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KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

KEI-J90-0804.R2
October 11, 1990

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

P07

Attention: Mr. Paul Paradiso

RE: Soil Sampling Report
BP Service Station #11132
3201 - 35th Street
Oakland, California

Dear Mr. Paradiso:

This report summarizes the soil sampling performed by Kaprealian Engineering, Inc. (KEI) at the referenced site. All work was performed in compliance with the guidelines established by the Regional Water Quality Control Board (RWQCB), and the Alameda County Health Agency.

The scope of the work performed by KEI consisted of the following:

Coordination with regulatory agencies.

Collection of soil samples from beneath the product dispensers and from the product pipe trenches.

Delivery of soil samples, including proper Chain of Custody documentation, to a certified analytical laboratory.

Preparation of this report.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a gasoline station. A Location Map and Site Plan are attached to this report.

FIELD ACTIVITIES

KEI's field work was conducted on August 21, 1990 during routine dispensers modification, when three soil samples, labeled D1, D2 and D3, were collected from beneath the product dispensers at depths ranging from approximately 3 to 7 feet. In addition, two soil samples, labeled PT-1 and PT-2, were collected from the product pipe trenches at a depth of about 3 feet. The undisturbed samples were collected from bulk material excavated by backhoe. Samples were placed in clean, two-inch diameter brass tubes, sealed with aluminum foil, plastic caps and tape, and stored in a cooled ice chest for delivery to a state certified laboratory. Pipe trenches and dispenser areas had been excavated to the sample depths. Excavated soil was stockpiled on-site for further sampling. Sample point locations are as shown on the attached Site Plan.

KEI returned to the site on August 24, 1990 to collect two additional soil samples, labeled PT-3 and PT-4, from the product pipe trenches. The samples were collected using a driven tube-type sampler at depths ranging from 3 to 4 feet. Samples were collected and handled as described above. Sample point locations are as shown on the attached Site Plan.

SUBSURFACE CONDITIONS

Subsurface soils exposed in the excavations appeared to consist primarily of silty clay to the maximum depth explored (7 feet). No relatively high permeability soil layers were observed and no visual evidence of past high water level was apparent in the pit.

ANALYTICAL RESULTS

All samples were analyzed by Sequoia Analytical Laboratory in Concord, California, and were accompanied by properly executed Chain of Custody documentation. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPH) using EPA method 5030 in conjunction with modified 8015, and benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA method 8020. In addition, all samples were analyzed for organic lead using the DHS LUFT method. Analytical results are summarized in Table 1. Copies of the laboratory analyses and the Chain of Custody documentation are attached to this report.

Analytical results of the soil samples indicate non-detectable levels of TPH as gasoline and BTX&E constituents for all samples, except sample PT-3, which showed 21 ppm of TPH as gasoline, 0.0099 ppm of benzene, 0.062 ppm of toluene, 0.038 ppm of xylenes and 0.060 ppm of ethylbenzene. Organic lead was non-detectable for all samples, except sample PT-1, which showed 0.55 ppm.

DISTRIBUTION

A copy of this report should be sent to Ms. Cynthia Chapman of the Alameda County Health Agency, and to the RWQCB, San Francisco Bay Region.

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 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 analyses obtained from a state certified laboratory. 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, regarding the above, including laboratory analyses, except that our services have been performed in accordance with generally accepted professional principles and practices existing for such work.

Should you have any questions regarding this report, please feel free to call me at (707) 746-6915.

Sincerely,

Kaprealian Engineering, Inc.

Richard M. Bradish
Staff Engineer

Don R. Braun
Certified Engineering Geologist

License No. 1310
Exp. Date 6/30/92

Mardo Kaprealian
President

jad

Attachments: Table 1
Location Map
Site Plan
Laboratory Analyses
Chain of Custody documentation

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October 11, 1990

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

(Collected on August 21 & 24, 1990)

Sample	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	Organic Lead
D1	4.5	ND	ND	ND	ND	ND	ND
D2	3.0	ND	ND	ND	ND	ND	ND
D3	7.0	ND	ND	ND	ND	ND	ND
PT-1	3.0	ND	ND	ND	ND	ND	0.55
PT-2	3.0	ND	ND	ND	ND	ND	ND
PT-3	4.0	21	0.0099	0.062	0.038	0.060	ND
PT-4	3.0	ND	ND	ND	ND	ND	ND
Detection Limits		1.0	0.0050	0.0050	0.0050	0.0050	0.050

ND = Non-detectable.

