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KAPREALIAN ENGINEERING, INC.
Consulting Engineers
535 Main Street
Martinez, Ca. 94553
(415) 372-5444

KEI-J86-123
January 13, 1987

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

B1

Attention: Mr. Paul Paradiso

Re: Abandoned Shell Service Station Located at
2101 Park Blvd.
Oakland, California
Subsurface Investigation Report 94606

Dear Mr. Paradiso:

The following report summarizes the soil and tank inspection conducted during removal of three underground gasoline tanks, and soil and water sampling at the abandoned Shell Service Station located at 2101 Park Blvd., Oakland, California.

FIELD INVESTIGATION

Kaprealian Engineering Inc. (KEI) conducted its investigation at the referenced site on December 10, 1986, which consisted of soil and water sampling after the excavation and removal of three 10,000 gallon, fiberglass, underground fuel storage tanks. Water was encountered at a depth of 9 feet, prohibiting the collection of soil samples from beneath the fuel tanks. One sample of native soil was collected from the sidewall of the fuel tank pit approximately six (6) inches above the standing water level. The location of the sample is shown on the attached location plan. The disturbed sample was obtained from bulk material excavated by backhoe. The sample was placed in a clean brass tube, sealed with aluminum foil and plastic caps, and was stored in a cooled ice chest for delivery to Sequoia Analytical Laboratory in Redwood City, California.

A light sheen was noted on the surface of the groundwater after the fuel tanks were removed. A sample of the groundwater was taken from the fuel tank pit, beneath the surface of the standing groundwater. The sample was delivered to Sequoia Laboratory for analysis.

After sampling was completed, the hole was backfilled with pea-gravel, which was excavated during the removal of the tanks.

SUBSURFACE CONDITIONS

The subsurface soils exposed in the excavation consisted of clay. A faint odor of gasoline was noted in the soil and water samples.

LABORATORY PROCEDURES AND ANALYTICAL RESULTS

The soil and water samples from the fuel tank pit were analyzed at Sequoia Analytical Laboratory for total hydrocarbons as gasoline (THC), Benzene, Toluene and Xylene (BTX). The results of the chemical analyses are summarized below. Copies of the laboratory results are attached.

Sample Number	Type	Total Hydrocarbon*	Benzene*	Toluene*	Xylene*
B1	soil	120	1.1	0.6	5.7
W1	water	4.4	.0076	.017	.097

*All analyses in parts per million (ppm)

CONCLUSIONS AND RECOMMENDATIONS

Results of the laboratory analyses indicate that the total hydrocarbon levels in both the soil and water are above the acceptable levels set by the Regional Water Quality Control Board fuel leak guidelines. Because the material that was excavated during tank removal consisted only of pea-gravel, we believe that no environmental hazard will result from the backfilling of the pit. However, because of the presence of dissolved gasoline constituents in the groundwater, we recommend the installation of groundwater monitoring wells based on the Regional Water Quality Control Board Guidelines on fuel leaks. The recommended installation of monitoring wells will define the extent of the contamination.

At your request, KEI will provide a proposal to define the extent of dissolved gasoline in the shallow groundwater to comply with the state guidelines.

Copies of this report should be sent to Mr. Clavin E. Choyce, Oakland City Fire Department, and to the Regional Water Quality Control Board.

Should you have any questions concerning this report, please do not hesitate to call me at (415) 372-5444.

Sincerely,

Mardo Kaprealian
Kaprealian Engineering Inc.

