

#### KAPREALIAN ENGINEERING, INC.

Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 676 • 9100 (707) 746 • 6915

KEI-J87-083-6 April 8, 1988

Shell Oil Company P. O. Box 4023 Concord, CA 94596

Attn: Ray Newsome

Re: Update Report #7

Former Shell Service Station

7194 Amador Valley Blvd.

Dublin, California

Dear Mr. Newsome:

This report summarizes the work performed by Kaprealian Engineering, Inc. (KEI) at the referenced site since our last report dated March 11, 1988.

#### FIELD INVESTIGATION

On March 11, 1988, KEI began aeration of the stockpiled soil. Approximately 500 cubic yards of soil were aerated over a period of four days. On March 16, 1988, five composite samples, labeled Comp A, Comp B, Comp C, Comp D, and Comp E were collected from the stockpile of the excavated pit and analyzed. The composite soil samples consisted of four (4) individual grab samples taken at various locations and depths ranging from 1-1/2 to 2 feet and composited as one sample. The samples were collected in 2-inch by 4-inch, clean brass tubes, sealed with aluminum foil and plastic caps and placed in an ice chest for subsequent delivery to HAZCAT Organics Laboratory in San Carlos, California. samples were analyzed for total petroleum hydrocarbon (TPH) as gasoline, benzene, toluene, xylene and ethylbenzene (BTXE) concentrations using EPA methods 5020, 8015 and 8020. laboratory analyses are summarized in Table 1. Copies of the analyses, and the chain of custody forms are attached to this report. On March 18, 1988, KEI supervised the backfilling of the excavated pit with the aerated soil. solul up to 73 ggm THG - googs benzene

On March 21, 1988, KEI began supervising the excavation of an approximately 20-foot wide strip along Amador Valley Blvd. (shown on attached sketch Figure 9) in an attempt to remove and aerate most of the contaminated soil found during the sampling of February 29, 1988. On March 22, 1988, the excavation of approximately 1200 cubic yards was completed. Twelve (12) composite samples, labeled Comp A through Comp L were collected from the excavated soil. The samples were sealed and stored using the procedures described above.

KEI-J88-083-6 April 8, 1988 Page 2

Analytical results of the composite samples showed TPH levels ranging from 11 to 1100 parts per million (ppm). On March 23, 1988, KEI obtained permission from the Bay Area Air Quality Management District (BAAQMD) to aerate the stockpiled soil where composite samples Comp D, Comp H, Comp I, Comp K and Comp L were taken. On March 24, 1988, KEI began aeration of the stockpiled soil (approximately 500 cu. yds.) which continued on March 25, 28 and 29. Stockpile J which had 1100 ppm concentration levels, was stockpiled separately and covered for a later aeration date.

On March 29, 1988, KEI resampled the aerated stockpiled soil, taking five (5) composite samples labeled Comp A, Comp B, Comp C, Comp D, and Comp E. The samples were sealed and stored using the procedures described above. All samples showed TPH levels less than 100 parts per million with the exception of sample Comp B which had a TPH level of 140 ppm. On March 31, 1988, KEI obtained an aeration permit from the BAAQMD to further aerate the soil. Aeration began on April 4, and continued through April 5, at which time a composite sample (labeled Comp A) was collected from the stockpile.

On April 4, 1988, KEI obtained permission from the BAAQMD to aerate stockpile J which had been analyzed to have TPH concentrations of 1100 ppm. Aeration was done on April 5, 6 and 7, 1988. A composite sample (labeled Comp J) was collected on April 7, and analyzed as described above. The result of the laboratory analyses are summarized in Table 1.

#### SUMMARY

Since August 3, 1987, approximately 6500 cubic yards of soil have been excavated, aerated (to a TPH level of less than 100 ppm) and backfilled (without compaction) over 2 feet of pea gravel. The area of the excavation and the location of the grab samples, from the side wall, 6 inches above the water table along the perimeter of the excavation, are shown on the attached sketch (Figure 10).

