



EAST BAY
MARKETING DISTRICT

P.O. Box 4023 Concord, CA 94524 (415) 676-1414

April 19, 1988



Mr. Peter Johnson Water Quality Control Board San Francisco Bay Region 1111 Jackson Street Room 6000 Oakland, CA 94607

Dear Mr. Johnson:

RE: SHELL STATION
7194 AMADOR VALLEY BOULEVARD
DUBLIN, CA
(SOIL SAMPLING INVESTIGATION)

Shell Oil Company has removed all underground storage tanks (3-10,000) gallon fiberglass and 1-550 steel waste oil tank) and performed on site soil aeration for cleanup.

Refer to the attached soil investigation report KEI-J87-083-6 dated April 8, 1988 prepared by Kaprealian Engineering, Inc. for your review.

If you have any questions, please call me at (415) 676-1414, Ext. 128.

Very truly yours,

R. G. Newsome

Sr. District Engineer

RGN: im

Attachment

cc: Chris Christensen
Alameda County Department of Environmental Health
Dublin/San Ramon Service District, Attn: Ms.Tonya Snyder-Hoover



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.

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

Son Congression - 1000

O. Alexander

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

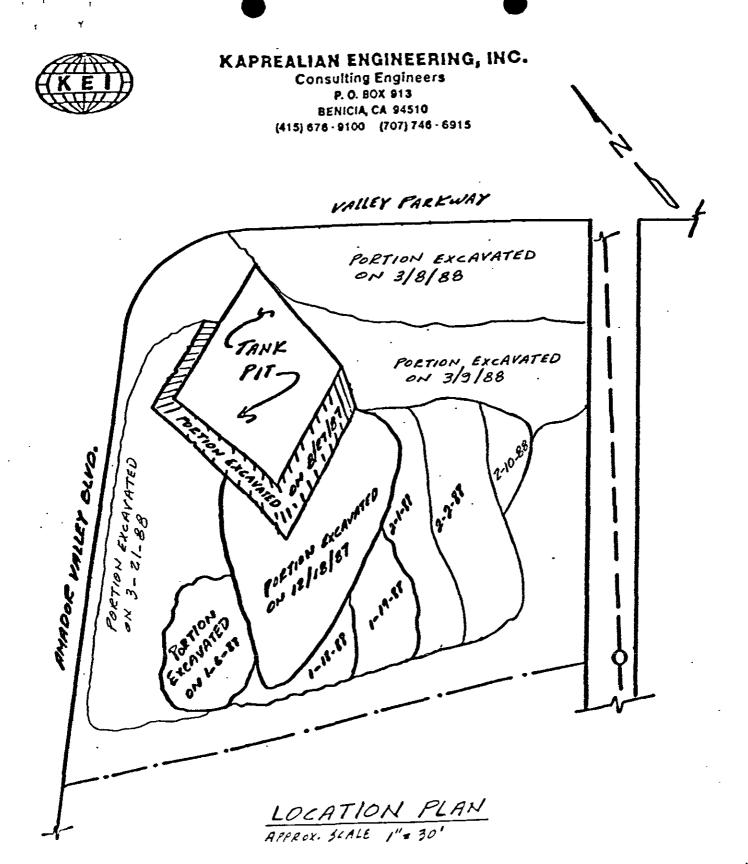
TABLE 1
SUMMARY OF LABORATORY ANALYSES

Sampling <u>Date</u>	<u>Sample</u>	TPH	<u>B</u>	<u> </u>	X	E
3/16/88	Comp A	17	0.1	0.4	2.9	0.4
• •	Comp B	21	0.2	0.3	6.5	0.7
	Comp C	49	0.6	0.6	6.3	1.0
	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
	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
	Comp G	26	0.7	1.1	6.1	1.1
	Comp H	280	19	10	45	10
	Comp I	170	1.5	7.2	45	7.8
	Comp J	1100	11	48	180	35
ē	Comp K	320	14	42	87	17
	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	71	0.2	0.1	1.7	0.4
	Comp D	29	0.2	<0.1	0.4	<0.1
	Comp E	64	0.4	0.1	1.1	0.2
4/05/88	Comp A	3.3	<0.1	<0.1	0.3	<0.1
4/07/88	Comp J	12	0.1	0.1	0.5	<0.1