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

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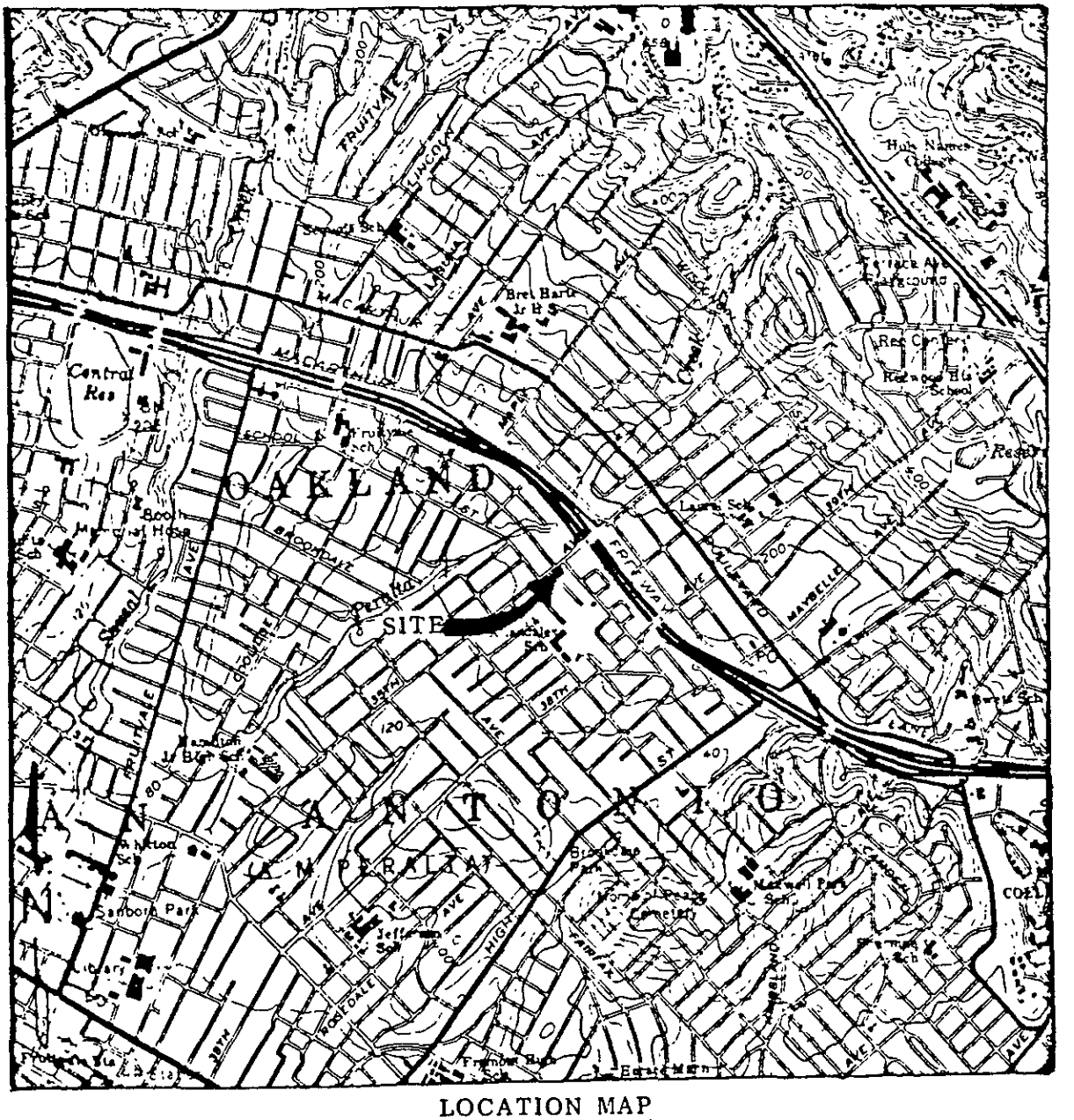