The results of the grab samples from the side wall showed total petroleum hydrocarbon (TPH) levels of less than 1000 parts per million (ppm) except samples TR-5 and TR-6. Sample TR-5 and TR-6 (located below the sidewalk along Village Parkway) showed TPH levels of 1900 and 1300 ppm, respectively. The results of the laboratory analyses are summarized in Table 2.

Based on the high levels of total petroleum hydrocarbons, KEI recommends additional investigation in order to comply with the requirements of the regulatory agencies. This investigation should consist of defining the lateral extent of the

KEI-J87-083-6 April 8, 1988 Page 3

contamination and mitigation for soil and groundwater cleanup.

A copy of this report should be sent to the Alameda Flood Control District, the Alameda County Health Department, the City of Dublin, and the Regional Water Quality Control Board.

#### **LIMITATIONS**

Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in groundwater levels and flow paths, thereby changing the extent and concentration of any contaminants. Our studies assume that the field and laboratory data are reasonably representative of the site as a whole, and assume that subsurface conditions are reasonably conducive to interpolation and extrapolation.

The results of this study are based on the data obtained from the field and laboratory investigations. We have analyzed this data using what we believe to be currently applicable engineering techniques and principles in the Northern California region. We make no warranty, either expressed or implied, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

Should you have any question regarding this matter, please call me at (707) 746-6915 or (415) 676-9100.

Sincerely,

Kaprealian Engineering, Inc.