KEI-J87-083-6 April 15, 1988 Page 5

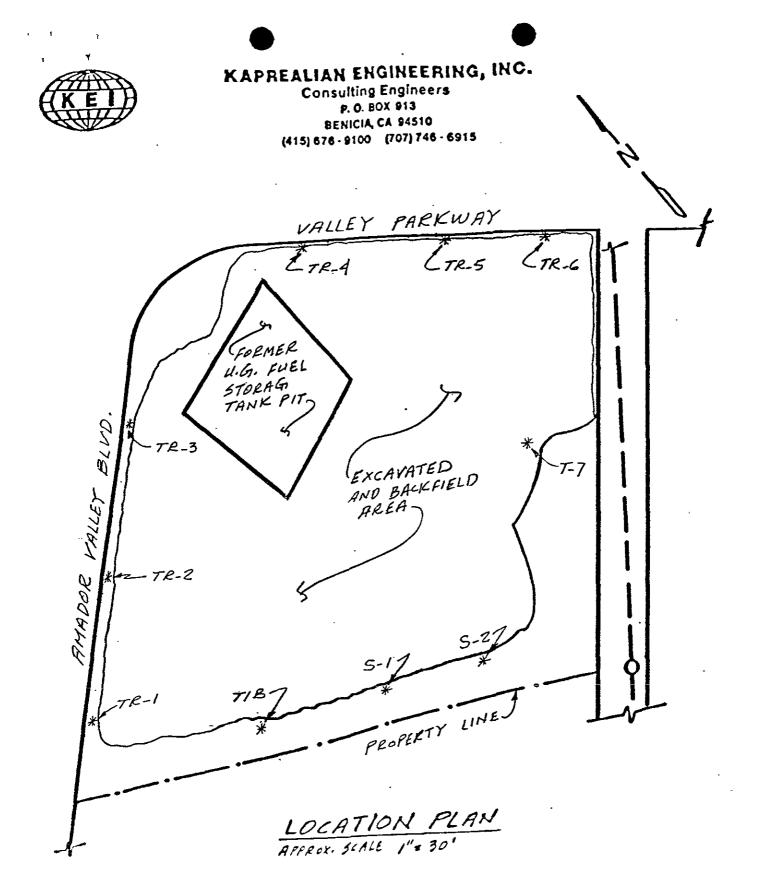
TABLE 2
Summary of Sidewall and Trench Samples

Sampling <u>Date</u>	<u>Sample</u>	<u>TPH</u>	<u> </u>	T	<u>x</u>	<u>E</u>
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 1300	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

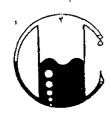


SHELL SERVICE STATION 7194 AMADOR VALLEY DUBLIN, CALIFORNIA

FIGURE 9



SHELL SERVICE STATION 7194 AMADOR VALLEY BLVD. DUBLIN, CALIFORNIA



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

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

Ronald G. Evans Lab Director

rap prieceou



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

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

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	

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

RAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER: laukeis	ATE/TIME OF	F3/16/8X	TURNAROUNI	24 HA
(signature)		1 - 1		<u> </u>
SAMPLE DESCRIPTIONAND PROJECT NUMBER:		10-0	W130	///
	DILC		KWY/	AMADO.
SAMPLE # ANALYSIS		GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
COMPA TPH, F.	BTX E	CoMP	4	<u>S</u>
COMPB a	4	<u>u</u> .	4	<u>S</u>
COMPC_u	4	-4.		<u>S</u>
COMPD u	4	<u> </u>	<u> </u>	<u> </u>
COMPE a		_ 4	4	<u> </u>
				
	E/DATE	RECEIVED	BY* <u>TI</u>	ME/DATE
1. Par(h/=1 3/	8:00 1	lawret	3/1 	6/88
2.				
3.				•
4.			. <u>. </u>	
* STATE AFFILIATION NEXT	TO SIGNATUR	ξE		
REMARKS:				

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

0.5

Comp. F SOIL

ANALYSIS

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

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

0.1

method 8020 used for BTX distinction.

HAZCAT

Ethylbenzene

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.E.

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

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: 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

AMPLER:	Cay (YE	DATE/TIME	/4:/6 DN: 3/22/8		D 24 H
AMPLE DESC ND PROJEC	CRIPTION _	SAMI	HELL L FDOR VAL	JUBLIN CEY/VILL	
AMPLE #	ANALYSIS		GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
MP A	TPH.	BTXE	COMP	2	. <u>S</u>
TMPB.					<u>2</u>
ompc.	u.	4	<u>- U</u>	2	<u> S </u>
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OMPE.	<u>u,</u>	4		_ 2	2-
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TAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

signature) () AMPLE DESCRIPTION	DATE/TIME COLLECTION	_ / /	BUN	244,
ND PROJECT NUMBER: —	AMA	DOR VALL	E4/ U10	CARC
AMPLE # ANALYSIS		GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
COMPH_ TPHO	BTX E	Comp		5
OMP I SPH.	BIXE	<u>u</u>		<u>S</u>
OMP J TALL	BIXE			<u> </u>
EMP K 1PH	BIXT	<u> </u>	;	$\frac{S}{S}$
DOMP L TPH, I	37XE	4	_2_	
· • • • • • • • • • • • • • • • • • • •				
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STATE AFFILIATION NEX	ጥ ጥር ድፕሮዚ <u>ነ</u>	ממווי		

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	\mathbf{mqq}
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.

