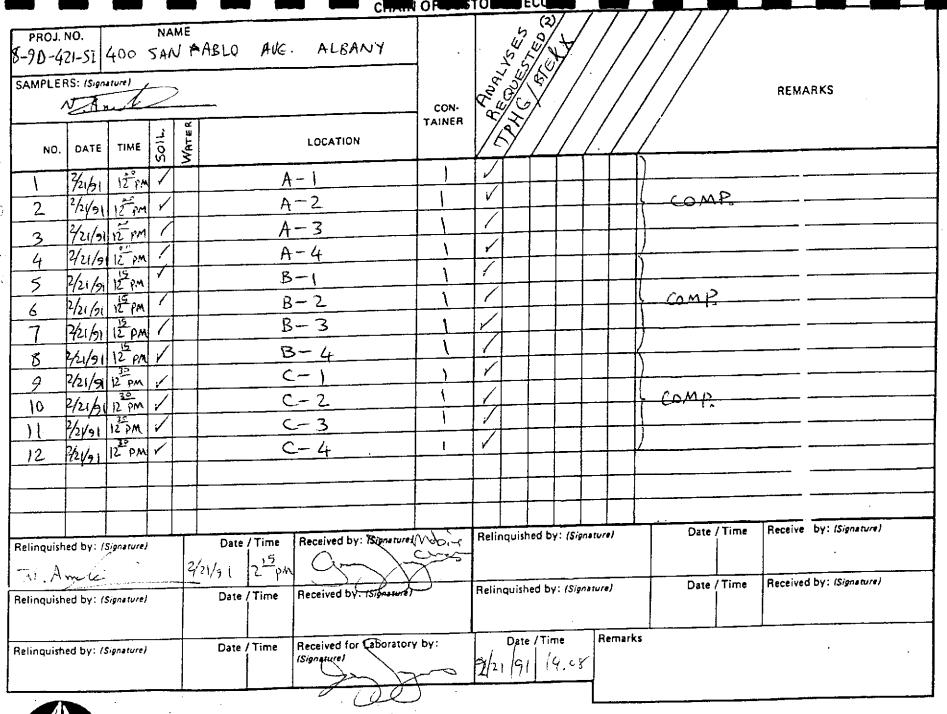
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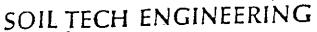
Analysis was performed using EPA methods 5030 and TPH

LUFT with method 8020 used for BTX distinction.

(ppm) = (mq/kq)

MOBILE CHEM LABS

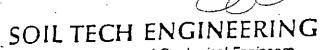




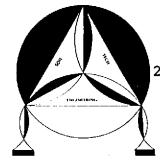
Soil, Foundation and Geological Engineers

208 BROKAW ROAD. SANTA CLARA, CA 95050 = (408) 866-0919 = (415) 791-6406

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Soil, Foundation and Geological Engineers



### SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

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

April 10, 1991

Redwood Sanitary Landfill, Inc. 8950 Redwood Highway P.O. Box 793 Novato, California 94948

Attention: Mr. Blair Virgin

Dear Mr. Virgin:

Enclosed is information regarding petroleum hydrocarbon contaminated soil that we wish to dispose of at your site.

The soil stockpile is a result of the removal of underground gasoline storage tanks located at 400 San Pablo Avenue, Albany, California. The remaining stockpile is approximately 110 yards and is currently stored on-site.

On April 2, 1991, four samples were taken every 50 yards at a depth of approximately 2 and 4 feet, with the aid of a hand sampler, in a brass tube. The ends of the tube were capped and sealed, the tube was labeled and analyzed by Superior Analytical Laboratory, Inc.

Please review this information as soon as possible. We would like to start transporting the soil as soon as possible.

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

Sincerely,

FRANK HAMEDI-FARD GENERAL MANAGER LAWRENCE KOO, P. E.

C. E. #34928

### SUPERIOR ANALYTICAL LABORATORY, INC.

1555 Burke, Unit I · San Francisco, Ca 94124 · Phone (415) 647-2081

DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 53414

CLIENT: Soil Tech Engineering

CLIENT JOB NO.: 8-90-421-SI

DATE RECEIVED: 04/03/91 DATE REPORTED: 04/09/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 5030 and 8015

LAB		Concentration (mg/kg)
#	Sample Identification	Gasoline Range
. 1	ST-(1>4)-5	ND<1
2	ST - (5 > 8) - 5	7

mg/kg - parts per million (ppm) Minimum Detection Limit for Gasoline in Soil: 1mg/kg

QAQC Summary:

Daily Standard run at 2mg/L: %DIFF Gasoline = <15% MS/MSD Average Recovery = 64%: Duplicate RPD = 0.3%

Richard Srna, Ph.D.

Laboratory Director

### SUPERIOR ANALYTICAL LABORATORY, INC.

1555 Burke: Unit I · San Francisco, Ca 94124 · Phone (415) 647-2081

DHS #1332

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 53414

CLIENT: Soil Tech Engineering

DATE RECEIVED: 04/03/91

DATE REPORTED: 04/09/91

CLIENT JOB NO.: 8-90-421-SI

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES by EPA SW-846 Methods 5030 and 8020

AB # 	Sample Identification	Benzene	Concentr Toluene	ation(ug/ Ethyl Benzene	Kg) Xylenes
1	ST-(1>4)-5	ND<3	ND<3	ND<3	4
2	ST-(5>8)-5	ND<3	ND<3	ND<3	1 3

g/kg - parts per billion (ppb)