Mrso Know

Mardo Kaprealian

Attachments: Tables 1 and 2

Laboratory Analyses Chain of Custody Figures 9 and 10

KEI-J87-083-6 April 8, 1988 Page 4

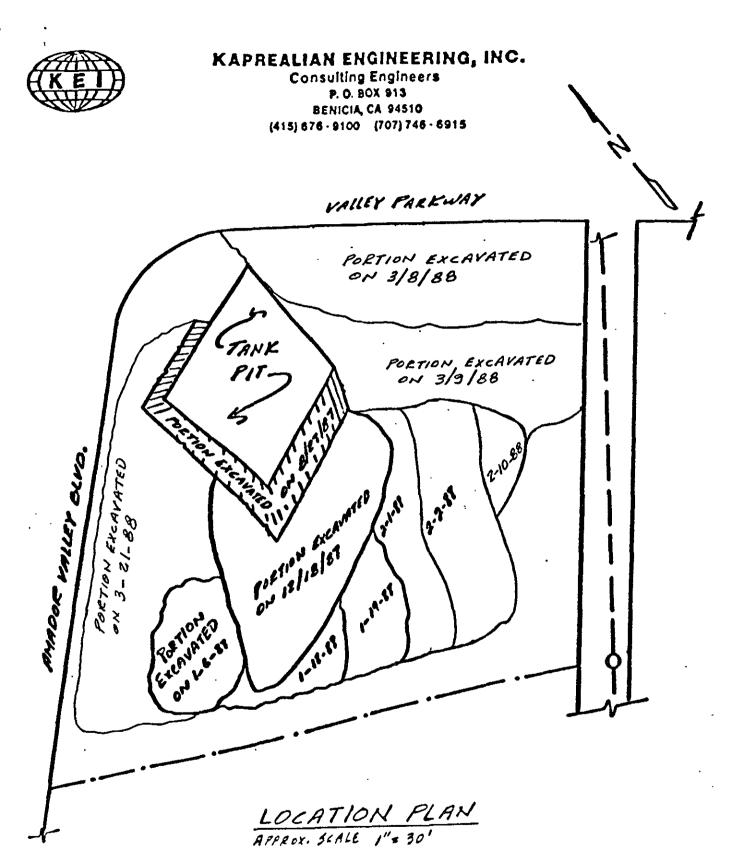
TABLE 1 SUMMARY OF LABORATORY ANALYSES

	Sampling <u>Date</u>	Sample	<u>TPH</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
	3/16/88	Comp A	17	0.1	0.4	2.9	0.4 \ Use &
	`	Comp B	21	0.2	0.3	6.5	0.7 \ Vac
	y into	Comp C	49	0.6	0.6	6.3	1.0
	V( ··	Comp D	60	0.8	2.6	10	1.6 /
		Comp E	73	0.9	2.2	18	2.6 '
	3/22/88	Comp A	26	0.1	0.1	4.6	0.9
		Comp B	34	0.2	0.5	9.9	1.7
		Comp C	23	0.6	1.5	3.5	0.6
	ه بر	Comp D	160	2.4	3.0	24	5.6
		Comp E	11	0.2	0.3	2.3	0.4
		Comp F	22	0.2	0.1	1.4	0.5
م يون		Comp G	26	0.7	1.1	6.1	1.1
سنبقق ب		Comp H	280	19	10	45	10
×*/	) a	Comp I	170	1.5	7.2	45	7.8
£ 2	tackpited (	Comp J	1100	11	48	180	35
8/ 60		Comp K	320	14	42	87	17
( as	cotion (	comp L	170	2.0	9.0	33	8.5
	3/29/88	Comp A	26	0.2	<0.1	<0.1	<0.1
		Comp B	140	₩ 0.6	0.6	2.8	0.6
		Comp C	140 71 29 ్ల	₹0.2	0.1	1.7	0.4
-	Jan Jan	Comp D	29 🤔	(A) 0.2	<0.1	0.4	<0.1
	(P) (P)	Comp E	64 ్ల	0.6 0.2 0.2 0.4	0.1	1.1	0.2
	4/05/88	Comp A	3.3	<b>/&lt;0.1</b>	<0.1	0.3	<0.1
	4/07/88	Comp J	12 6	0.1	0.1	0.5	<0.1

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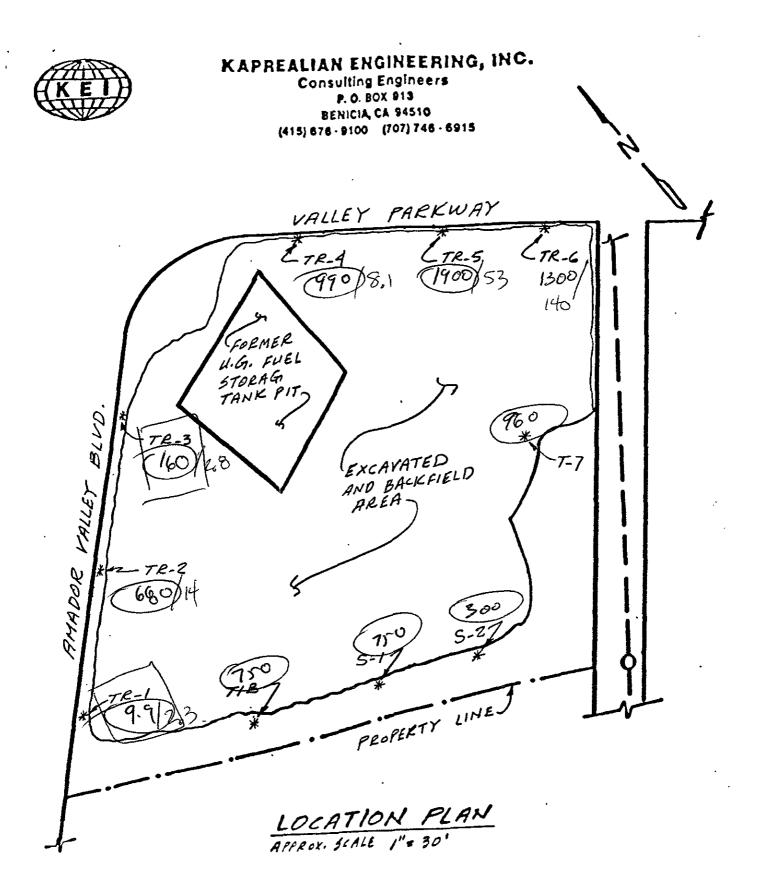
TABLE 2
Summary of Sidewall and Trench Samples