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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	Sample Results
	ppm	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

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

method 8020 used for BTX distinction.

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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	$\mathbf{p}\mathbf{p}\mathbf{m}$
Total Petroleum Hydrocarbons as Gasoline	1	29
Benzene	0.1	0.2
Toluene	0.1	<0.1
Xylenes	0.1	0.4
Ethylbenzene	0.1	<0.1

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

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Attn: Mardo Kaprealian, P.E.

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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:		of : 3/29/88	TURNAROUNI TIME:	U HAS
SAMPLE DESCRIPTION SHELL DUBLING AND PROJECT NUMBER: UILLAGE PRWY / AMADOR A			DOR RI	
SAMPLE #	ANALYSIS	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/ WATER
COMP A 3	· · ·	COMP	_2_	5
COMPB:	·	<u> </u>		3
COMP (3	3/21 TPH, BIXE	<u> </u>		2
Comp E	3/29 TPH. BIXE	И	_2_	S
		•		•
relinquish	HED BY* TIME/DATE 4/40PM 6(E1) 3/29/88	RECEIVED Rizvan Homan	3/	ME/DATE 29/88 HOPM
2.			. •	
3.			- ,	
4.		-	1	
* STATE AF	FILIATION 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

TAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLE DESCRIPTION SHE - UICCAG	C BUBLIN	MAD
SAMPLE # ANALYSIS	GRAB OR NUMBER OF COMP.	F SO
COMPA 4/5 TPH, BTX E	Comp 2	<u> </u>
		_ · _
RELINQUISHED BY* TIME/DATE 1. $000 (671) 45188$	RECEIVED BY* HAZCAT Dushnuau	TIME/I
2. 1 Dishuan 4:10	MENONED, Hansal	4-5-8 4:10#
3.		
4.		

TAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER: Quy () DATE/TIME COLLECTION	of n: 4/5/88 time: 2440
(signature) SAMPLE DESCRIPTION	′ ′
SAMPLE ANALYSIS COMPA 4/5 TPH, BIX E	GRAB OR NUMBER OF SOIL/ COMP. CONTAINERS WATER
RELINQUISHED BY* TIME/DATE	RECEIVED BY* TIME/DATE
1. Ray (NEI) 4/5/88 2.	Dushnen 2.45
3. 4.	
* STATE AFFILIATION NEXT TO SIGNAT	TURE

Kaprealian Engineering, Inc.

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

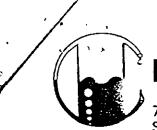
Analysis was performed using EPA methods 5020 and 8015 with Note: method 8020 used for BTX distinction.

HAZCAT

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER: (h) E) DATE/TIME COLLECTION	of 4/7/88 TURNAROUND
(signature) SAMPLE DESCRIPTION AND PROJECT NUMBER:	HEG DUBLIKI HDOR / WILLAGE PKI
SAMPLE # ANALYSIS (SMP J (4.7) TPH, BTXE	GRAB OR NUMBER OF SOIL/ COMP. CONTAINERS WATER SOIL/ WATER
RELINQUISHED BY* TIME/DATE	RECEIVED BY* TIME/DATE
1. Play (h/=// 4/7/88) 2.	Hayest 5,50PM
3.	
* STATE AFFILIATION NEXT TO SIGNAT	TURE
REMARKS:	



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: 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	7 50
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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Lab Director

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Kaprealian Engineering, Inc.

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

SOIL S-1

ANALYSIS

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

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

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Kaprealian Engineering, Inc.

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

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

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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

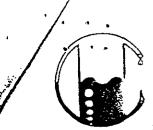
SOIL

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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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

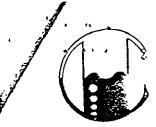
SOIL

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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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

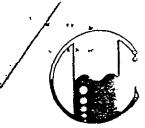
SOIL

ANALYSIS

	Detection Limit ppm	Sample Results 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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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

	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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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

0.1

0.1

SOIL

230

40

ANALYSIS

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

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

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Xylenes

Ethylbenzene

Kaprealian Engineering, Inc.

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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.

HAZCAT

Ronald G. Evans

Lab Director