



TRANSMITTAL PAGE

DATE: 5/20/96

TO: Eva Chu

FROM: Dennis Royce

Number of pages (including cover): 13

SUBJECT: BP Service Station

Attached for your review is the Stockpiled Soil Sampling report for the subject site.

If any problems occur in receiving, please
call the number listed below

2401 Stanwell Drive, Suite 400
Concord, CA 94520
Tel. 510/602-5100 Fax: 510/687-0602



KAPREALIAN ENGINEERING, INC.
Consulting Engineers

P.O. BOX 996 • BENICIA, CA 94510
(707) 748-8915 • (707) 748-8918 • FAX: (707) 748-5581

KEI-J90-0706.R2
October 9, 1990

Paradiso Construction
P.O. Box 6397
Oakland, CA 94603

Attention: Mr. Paul Paradiso

RE: Stockpiled Soil Sampling for
BP Service Station
3101 - 98th Avenue
Oakland, California

Dear Mr. Paradiso:

This letter report summarizes the results of the stockpiled soil sampling and laboratory analyses for the referenced site. The soil analyses were conducted to comply with the County Health Department requirements for proper disposal of contaminated soil.

On July 13, 1990, soil samples from approximately 130 cubic yards of stockpiled soil at the referenced site were collected to determine proper disposal of the soil. Three composite soil samples (designated as Comp A, Comp B, and Comp C) were taken from soil excavated from the piping trenches. Each composite sample consisted of four individual grab samples taken at various locations and depths ranging from 1 to 2 feet. The samples were collected in two-inch diameter, clean brass tubes, which were then sealed with aluminum foil, plastic caps and tape, and placed in a cooled ice chest for subsequent delivery to a certified laboratory for analysis. All samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California, and were accompanied by properly executed Chain of Custody documentation. Sample locations are as shown on the attached Site Plan, Figure 1.

On July 20, 1990, KEI returned to the referenced site and collected soil samples from approximately 250 cubic yards of stockpiled soil. Three composite samples (designated as Comp 1, Comp 2, and Comp 3) were taken from approximately 130 cubic yards of aerated soil, previously sampled as Comp A, Comp B and Comp C. On this same day, two composite samples (designated as Comp D and Comp E) were taken from approximately 120 cubic yards of stockpiled soil additionally excavated from the piping trenches. Each composite sample was collected, stored, and delivered as described above. All samples were analyzed at Sequoia Analytical Laboratory in Redwood City, California, and were accompanied by

KEI-J90-0706.R2
October 9, 1990
Page 2

properly executed Chain of Custody documentation. Sample locations are as shown on the attached Site Plan, Figure 2.

Soil samples were analyzed to determine concentrations of total petroleum hydrocarbons (TPH) as gasoline using EPA method 5030 in conjunction with modified 8015, benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020. In addition, sample Comp A was analyzed for organic lead using the DHS LUFT Manual method. Analytical results of the soil samples (Comp A, Comp B, and Comp C) indicate levels of TPH as gasoline ranging from 31 ppm to 430 ppm. However, analytical results of the soil samples (Comp 1, Comp 2, Comp 3, Comp D, and Comp E) indicate levels of TPH as gasoline ranging from 1.1 ppm to 21 ppm. Results of the soil analyses are summarized in Table 1. Copies of the laboratory analyses, and the Chain of Custody documentation are attached to this report.

Based on the analytical results of the soil samples, stockpiled soil represented by samples Comp 1, Comp 2, Comp 3, Comp D and Comp E can be disposed of at an approved Class III disposal site. However, KEI recommends that during disposal, when obvious isolated high contamination is detected within the stockpiled soil, that portion of the soil be separately stockpiled for further sampling and treatment.

DISTRIBUTION

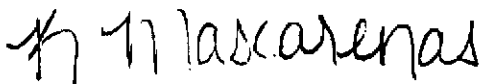
A copy of this report should be sent to Alameda County Health Care Services, and to the Regional Water Quality Control Board, San Francisco Bay Region.