Sampling <u>Date</u>	Sample	ТРН	B	<u> </u>	<u>x</u>	E
12/17/87	T1-B	750	31	37	170	32
2/01/88	S-1 S-2	750 300	22 5.5	34 1.8	180 98	25 18
2/08/88	T-7	960	99	99	260	42
2/29/88	TR-1 TR-2 TR-3 TR-4 TR-5 TR-6	9.9 680 160 990 1900	2.3 14 2.8 8.1 53 140	<0.1 1.1 <0.1 5.8 27 48	1.2 54 13 110 230 260	0.7 35 9.5 36 40 35



SHELL SERVICE STATION 1194 AMADOR VALLEY DUBLIN, CALIFORNIA

FIGURE 9



PPM TPH-G

SHELL SERVICE STATION 7194 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA

FIGURE 10

# **HAZCAT** Mobile Organics Lab

733 Dartmouth Avenue San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-16-88

Date Received: 03-16-88
Date Reported: 03-17-88

Sample Number

038108

Sample Description

Shell-Dublin

Village Pkwy. & Amador

ŧ

Comp. A SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	17
Benzene	0.1	0.1
Toluene	0.1	0.4
Xylenes	0.1	2.9
Ethylbenzene	0.1	0.4

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-16-88 Date Received: 03-16-88

Date Reported: 03-17-88

Sample Number

038109

Sample Description

Shell-Dublin

Village Pkwy. & Amador

Comp. B SOIL

### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	21	
Benzene	0.1	0.2	
Toluene	0.1 •	0.3	
Xylenes	0.1	6.5	
Ethylbenzene	0.1	0.7	

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-16-88
Date Received: 03-16-88

Date Reported: 03-17-88

Sample Number

038110

Sample Description

Shell-Dublin

Village Pkwy. & Amador

Comp. C SOIL

### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	49	
Benzene	0.1	0.6	
Toluene	0.1	0.6	
Xylenes	0.1	6.3	
Ethylbenzene	0.1	1.0	

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-16-88 Date Received: 03-16-88

Date Reported: 03-17-88

Sample Number

038111

Sample Description

Shell-Dublin

Village Pkwy. & Amador

Comp. D SOIL

### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	60	
Benzene	0.1	0.8	
Toluene	0.1	2.6	
Xylenes	0.1	10	
Ethylbenzene	0.1	1.6	

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-16-88
Date Received: 03-16-88

Date Reported: 03-17-88

Sample Number

038112

Sample Description

Shell-Dublin

Village Pkwy. & Amador

Comp. E SOIL

#### ANALYSIS

•	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	73	
Benzene	0.1	0.9	
Toluene	0.1	2.2	
Xylenes	0.1	18	
Ethylbenzene	0.1	2.6	

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

# TAPREALIAN ENGINEERING, INC.

# CHAIN OF CUSTODY

SAMPLER: au he	DATE/TIME COLLECTION	of 1: 3/16/8/	TURNAROUN TIME:	2441
(signature)  SAMPLE DESCRIPTION AND PROJECT NUMBER:	8	HELL ACT A	DUBO KWY/	AMA DO
SAMPLE & ANALYSIS  COMPA TPH,  COMPB "  COMPC "  COMPD "  COMPD "  COMPE "	BTX E 4 4	GRAB OR COMP.  COMP.  LA.  LA.  LA.  LA.  LA.  LA.  LA.  L	NUMBER OF CONTAINERS  4  4  4  4  4	SOIL/ WATER S S
RELINQUISHED BY*	TIME/DATE 18:00 5/16/38	RECEIVED Nevere Haysot	3/1	ME/DATE 6/88
<ul><li>3.</li><li>4.</li></ul>	•		· •	•
* STATE AFFILIATION NEX	IT TO SIGNATU	JRE		