LOCATION MAP

BP Service Station
3201 35th Avenue
Oakland, CA

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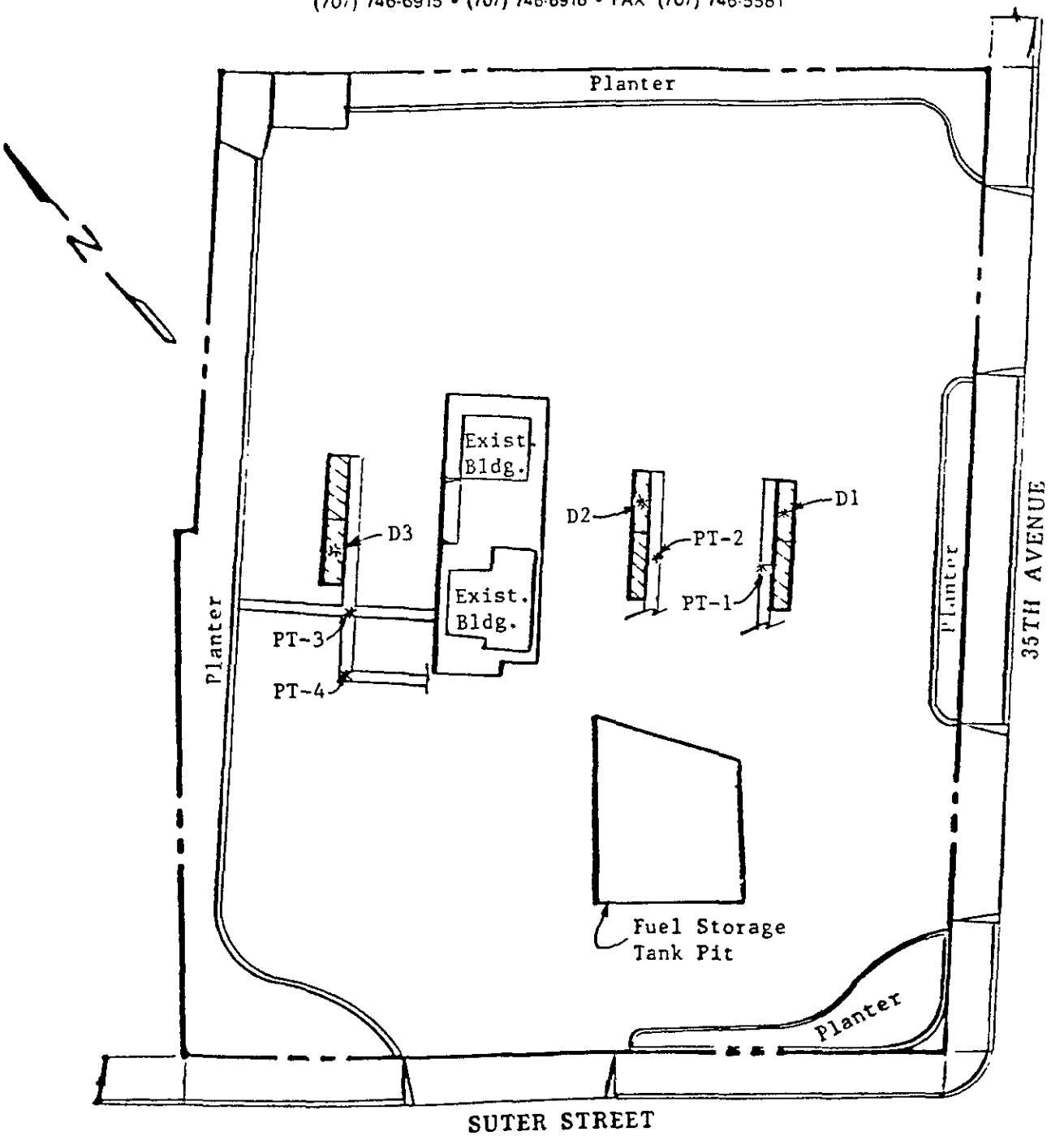