KEI-J90-0706.R2
October 9, 1990
Page 3

Should you have any questions on this report, please do not
hesitate to contact me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.



Kristin B. Mascarenas

bam

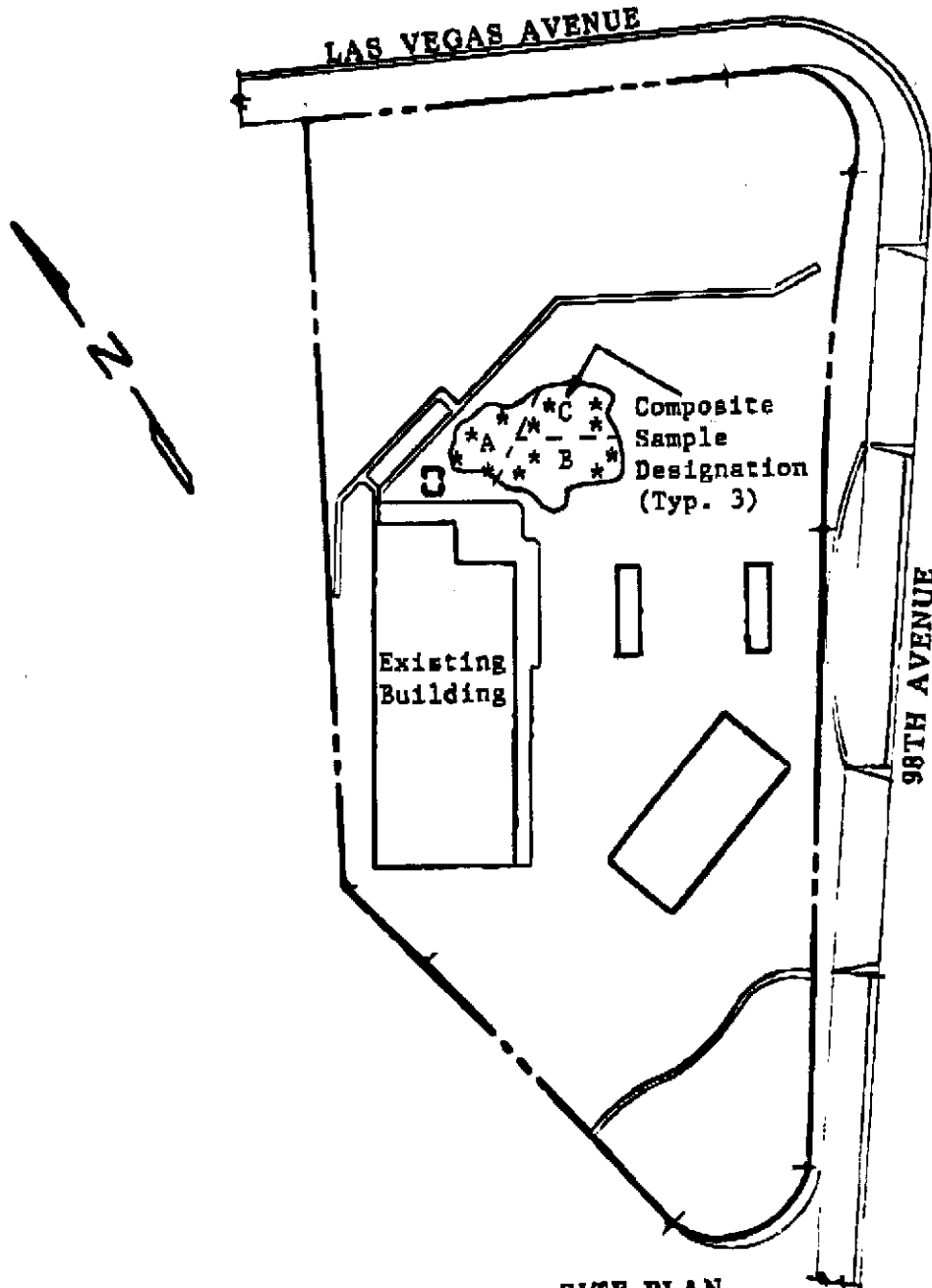
Attachments: Table 1
Site Plans - Figures 1 & 2
Laboratory Results
Chain of Custody documentation