P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038130

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. A SOIL

### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	26	
Benzene	0.1	0.1	
Toluene	0.1	0.1	
Xylenes	0.1	4.6	
Ethylbenzene	0.1	0.9	

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88
Date Reported: 03-23-88

Sample Number

038131

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. B SOIL

#### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	34	
Benzene	0.1	0.2	
Toluene	0.1	0.5	
Xylenes	0.1	9.9	
Ethylbenzene	0.1	1.7	

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88
Date Reported: 03-23-88

Sample Number

038132

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. C SOIL

#### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	23	
Benzene	0.1	0.6	
Toluene	0.1	1.5	
Xylenes	0.1	3.5	
Ethylbenzene	0.1	0.6	

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038133

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. D SOIL

### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	160	
Benzene	0.1	2.4	
Toluene	0.1	3.0	
Xylenes	0.1	24	
Ethylbenzene	0.1	5.6	

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88 Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038134

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. E SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	11
Benzene	0.1	0.2
Toluene	0.1	0.3
Xylenes	0.1	2.3
Ethylbenzene	0.1	0.4

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88 Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038135

Sample Description

Shell-Dublin

Amador Valley & Village Comp. F SOIL

# ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	22
Benzene	0.1	0.2
Toluene	0.1	0.1
Xylenes	0.1	1.4
Ethylbenzene	0.1	0.5

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038136

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. G SOIL

### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	26	
Benzene	0.1	0.7	
Toluene	0.1	1.1	
Xylenes	0.1	6.1	
Ethylbenzene	0.1	1.1	

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038137

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. H SOIL

### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	280
Benzene	0.1	19
Toluene	0.1	10
Xylenes	0.1	45
Ethylbenzene	0.1	10

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038138

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. I SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	170
Benzene	0.1	1.5
Toluene	0.1	7.2
Xylenes	0.1	45
Ethylbenzene	0.1	7.8

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.K.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038139

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. J SOIL

# ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	1,100
Benzene	0.1	11
Toluene	0.1	48
Xylenes	0.1	180
Ethylbenzene	0.1	35

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT



P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038140

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. K SOIL

# ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	320	
Benzene	0.1	14	
Toluene	0.1	42	
Xylenes	0.1	87	
Ethylbenzene	0.1	17	

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-22-88
Date Received: 03-22-88

Date Reported: 03-23-88

Sample Number

038141

Sample Description

Shell-Dublin

Amador Valley & Village

Comp. L SOIL

### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	170
Benzene	0.1	2.0
Toluene	0.1	9.0
Xylenes	0.1	33
Ethylbenzene	0.1	8.5

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

# TAPREALIAN ENGINEERING, INC.

# CHAIN OF CUSTODY

	SCRIPTION OT NUMBER:	AM	ADOR VAL	70/36/N	
SAMPLE #	ANALYSIS		GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
OMP A	TPH.	BTXE	COMP	2	<u>ع</u> ·
EMP B				2	2
OMPC 25400		Ч	<u> </u>	2	<u>_S</u>
OMPE				; 2	<u></u>
OMP F		<u> </u>	<u> </u>	2	-3
DMP G	и	~			2
elinquish Ray	ED BY*  A (A)(E1)	7:20 3:20 3/22/98	A RECEIVED	W 3/2	me/date 2/88 2/88
•		•		•	•
•					

