



**KAPREALIAN ENGINEERING, INC.**

Consulting Engineers

P. O. BOX 913

BENICIA, CA 94510

(415) 676-9100 (707) 746-6915

DEC 07 1988

QUALITY CONTROL BOARD

KEI-J88-119

December 2, 1988

R. W. Johnston  
801 53rd Avenue  
Oakland, CA 94601

File

Attention: Mr. Dick Burge

Re: Soil Sampling Report for  
Clark's Building Materials  
23040 Clawiter Road  
Hayward, California

Dear Mr. Burge:

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 (ACHA).

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

Coordination with regulatory agencies.

Collection of samples of native soil from beneath the tanks.

Delivery of samples with proper chain of custody to a certified analytical laboratory.

Technical review of laboratory analyses and preparation of this report.

SITE DESCRIPTION AND BACKGROUND

The subject site is presently used as a building materials store. The site description is shown on the attached sketches. No leaks or previous subsurface work performed at the site are known to KEI.

FIELD ACTIVITIES

KEI's field work was conducted on November 4, 1988. On that date, two underground gasoline storage tanks were removed from the site.

The tanks consisted of a 3,000 gallon unleaded gas tank and a 1,000 gallon diesel tank. The tanks were made of steel and no apparent holes or cracks were observed in the gas tank while the diesel tank had several pin holes. Mr. Thomas Peacock of the ACHA was present for the tank removal.

Four soil samples, labeled A1, A2, B1 and B2 were taken of the native soil from beneath the tanks at a depth of about 13 feet for A1 and A2 and ten feet for B1 and B2. The samples were collected from bulk material excavated by backhoe. The samples were placed in clean, 2" diameter brass tubes, sealed with aluminum foil, plastic caps and tape, and stored in a cooled ice chest for delivery to a certified laboratory. Sample locations are as shown on the attached Site Plan. The entire pit was excavated to a depth of 13 feet.

#### SUBSURFACE CONDITIONS

The subsurface soils exposed in the excavation consisted primarily of black clay. Product odors were present in samples A2, B1 and B2.

#### ANALYTICAL RESULTS

All tank pit samples were analyzed by Sequoia Analytical Laboratory of Redwood City, California and were accompanied by a properly executed Chain of Custody form. All soil samples were analyzed for total petroleum hydrocarbon (TPH) as gasoline using EPA method 5030 or 3810 in conjunction with modified 8015, and benzene, toluene, xylenes and ethylbenzene (BTX&E) using EPA methods 5030 and 8020. In addition, the two samples from beneath the diesel tank were analyzed for TPH as diesel using EPA method 3550 in conjunction with modified 8015.

Soil sample analyses from the tank pit indicate levels of TPH as gasoline ranging from non-detectable to 3,500 ppm. TPH as diesel ranged from 23,000 to 24,000 ppm for the samples taken from under the diesel tank. The analytical results are summarized in Table 1. Copies of the Laboratory Analyses and the Chain of Custody form are attached to this report.

#### DISCUSSION AND RECOMMENDATIONS

Based on the analyses of the pit samples, the stockpiled soil must be considered hazardous, and needs to be treated or disposed of at a Class I landfill. In accordance with the guidelines established by the RWQCB, further work is necessary at the site because of the level of contamination found in the soil. To comply with the requirements of the RWQCB and the ACHA, KEI

recommends excavation of contaminated soil down to the water table and the installation of monitoring wells to determine if ground water has been impacted. KEI will submit a proposal for this work upon your request.

A copy of this report should be sent to Mr. Thomas F. Peacock of ACHA and to the RWQCB, San Francisco Bay Region.

LIMITATIONS

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

Sincerely,

Kaprealian Engineering, Inc.