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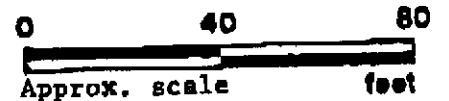
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SITE PLAN
Figure 1

LEGEND

* Sample Point Location



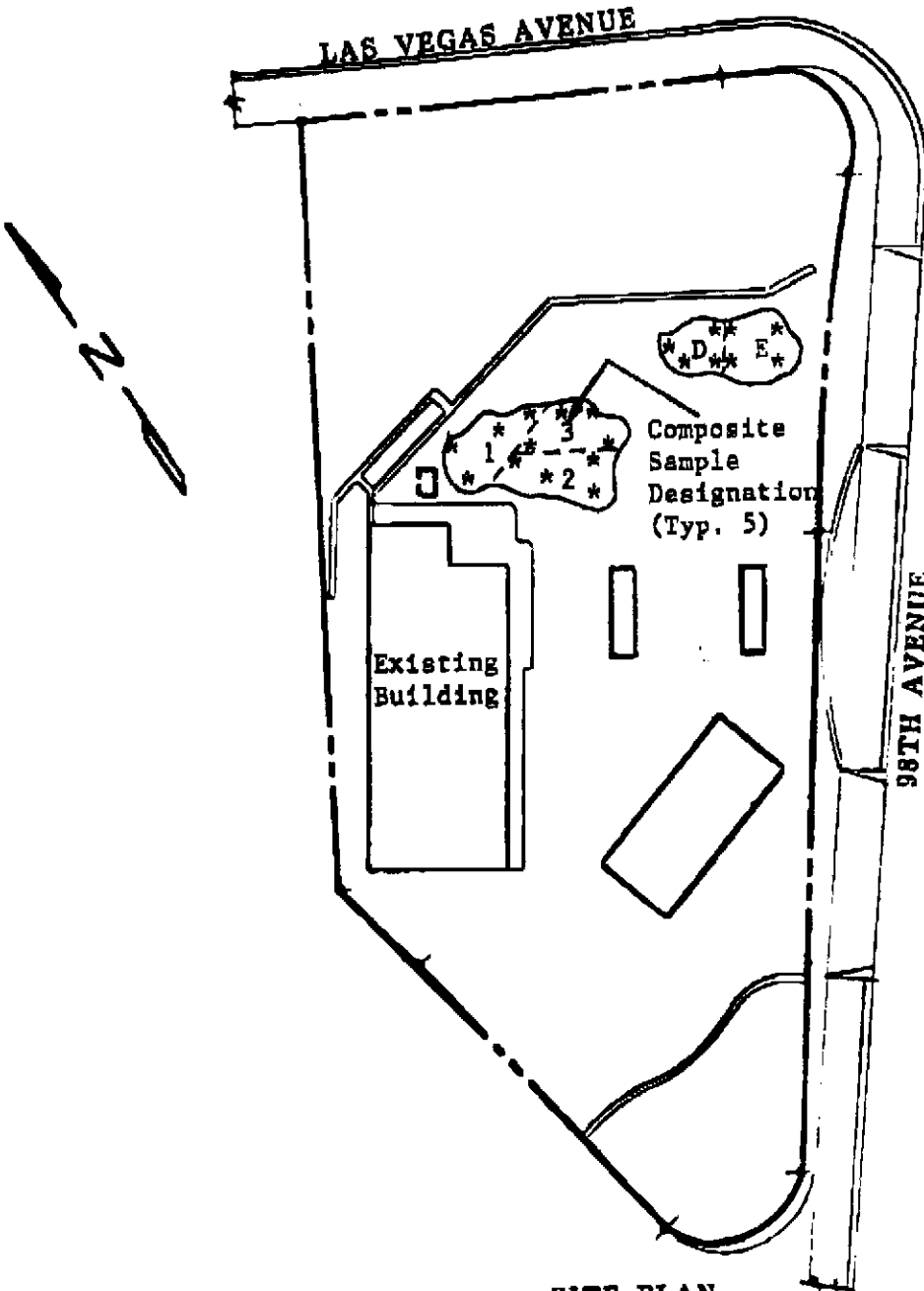
BP Service Station
3101 98th Avenue
Oakland, CA