# RAPREALIAN ENGINEERING, INC.

# CHAIN OF CUSTODY

SAMPLE DESCRIPTION _	SH	ELL D	BUN	ZUH.
AND PROJECT NUMBER: -	AMA	DOR VAL	EY/UI	CAR
SAMPLE ANALYSIS	0	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
COMPH TPH EMPI TPH,	BTX E BTX E	COMP		. <u>S</u>
DMP J THE	BIXE	<u> 9</u>	2	<u>S</u>
DOMP L. TPH.	BTXE	4	2	5
ELINQUISHED BY*	TIME/DATE	RECEIVED	<u> </u>	ME/DATI
· Pay(NE)	3/22/88	Haycat	3/2. 3/2	2/88 v pm
	/ /			-
•	•		-	
•				-

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-29-88 Date Received: 03-29-88 Date Reported: 03-30-88

Sample Number

038212

Sample Description

Shell-Dublin

Village Pkwy. & Amador Rd.

Comp. A

SOIL

#### ANALYSIS

	Detection Limit	Sample Results	
	ppm	ppm	
Total Petroleum Hydrocarbons as Gasoline	1	26	
Benzene	0.1	0.2	
Toluene	0.1	<0.1	
Xylenes	0.1	<0.1	
Ethylbenzene	0.1	<0.1	

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-29-88
Date Received: 03-29-88

Date Reported: 03-30-88

Sample Number

038213

Sample Description

Shell-Dublin

Village Pkwy. & Amador Rd.

Comp. B

SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	140
Benzene	0.1	0.6
Toluene	0.1	0.6
Xylenes	0.1	2.8
Ethylbenzene	0.1	0.6

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-29-88
Date Received: 03-29-88

Date Reported: 03-30-88

Sample Number

038214

Sample Description

Shell-Dublin

Village Pkwy. & Amador Rd.

Comp. C

SOIL

# ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	71
Benzene	0.1	0.2
Toluene	0.1	0.1
Xylenes	0.1	1.7
Ethylbenzene	0.1	0.4

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-29-88
Date Received: 03-29-88
Date Reported: 03-30-88

Sample Number

038215

Sample Description

Shell-Dublin

Village Pkwy. & Amador Rd.

Comp. D

SOIL

### ANALYSIS

Detection Limit	Sample Results
ppm	ppm
1	29
0.1	0.2
0.1	<0.1
0.1	0.4
0.1	<0.1
	ppm  1  0.1  0.1  0.1

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 03-29-88 Date Received: 03-29-88

Date Reported: 03-30-88

Sample Number

038216

Sample Description

Shell-Dublin

Village Pkwy. & Amador Rd.

Comp. E

SOIL

### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	64
Benzene	0.1	0.4
Toluene	0.1	0.1
Xylenes	0.1	1.1
Ethylbenzene	0.1	0.2

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

# KAPREALIAN ENGINEERING, INC.

# CHAIN OF CUSTODY

SAMPLER: Ray (BET) DATE/TIME COLLECTION	of 1: <u>3/29/88</u>	TURNAROUN TIME:	DUHRS
(signature) SAMPLE DESCRIPTION SHE	LL DU	BLIN	. ·
AND DECT NUMBER.		Y/AMAL	DOR R
SAMPLE # ANALYSIS	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
COMP A 3/29 TPH, BIXE	Comp	2	5
COMPB 3/29 TPH. BTXE			<u></u>
COMPC 3/29 TPH, BTXE		2_	<u> </u>
COMPD 3/21 TPH, BIXE			<u> </u>
COMPE 3/29 TPH. BIXE		2	
		<del></del> .	<del></del>
	, <del>-</del>	<del></del>	
RELINQUISHED BY* TIME/DATE	RECEIVED		ME/DATE
1. Ray REI 3/29/88	K, Evan Homal	•	29/88 40pm
2.	- conjunt		<u> </u>
3.			
4.		1	
* STATE AFFILIATION NEXT TO SIGNAT	URE		
REMARKS:			

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 04-05-88
Date Received: 04-05-88