Minimum Detection Limit in Soil: 3.0ug/kg

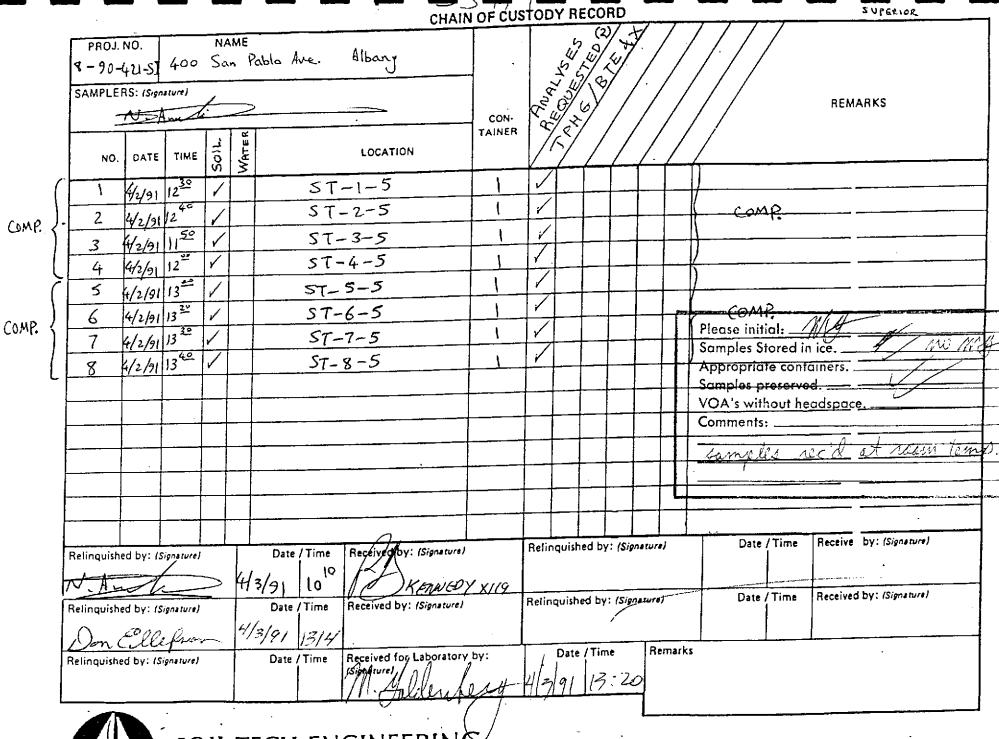
QAQC Summary:

Daily Standard run at 20ug/L: %DIFF = <15%

MS/MSD Average Recovery = 91% : Duplicate RPD = 7%

Richard Srna, Ph.D.

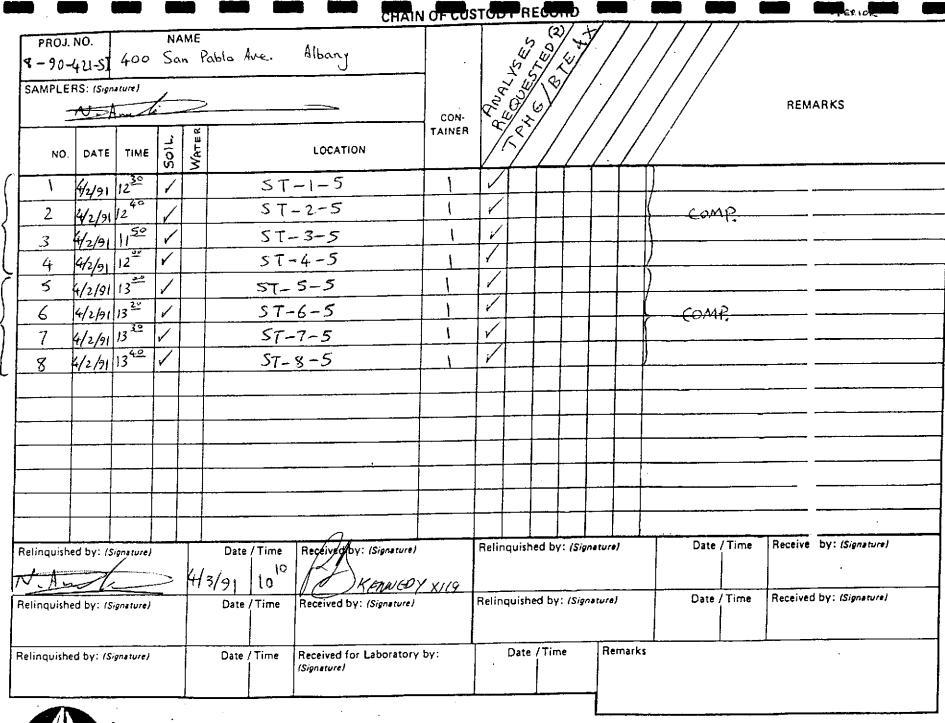
Omji A Nowsingfol Laboratory Director



SOIL TECH ENGINEERING

Soil, Foundation and Geological Engineers

00 000 0010 M (415) 701 0400



### SOIL TECH ENGINEERING

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Soil, Foundation and Geological Engineers

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

8-90-421-SI 4/2/91

S. TOCK PILE SAMPLING DAY NORGE CLEANERS 7-5 HIGHT CAR WASH ELEC. 8

SAN PABLO AVC.

Dear Mr. Virgin,

Here is the information that you requested. This package was originally sent, via FAX, on February 22, 1991. It has come to my attention that you did not receive it.

I apologize for any inconvenience this may have caused you. The soil is being trucked to you today (February 26, 1991).

Sincerely,

Richard Downs