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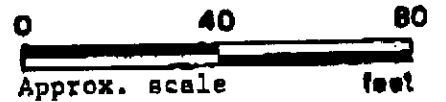
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SITE PLAN
Figure 2

LEGEND

* Sample Point Location



BP Service Station
3101 98th Avenue
Oakland, CA

KEI-J90-0706.R2
October 9, 1990

TABLE 1
SUMMARY OF LABORATORY ANALYSES
(Collected on July 13 & 20, 1990)

<u>Sample</u>	<u>TPH as Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethylbenzene</u>
Comp A*	430	ND	0.17	5.3	0.55
Comp B	110	0.18	2.6	9.2	1.6
Comp C	31	0.31	1.2	2.2	0.39
Comp 1	1.3	ND	ND	ND	ND
Comp 2	1.1	ND	ND	ND	ND
Comp 3	1.3	ND	ND	ND	ND
Comp D	21	ND	0.025	0.39	0.12
Comp E	8.5	0.0070	0.012	0.15	0.043
Detection Limits	1.0	0.0050	0.0050	0.0050	0.0050

* Organic Lead was non-detectable; total lead was 16 ppm.

ND = Non-detectable.

Results in parts per million (ppm), unless otherwise indicated.



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
 (415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID:	BP, Oakland, 98th Ave/Las Vegas Ave	Sampled:	Jul 13, 1990
P.O. Box 996	Matrix Descript:	Soil	Received:	Jul 13, 1990
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Jul 17, 1990
Attention: Mardo Kaprealian, P.E.	First Sample #:	007-2082 A-B	Reported:	Jul 17, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
0072082 A-B	Composite A	430	N.D.	0.17	0.55	5.3
0072083 A-B	Composite B	110	0.18	2.6	1.6	9.2
0072084 A-B	Composite C	31	0.31	1.2	0.39	2.2

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
 Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager

72092.KEI <1>



SEQUOIA ANALYTICAL

880 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP, Oakland, 88th Ave/Las Vegas Ave Sample Descript: Soil Analysis Method: California LUFT Manual, 12/87 First Sample #: 007-2092 A-B	Sampled: Jul 13, 1990 Received: Jul 13, 1990 Analyzed: Jul 16, 1990 Reported: Jul 17, 1990
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ORGANIC LEAD

Sample Number	Sample Description	Sample Results mg/kg (ppm)
0072092 A-B	Composites A	N.D.

Detection Limits:	0.050
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Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Belinda C. Vega
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID: BP, Oakland, 68th Ave/Las Vegas Ave	Sampled: Jul 13, 1990
P.O. Box 996	Sample Descript: Soil, Composite A	Received: Jul 13, 1990
Benicia, CA 94510	Lab Number: 007-2092 A-B	Extracted: Jul 13, 1990
Attention: Mardo Kaprealian, P.E.		Analyzed: Jul 16, 1990
		Reported: Jul 17, 1990

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
 Belinda C. Vega
 Project Manager



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER Hartig		SITE NAME & ADDRESS BP station - Oakland 98th Ave / Las Vegas Ave				ANALYSES REQUESTED TPH - <input checked="" type="checkbox"/> BTX - <input checked="" type="checkbox"/> Total Lead <input checked="" type="checkbox"/> Organic Lead <input checked="" type="checkbox"/>				TURN AROUND TIME: 24 Hrs		
WITNESSING AGENCY										REMARKS		
SAMPLE NO.	DATE	TIME	SOIL	WATER	GRAB SAMPLE / CONT.	NO. OF	SAMPLING LOCATION	TPH	BTX	Total Lead	Organic Lead	REMARKS
Comp A	7/13/90		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	2	STOCKPILE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0072092
Comp B	7/13/90		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	2	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			0072093
Comp C	7/13/90		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	2	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			0072094
Relinquished by: (Signature) Joe Kework		Date/Time 7-13-90 5:55		Received by: (Signature) Bill Fligdon		The following MUST BE completed by the laboratory accepting samples for analysis:						
Relinquished by: (Signature) Bill Fligdon		Date/Time 7-13-90 7:40		Received by: (Signature) [Signature]		1. Have all samples received for analysis been stored in ice?						
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		2. Will samples remain refrigerated until analyzed?						
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		3. Did any samples received for analysis have head space?						
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		4. Were samples in appropriate containers and properly packaged?						
						Signature		Title		Date		