Gary S. Johnson  
Registered Geologist

License No. 4315  
Exp. Date 6/30/90

Attachments: Table 1  
Site Plan  
Laboratory Analyses  
Chain of Custody forms

KEI-J88-119  
December 2, 1988

TABLE 1  
SUMMARY OF LABORATORY ANALYSES  
(Results in ppm)

<u>Sample</u>	<u>Depth</u> <u>(feet)</u>	<u>TPH as</u> <u>Diesel</u>	<u>TPH as</u> <u>Gasoline</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylenes</u>	<u>Ethyl-</u> <u>benzene</u>
A1	13	---	5.1	<0.05	<0.01	<0.1	<0.1
A2	13	---	<1.0	<0.05	<0.1	<0.1	<0.1
B1	10	24,000	2,700	0.43	33	350	61
B2	10	23,000	3,500	0.57	46	350	63



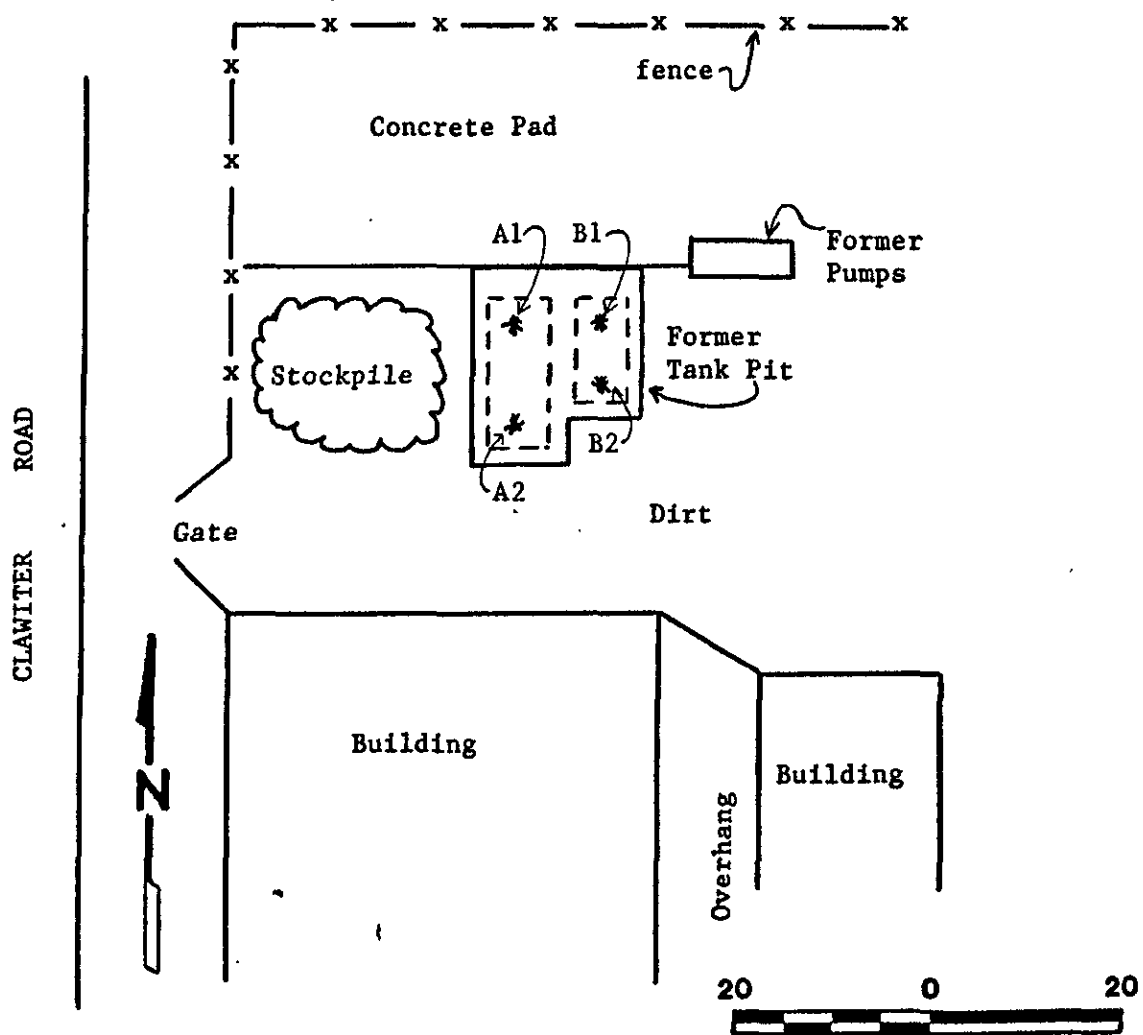
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SITE PLAN

