



KAPREALIAN ENGINEERING
INCORPORATED

December 2, 1996

Alameda County Health Care Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Mr. Scott Seery

RE: Unocal Service Station #3292
15008 E. 14th Street
San Leandro, California

Dear Mr. Seery:

Per the request of Mr. Edward C. Ralston of Unocal Corporation, enclosed please find our work plan/proposal dated November 5, 1996, for the above referenced site.

If you should have any questions, please feel free to call our office at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

Judy A. Dewey
Executive Secretary

jad\ACHCS

Enclosure

cc: Edward C. Ralston, Unocal Corporation

96 DEC -4 PM 3: 26
ENVIRONMENTAL
PROTECTION



KAPREALIAN ENGINEERING
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KEI-P91-0102.P4
November 5, 1996

Unocal Corporation
2000 Crow Canyon Place, Suite 400
P.O. Box 5155
San Ramon, California 94583

Attention: Mr. Edward C. Ralston

RE: **Work Plan/Proposal**
Unocal Service Station #3292
15008 E. 14th Street
San Leandro, California

Dear Mr. Ralston:

This work plan/proposal for additional subsurface exploration has been prepared for your review. The purpose of this work is to further define the degree and extent of hydrocarbon-impacted soil at the subject site as discussed in a meeting with the Alameda County Health Care Services (ACHCS) Agency. *and GW*

The data obtained from soil samples collected from EB1 through EB4 will be utilized in a Risk-Based Correction Action (RBCA) analysis, as discussed in the aforementioned meeting with the ACHCS. RBCA analyses will be conducted for the adjacent residential and commercial structure in the site vicinity.

DEFINING THE EXTENT OF SUBSURFACE CONTAMINATION

1. KEI proposes the drilling and sampling of four Geoprobe borings, designated as EB1 through EB4 on the attached Figure 1. Permits will be obtained from ACHCS prior to beginning work. EB3 and EB4 will also require encroachment permits from the California Department of Transportation.

The borings will be advanced to a depth of approximately 8 feet below grade, at which time drilling will be terminated. Static ground water level is anticipated at approximately 8 feet below grade, based on the previous ground water levels measured in the monitoring wells.

2. Soil samples will be collected at significant changes in lithology, at obvious areas of contamination, and at/or within the soil/ground water interface, beginning at a depth of about 4 to 5 feet below grade in each of the borings. Sample intervals will be chosen so that an accurate profile of the subsurface conditions can be determined. Classification of soils will be done using the Unified Soils Classification

System (USCS) by KEI's field geologist. Samples will be collected in a split-spoon sampler with liners. Samples will be removed from the sampler and retained in the liners. The liners will be sealed with Teflon-lined plastic caps and placed in individually sealed plastic bags. They will then be labeled and stored in a cooler on crushed ice or "blue ice" for delivery to a state-certified laboratory. Properly executed Chain of Custody documentation will accompany all soil samples.

3. During drilling operations, all soil materials will be stored on-site in DOT-approved 55-gallon drums, or else covered by visqueen. Each drum (if used) will be properly labeled and will include, at a minimum, the date, the boring that the soil materials were obtained from, a contact individual, and the phone number at KEI.
4. Finalized Boring Logs will be prepared from field logs and submitted to the ACHCS.

5. Borehole Sealing:

After completion of drilling and sampling, all borings will be fully sealed by the use of either neat cement grout or 11-sack cement/sand slurry (in accordance with the grout mixing guidelines presented in the California Well Standards, Bulletin 74-90, dated June 1991). The upper 1 to 2 feet of grout may contain a hardening agent to allow for a reduced curing time.

6. Laboratory Analyses:

Selected soil samples from the exploratory borings will be analyzed at Sequoia Analytical Laboratory, a state-certified laboratory, for total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030/modified 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA method 8020. Soil samples will also be collected and analyzed for geotechnical parameters for use in RBCA analysis.

7. Conclusions:

Conclusions and results of this work will be described in a technical report. The technical report will be submitted to the ACHCS.

LIMITATIONS

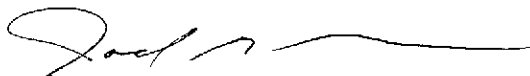
Soil deposits and rock formations may vary in thickness, lithology, saturation, strength and other properties across any site. In addition, environmental changes, either naturally-occurring or artificially-induced, may cause changes in the extent and concentration of any contaminants. Our studies assume 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 will be based on the data obtained from the field and laboratory analyses obtained from a state-certified laboratory. We will analyze 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 will be performed in accordance with generally accepted professional principles and practices existing for such work.

If you have any questions regarding this work plan/proposal, please do not hesitate to call at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.