Date Reported:04-06-88

Sample Number

048011

Sample Description

Shell-Dublin

Village Pkwy. & Amador Comp. A SOIL

#### ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	3.3
Benzene	0.1	<0.1
Toluene	0.1	<0.1
Xylenes	0.1	0.3
Ethylbenzene	0.1	<0.1

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

HAZCAT

# KAPREALIAN ENGINEERING, INC.

# CHAIN OF CUSTODY

(signature)	of 4/5/88 TURNAROUND 20 HO
SAMPLE DESCRIPTION AND PROJECT NUMBER:	ZC BUBLIN GE PKWY-AMADOR
SAMPLE # ANALYSIS	GRAB OR NUMBER OF SOIL/ COMP. CONTAINERS WATER
COMPA 4/5 TPH, BIXE	Gome 2 5
RELINQUISHED BY* TIME/DATE	RECEIVED BY* TIME/DATE HAZCAT 4-5-88
1. Ray (NEI) 4/5/88	Dushman 5.45
2.	
3.	
4.	
* STATE AFFILIATION NEXT TO SIGNA	TURE
REMARKS:	

### TAPREALIAN ENGINEERING, INC.

# CHAIN OF CUSTODY

SAMPLER: Oy ( ) E/ COLLECTION SAMPLE DESCRIPTION  SAMPLE DESCRIPTION	IL Dr	BLIN	· · · · ·
AND PROJECT NUMBER: - UILCAC	RE PKW	14- A	MADOR
SAMPLE # ANALYSIS	GRAB OR COMP.	NUMBER O	F SOIL/
COMPA 4/5 TPH, BIXE	COMP	_2	
			<u> </u>
		· · · · · · · ·	
ELINQUISHED BY* TIME/DATE	RECEIVED		TIME/DATE
· Ray (KEI) 4/5/88		AZCAT whosen	4-5-8
•			
			-
			,
STATE AFFILIATION NEXT TO SIGNAT	ni D Tr	· · · · · · · · · · · · · · · · · · ·	

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 04-07-88
Date Received: 04-07-88

Date Reported: 04-07-88

Sample Number

048023

Sample Description

Shell- Dublin

Amador & Village Pkwy.

Comp. J (4-7) SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	12
Benzene	0.1	0.1
Toluene	0.1	0.1
Xylenes	0.1	0.5
Ethylbenzene	0.1	<0.1

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

### KAPREALIAN ENGINEERING, INC.

### CHAIN OF CUSTODY

DATE/TIME	OF a d	_ TURNAROUN	D
SAMPLER: (Signature) DATE/TIME COLLECTION	1: 4/7/80	TIME:	DUHN
SAMPLE DESCRIPTION AND PROJECT NUMBER:	4EU	WW A	1K)
	GRAB OR	NUMBER OF	SOIL/
SAMPLE & ANALYSIS  STAP J (4.7) TPH, BTXE	COMP.	CONTAINERS 2	WATER S
		•	
1. Play (h/=// 4/7/88	RECEIVED Hanes	s ?	IME/DATE 1-7-88 1501m
2.			•
3.			· · · · · · · · · · · · · · · · · · ·
4.		£ .	
* STATE AFFILIATION NEXT TO SIGNAT	URE	1	
REMARKS:			

P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 12-17-87
Date Received: 12-17-87

Date Reported: 12-18-87

Sample Number

127042

Sample Description

Shell Dublin

T1-B SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	750
Benzene	0.1	31
Toluene	0.1	37
Xylenes	0.1	170
Ethylbenzene	0.1	32

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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P.O. BOX 913

Benicia , CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 02-01-88
Date Received: 02-02-88

Date Reported: 02-02-88

Sample Number

028001

Sample Description

Shell-Dublin

S-1

SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	750
Benzene	0.1	22
Toluene	0.1	34
Xylenes	0.1	180
Ethylbenzene	0.1	25

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 02-01-88 Date Received: 02-02-88 Date Reported:02-02-88

Sample Number

028002

Sample Description

Shell-Dublin

S-2 SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	300
Benzene	0.1	5.5
Toluene	0.1	1.8
Xylenes	0.1	98
Ethylbenzene	0.1	18

Note: Analysis was performed using EPA methods 5020 and 8015 with

method 8020 used for BTX distinction.