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94083
 (415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.	Client Project ID: BP, Oakland, 98th/Las Vegas	Sampled: Jul 20, 1990
P.O. Box 996	Matrix Descript: Soil	Received: Jul 20, 1990
Benicia, CA 94610	Analysis Method: EPA 5030/8015/8020	Analyzed: Jul 23, 1990
Attention: Mardo Kaprealian, P.E.	First Sample #: 007-3520 A-B	Reported: Jul 24, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
0073520 A-B	Composites 1	1.3	N.D.	N.D.	N.D.	N.D.
0073521 A-B	Composites 2	1.1	N.D.	N.D.	N.D.	N.D.
0073522 A-B	Composites 3	1.3	N.D.	N.D.	N.D.	N.D.
0073523 A-B	Composites D	21	N.D.	0.025	0.12	0.39
0073524 A-B	Composites E	8.5	0.0070	0.012	0.043	0.15

Detection Limits:

1.0

0.0050

0.0050

0.0050

0.0050

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
 Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega

Belinda C. Vega
 Project Manager

73520.KEI <1>



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLE # <u>U-1111</u> ANALYSING AGENCY <u>T</u>		SITE NAME & ADDRESS <u>B.P. - Oakland</u> <u>98th & Las Vegas.</u>					ANALYSES REQUESTED T B P T H X G E			TIME AND DATE: <u>24 hrs.</u>	
SAMPLE NO.	DATE	TIME	SOIL	WATER	GRAB	CONT.	NO. OF	SAMPLING LOCATION			REMARKS
<u>Comp 1</u>	<u>7/20</u>	<u>11:30</u>	<u>X</u>		<u>X</u>		<u>2</u>	<u>Stockpile</u>	<u>X</u>	<u>X</u>	0073520 ↓ 3521 3522 3523 ↓ 3524
<u>Comp 2</u>	<u>7/20</u>	<u>11:30</u>	<u>X</u>		<u>X</u>		<u>2</u>	<u>"</u>	<u>X</u>	<u>X</u>	
<u>Comp 3</u>	<u>7/20</u>	<u>11:30</u>	<u>T</u>		<u>X</u>		<u>2</u>	<u>"</u>	<u>X</u>	<u>X</u>	
<u>Comp 4</u>	<u>7/20</u>	<u>11:30</u>	<u>X</u>		<u>X</u>		<u>2</u>	<u>"</u>	<u>X</u>	<u>X</u>	
<u>Comp 5</u>	<u>7/20</u>	<u>11:30</u>	<u>X</u>		<u>X</u>		<u>2</u>	<u>"</u>	<u>X</u>	<u>X</u>	
Delivered by: (Signature) <u>U-1111</u>			Date/Time <u>7/20/1990</u>		Received by: (Signature) <u>Tom McLean</u>		The following MUST be completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? 2. Will samples remain refrigerated until analyzed? 3. Did any samples received for analysis have head space? 4. Were samples in appropriate containers and properly packaged?				
Delivered by: (Signature) <u>Tom McLean</u>			Date/Time		Received by: (Signature)						
Delivered by: (Signature)			Date/Time		Received by: (Signature)						
Delivered by: (Signature)			Date/Time		Received by: (Signature)						
			Date/Time <u>7/20</u> <u>4:30 PM</u>		Received by: (Signature) <u>K. Walter</u>		Signature <u>KW</u> Title <u>ES</u> Date <u>7/20</u>				