Attachments: Location Plan
Laboratory Analyses

MK/js

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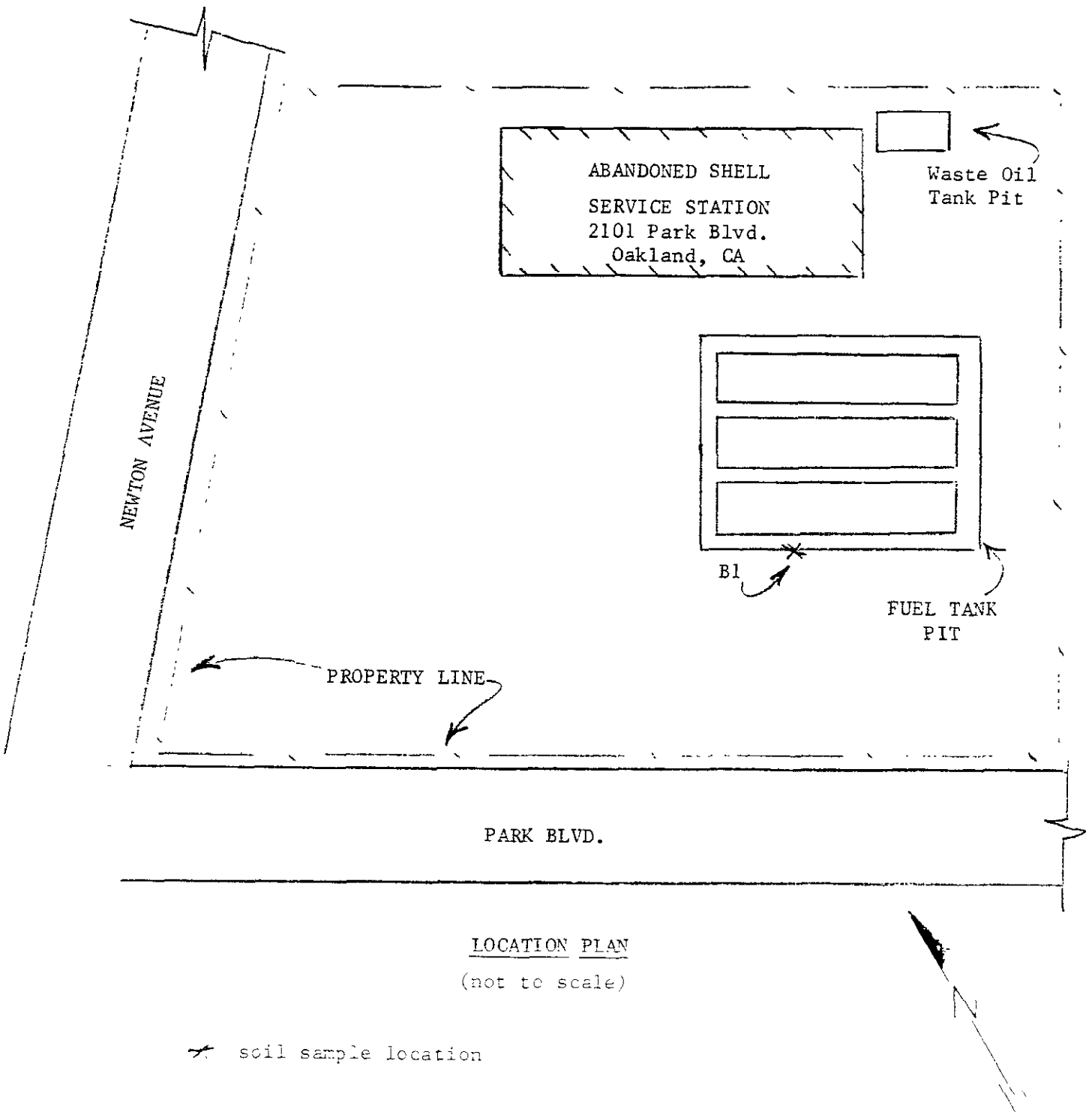

LOCATION PLAN

(not to scale)

✕ soil sample location

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
535 Main Street, Suite 309
Martinez, CA 94553
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 12/10/86
Date Received: 12/12/86
Date Reported: 12/24/86

Sample Number	Sample Description
6120779	Soil B1 Shell, Park Blvd. Oakland

ANALYSIS

	Detection Limit ppm	Sample Results ppm
Total Hydrocarbons	1	120
Benzene	0.1	1.1
Toluene	0.1	0.6
Xylnes	0.1	5.7

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

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

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Date Sampled: 12/10/86
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Sample Number	Sample Description
6120778	Water W1 Shell, Park Blvd. Oakland

ANALYSIS

	Detection Limit ppb	Sample Results ppb
Total Hydrocarbons	50	4,400
Benzene	0.5	7.6
Toluene	0.5	17
Xylenes	0.5	97

NOTE: Analysis was perfromed using EPA method 602.

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Arthur G. Burton
Laboratory Director

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