SITE PLAN

LEGEND

* Sample Point Location

0 30 60
Approx. scale feet

BP Service Station
3201 35th Avenue
Oakland, CA

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	B.P./35th & Sutter/Oakland	Sampled:	Aug 21, 1990
P.O. Box 996	Matrix Descript:	Soil	Received:	Aug 22, 1990
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Aug 22, 1990
Attention: Mardo Kaprealian, P.E.	First Sample #:	008-0510	Reported:	Aug 23, 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)
008-0510	D-1	N.D.	N.D.	N.D.	N.D.	N.D.
008-0511	D-2	N.D.	N.D.	N.D.	N.D.	N.D.
008-0512	D-3	N.D.	N.D.	N.D.	N.D.	N.D.
008-0513	PT-1	N.D.	N.D.	N.D.	N.D.	N.D.
008-0514	PT-2	N.D.	N.D.	N.D.	N.D.	N.D.
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
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(415) 686-9600 • FAX (415) 686-9689

Kaprealian Engineering, Inc.	Client Project ID:	B.P./35th & Sutter/Oakland	Sampled:	Aug 21, 1990
P.O. Box 996	Sample Descript:	Soil	Received:	Aug 22, 1990
Benicia, CA 94510	Analysis Method:	California LUFT Manual, 12/87	Extracted:	Aug 22, 1990
Attention: Mardo Kaprealian, P.E.	First Sample #:	008-0510	Analyzed:	Aug 22, 1990
			Reported:	Aug 23, 1990

ORGANIC LEAD

Sample Number	Sample Description	Sample Results mg/kg (ppm)
008-0510	D-1	N.D.
008-0511	D-2	N.D.
008-0512	D-3	N.D.
008-0513	PT-1	0.55
008-0514	PT-2	N.D.

Detection Limits:	**0.050**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER: [signature]

WITNESSING AGENCY

SITE NAME & ADDRESS: B.P. - Oakland - 35th & Suter

ANALYSES REQUESTED: TPH G; BTX E; TEL

TURN AROUND TIME: 24 HR.

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH G	BTX E	TEL	REMARKS
D-1	8/21	330	X		X		1	Under Dispenser	X	X	X	0080510
D-2	8/21	330	X		X		1	Under Dispenser	X	X	X	0511
D-3	8/21	330	X		X		1	Under Dispenser	X	X	X	0512
PT-1	8/21	330	X		X		1	Pipe Trench	X	X	X	0513
PT-2	8/21	330	X		X		1	Pipe Trench	X	X	X	0514

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	8/22/90	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Tim McLain	8/22/90 835	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

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? NO
4. Were samples in appropriate containers and properly packaged? ✓

[signature]	SR	8/22
Signature	Title	Date

SEQUOIA ANALYTICAL

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Kaprealian Engineering, Inc.	Client Project ID:	B.P. - Paradiso/35th & Sutter/Oakland	Sampled:	Aug 24, 1990
P.O. Box 996	Matrix Descript:	Soil	Received:	Aug 27, 1990
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Aug 27, 1990
Attention: Mardo Kaprealian, P.E.	First Sample #:	008-0642	Reported:	Aug 28, 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)
008-0642	PT-3	21	0.0099	0.062	0.060	0.038
008-0643	PT-4	N.D.	N.D.	N.D.	N.D.	N.D.
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
Laboratory Director

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Kaprealian Engineering, Inc.	Client Project ID:	B.P. - Paradiso/35th & Sutter/Oakland	Sampled:	Aug 24, 1990
P.O. Box 996	Sample Descript:	Soil	Received:	Aug 27, 1990
Benicia, CA 94510	Analysis Method:	California LUFT Manual, 12/87		
Attention: Mardo Kaprealian, P.E.	First Sample #:	008-0642	Analyzed:	Aug 28, 1990
			Reported:	Aug 28, 1990

ORGANIC LEAD

Sample Number	Sample Description	Sample Results mg/kg (ppm)
008-0642	PT-3	N.D.
008-0643	PT-4	N.D.

Detection Limits:	**0.050**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER: W.M. Bradish

SITE NAME & ADDRESS: Paradise (BP), 35TH & Sutter, Oakland

TURN AROUND TIME: 24 HR

SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	TPH-G & BTEX	TEL	REMARKS
PT-3	8-24-90		✓		✓		1	Product Pipe Trench	✓	✓	0080642
PT-4	"		✓		✓		1	" " "	✓	✓	0643

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
W.M. Bradish	8/27/90 905	Tim McLain
Tim McLain	8/27/90 930	

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? NO
4. Were samples in appropriate containers and properly packaged? ✓

Signature: [illegible] Title: SR Date: 8/29