HAZCAT

Ronald G. Evans

Lab Director

P.O. BOX 913

Benicia ,CA 94510 Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 02-08-88 Date Received: 02-09-88

Date Reported: 02-09-88

Sample Number

028035

Sample Description

Shell-Dublin

Amador & Valley Road

T-7 SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	960
Benzene	0.1	99
Toluene	0.1	99
Xylenes	0.1	260
Ethylbenzene	0.1	42

Analysis was performed using EPA methods 5020 and 8015 with Note: method 8020 used for BTX distinction.

HAZCAT

Ronald G. Evans

Lab Director

## **HAZCAT** Mobile Organics Lab

733 Dartmouth Avenue San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 02-29-88

Date Received: 02-29-88
Date Reported: 03-01-88

Sample Number

028153

Sample Description

Shell-Dublin

TR-1

SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	9.9
Benzene	0.1	2.3
Toluene	0.1	<0.1
Xylenes	0.1	1.2
Ethylbenzene	0.1	0.7

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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# HAZCAT Mobile Organics Lab 733 Dartmouth Avenue

San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 02-29-88

Date Received: 02-29-88

Date Reported: 03-01-88

Sample Number

028154

Sample Description

Shell-Dublin

TR-2 ·

SOIL

### ANALYSIS

	Detection Limit ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	680
Benzene	0.1	14
Toluene	0.1	1.1
Xylenes	0.1	54
Ethylbenzene	0.1	35

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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# HAZCAT Mobile Organics Lab 733 Dartmouth Avenue San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled:02-29-88
Date Received:02-29-88

Date Reported: 03-01-88

Sample Number

028155

Sample Description

Shell-Dublin

TR-3

SOIL

### ANALYSIS

	Detection Limit	Sample Results
	<b>b</b> bm	ppm
Total Petroleum Hydrocarbons as Gasoline	1	160
Benzene	0.1	2.8
Toluene	0.1	<0.1
Xylenes	0.1	13
Ethylbenzene	0.1	9.5

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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## **HAZCAT** Mobile Organics Lab

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Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled: 02-29-88

Date Received: 02-29-88

Date Reported: 03-01-88

Sample Number

028156

Sample Description

Shell-Dublin

TR-4

SOIL

### ANALYSIS

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•	Detection Limit ppm	Sample Results ppm
Total Petroleum Hydrocarbons as Gasoline	1	990
Benzene	0.1	8.1
Toluene	0.1	5.8
Xylenes	0.1	110
Ethylbenzene	0.1	36

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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## **KAZCAT** Mobile Organics Lab

733 Dartmouth Avenue San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled:02-29-88
Date Received:02-29-88

Date Reported:03-01-88

Sample Number

028157

Sample Description

Shell-Dublin

TR-5

SOIL

### ANALYSIS

	Detection Limit  ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	1900
Benzene	0.1	53
Toluene	0.1	27
Xylenes	0.1	230
Ethylbenzene	0.1	40

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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San Carlos, CA 94070 • (415) 591-5820

Kaprealian Engineering, Inc.

P.O. BOX 913

Benicia ,CA 94510

Attn: Mardo Kaprealian, P.E.

President

Date Sampled:02-29-88
Date Received:02-29-88

Date Reported:03-01-88

Sample Number

028158

Sample Description

Shell-Dublin

TR-6

SOIL

### ANALYSIS

	Detection Limit  ppm	Sample Results  ppm
Total Petroleum Hydrocarbons as Gasoline	1	1300
Benzene	0.1	140
Toluene	0.1	48
Xylenes	0.1	260
Ethylbenzene	0.1	35

Note: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

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