Joel G. Greger, C.E.G.
Senior Engineering Geologist

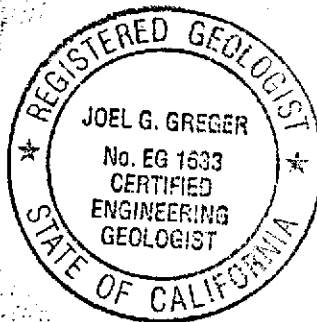
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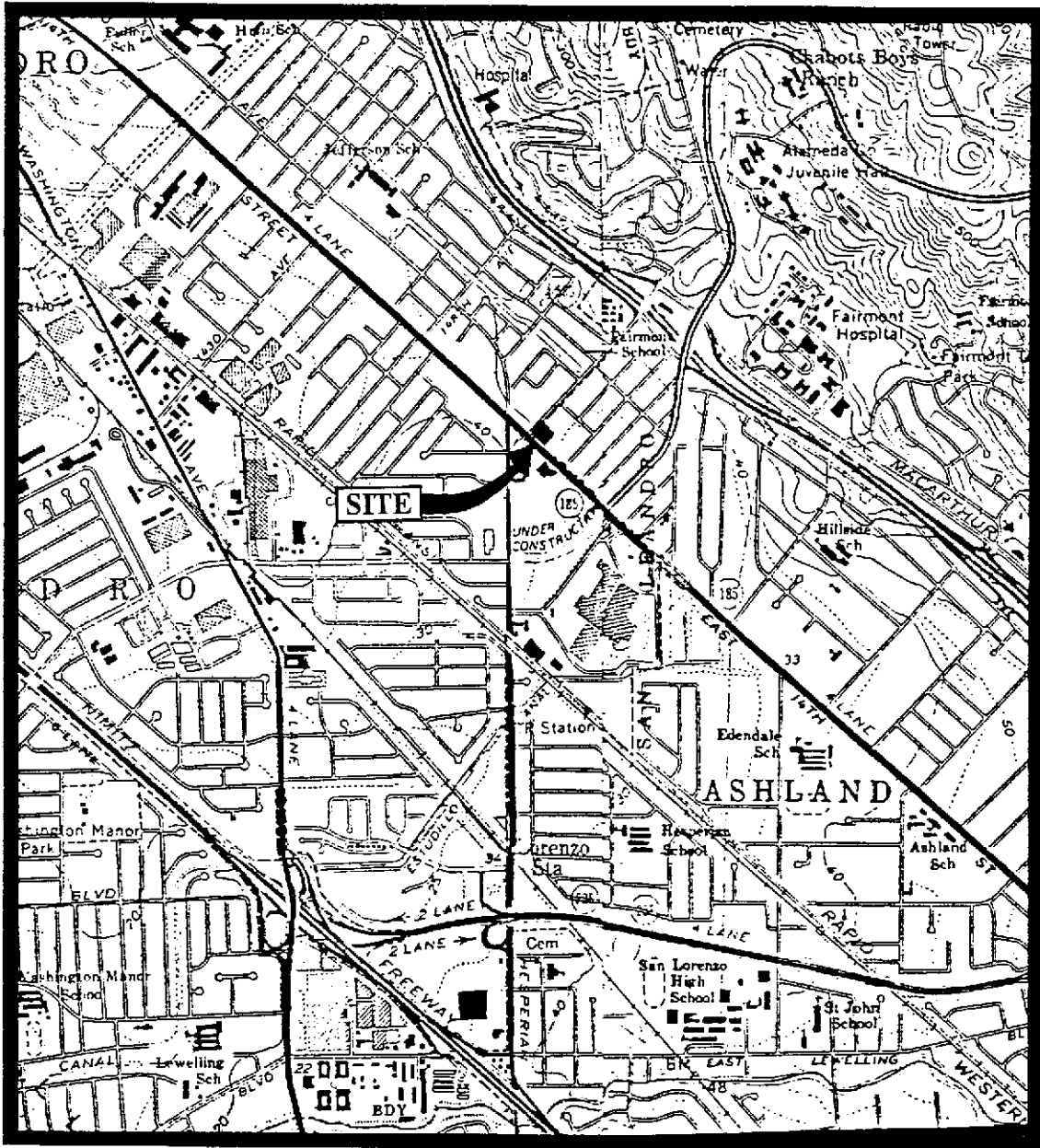


Robert H. Kezerian
Project Manager

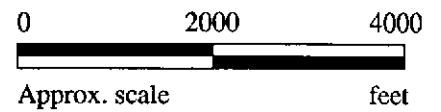
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Attachments: Location Map
Figure 1