\* Soil Sample Location  
from Pit Bottom

Clark's Building Materials  
23040 Clawiter Road  
Hayward, California



# SEQUOIA ANALYTICAL

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

Kaprealian Engineering, Inc.  
P.O. Box 913  
Benicia, CA 94510  
Attn: Mardo Kaprealian, P.E.

Date Sampled: 11/04/88  
Date Received: 11/07/88  
Date Analyzed: 11/20/88  
Date Reported: 11/29/88

Project: Clark's Building  
Materials, Hayward

TOTAL PETROLEUM FUEL  
HYDROCARBONS WITH BTEX DISTINCTION

<u>Sample Number</u>	<u>Sample Description</u> Soil	<u>Low to Medium Boiling Point Hydrocarbons</u> ppm	<u>Benzene</u> ppm	<u>Toluene</u> ppm	<u>Ethyl Benzene</u> ppm	<u>Xylenes</u> ppm
8110792	A1	5.1	N.D.	N.D.	N.D.	N.D.
8110793	A2	N.D.	N.D.	N.D.	N.D.	N.D.
8110794	B1	2700	0.43	33	61	330
8110795	B2	3500	0.57	46	63	350

Detection Limits:                    1.0                    0.05                    0.1                    0.1                    0.1

Method of Analysis: EPA 5030 or 3810/8015/8020

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

SEQUOIA ANALYTICAL

Arthur G. Burton  
Laboratory Director



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Project: Clark's Building  
Materials, Hayward

## TOTAL PETROLEUM HYDROCARBONS

<u>Sample Number</u>	<u>Sample Description</u> Soil	<u>Detection Limit</u> ppm	<u>High Boiling Point Hydrocarbons</u> ppm
8110794	B1	1.0	24000
8110795	B2	1.0	23000

Method of Analysis: EPA 3550/8015

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

SEQUOIA ANALYTICAL

Arthur G. Burton  
Laboratory Director



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## CHAIN OF CUSTODY

SAMPLER: Jean Semarsky DATE/TIME OF COLLECTION: 11/4/88 10 AM  
 (signature) KEI TURN AROUND TIME: Regular

SAMPLE DESCRIPTION AND PROJECT NUMBER: Clark's Building Materials  
Hayward

SAMPLE #	ANALYSES	GRAB OR COMP.	NUMBER OF CONTAINERS	SOIL/WATER
<u>A1</u>	<u>TPH(G) BTXE</u>	<u>grab</u>	<u>1</u>	<u>S</u> 8110772
<u>A2</u>	<u>TPH(G) BTXE</u>	<u>grab</u>	<u>1</u>	<u>S</u>
<u>B1</u>	<u>TPH(G+D) BTXE</u>	<u>grab</u>	<u>1</u>	<u>S</u>
<u>B2</u>	<u>TPH(G+D) BTXE</u>	<u>grab</u>	<u>1</u>	<u>S</u>

RELINQUISHED BY*	TIME/DATE	RECEIVED BY*	TIME/DATE
<u>1. Jean Semarsky</u> <u>KEI</u>		<u>William Stucke</u>	<u>11/7/88 1005</u>
<u>2. William Stucke</u>	<u>11/7/88 1200</u>	<u>Roy M. M.</u>	<u>11/7/88 12:00 NOON</u>
<u>3.</u>			
<u>4.</u>			

\* STATE AFFILIATION NEXT TO SIGNATURE

REMARKS: \_\_\_\_\_