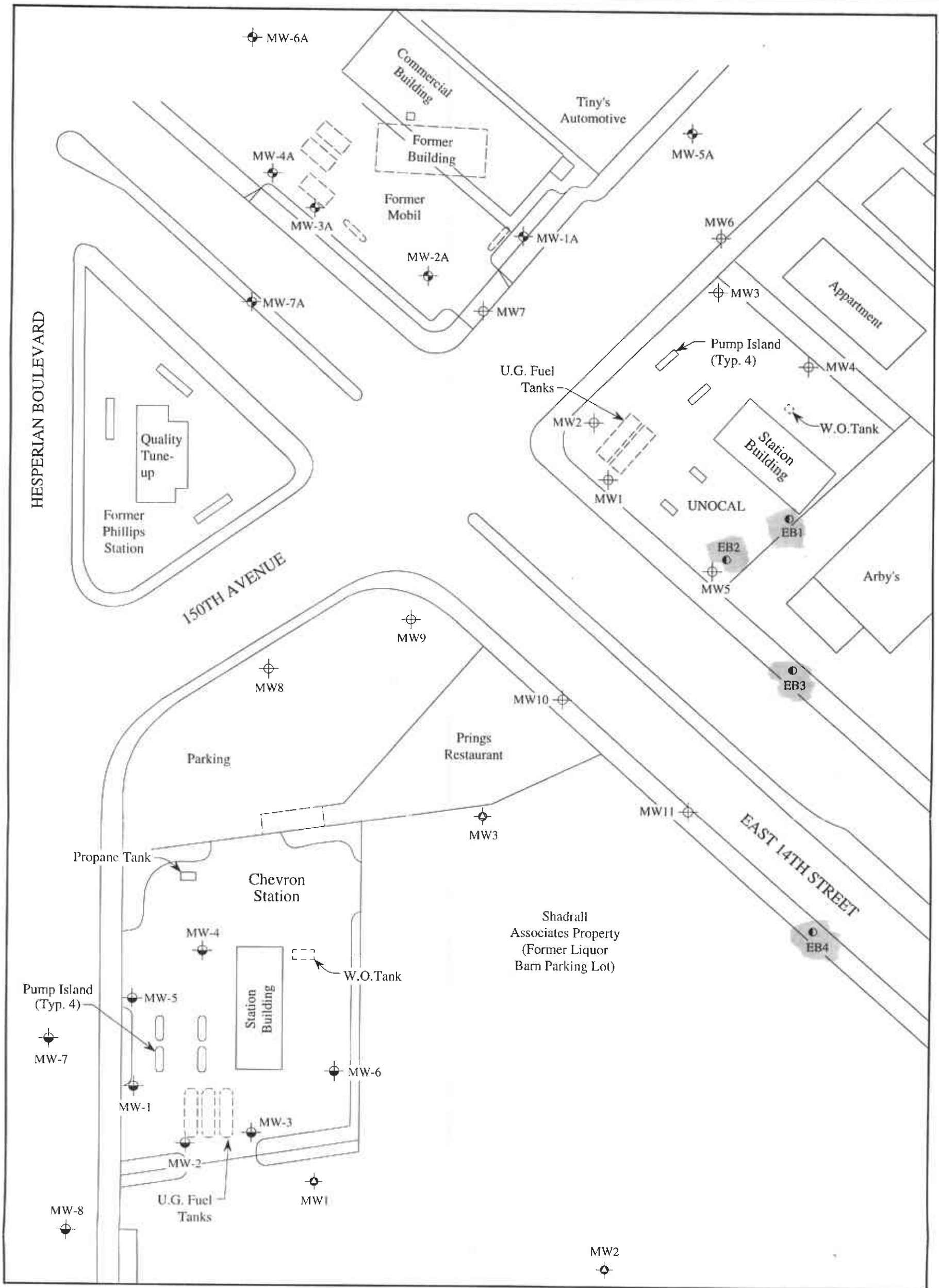
Base modified from 7.5 minute U.S.G.S. Hayward and San Leandro Quadrangle
 (both photorevised 1980)



**KAPREALIAN ENGINEERING
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**UNOCAL SERVICE STATION #3292
 15008 E. 14TH STREET
 SAN LEANDRO, CALIFORNIA**

**LOCATION
 MAP**

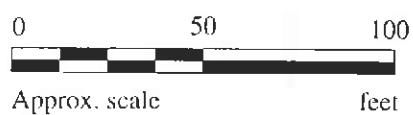


LEGEND

- ⊕ Monitoring well (Unocal)
- ⊕ Monitoring well (Shadrall Property)
- ⊕ Monitoring well (Former Mobil)
- ⊕ Monitoring well (Chevron)
- Exploratory boring (proposed)

WELL LOCATION MAP

UNOCAL SERVICE STATION #3292
 15008 E. 14TH STREET
 SAN LEANDRO, CALIFORNIA



**KAPREALIAN ENGINEERING
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**FIGURE
 1**