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KAPREALIAN ENGINEERING
INCORPORATED

KEI-P91-1201.P2
June 29, 1992

Wells Fargo Bank
525 Market Street, 17th Floor
MAC #0103-171
San Francisco, CA 94105

Attention: Mr. Joe Schrader

RE: Work Plan/Proposal
Wells Fargo Bank
(Walter Blumert Co., Inc.)
490 - 43rd Street
Oakland, California

INTRODUCTION

1. Site Description and Background:

The subject site occupies the north-northeastern corner of the intersection of 43rd Street and Telegraph Avenue in Oakland, California. A Location Map and Site Plan are attached to this work plan/proposal.

On December 11, 1991, Kaprealian Engineering, Inc. (KEI) collected soil samples following the removal of one 1,000 gallon underground unleaded gasoline storage tank and one 350 gallon underground paint thinner storage tank at the referenced site. To continue defining the extent of soil contamination beneath the site, and to determine if the ground water beneath the site has been impacted by hydrocarbon contamination, KEI proposed the installation of three monitoring wells in a letter accompanying KEI's report (KEI-91-1201.R1) dated June 29, 1992.

2. Geology and Hydrology

Based on review of regional geologic maps (USGS, Miscellaneous Geologic Investigations, Map I-239, Areal and Engineering Geology of the Oakland West Quadrangle, California, by D.H. Radbruch, 1957), the subject site is underlain by the Quaternary-age alluvial fan deposits of the Temescal formation (Qtc). These deposits are described as typically consisting of clayey gravel, sandy and silty clays, and sand-clay-silt mixtures. The depth to bedrock is presently unknown to KEI.

Ground water was encountered at a depth of approximately 11.5 feet during underground storage tank removal operations at the subject site. The ground water flow direction is presently not known to KEI. However, the regional ground water flow

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direction is inferred to be to the southwest, paralleling the gently sloping, southwest-trending topography.

PROPOSED FIELD WORK

PHASE I - WELL INSTALLATION

1. KEI proposes to install three two-inch diameter monitoring wells by the use of hollow-stem auger equipment. Permits will be obtained from the Alameda County Health Care Services Agency (ACHCS) and the City of Oakland, as necessary, prior to beginning work.

   The wells will be drilled 10 to 15 feet into the saturated zone of the first encountered ground water, unless a clay aquitard of at least 5 feet thick is encountered first, at which time drilling will be terminated.

2. Soil samples will be collected at a maximum spacing of 5 foot intervals, at significant changes in lithology, at obvious areas of contamination, and at/or within the soil/ground water interface, beginning at a depth of 5 feet below grade. Sample intervals will be chosen so that an accurate profile of the subsurface conditions can be determined. Sampling will continue until the first water table is encountered. Sampling for lithologic logging purposes only will continue below the water table to the total depth drilled. A representative soil sample of the saturated zone will be collected and submitted to a laboratory for a particle size analysis (sieve and hydrometer analysis) for verification of casing slot size and filter pack design. Classification of soil will be done using the Unified Soils Classification System (USCS) by KEI's field engineer or geologist. Samples will be collected in a California modified split-spoon sampler with two-inch diameter brass liners. The sampler will be advanced ahead of the drilling augers at designated depths by dropping a 140 pound hammer 30 inches. Blow counts will be recorded. The samples will be removed from the sampler, retained in the brass liners, and sealed with aluminum foil, plastic caps, and tape. The samples will then be labeled and stored in a cooler, on ice, for delivery to a state-certified laboratory.

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 interval that 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, and to the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region.

5. Ground water is anticipated at approximately 11.5 feet below grade, based on the ground water level found during the tank removal activities.

6. Well Construction:

   Casing Type: Schedule 40 PVC, flush threaded joints, 0.02 inch factory slot, two-inch diameter. Screen to run from total depth of the well to approximately 5 feet above the depth of the first encountered ground water. Monterey sand (#3) will fill the annular space from total depth to 2 feet above the perforated casing interval. A two-foot thick bentonite seal will be placed in the annular space on top of the sand pack. Concrete will be poured from the top of the bentonite seal to the surface.

   The well casings will be secured with a waterproof cap and a padlock. A round, watertight, flush-mounted well cover will be concreted in place over the top of the casing.

7. The wells will be checked for depth to the water table and the presence of free product (by the use of an interface probe and/or paste tape) prior to both development and sampling. Water levels will be measured with an electronic sounder. The wells will be developed by the use of a surface pump approximately one week after well completion. Wells will be pumped until expelled water is clear and free of turbidity. Effluent generated during well development will be contained in barrels and hauled from the site by a licensed hazardous materials hauler.

   Casing elevations will be surveyed by a licensed surveyor to Mean Sea Level and to a vertical accuracy of 0.01 feet.

8. Ground Water Sampling:

   The wells will be purged (by the use of a surface pump or bailer) of approximately 4 casing volumes prior to sampling, at least 24 hours after development. After recovery, samples will be collected by the use of a clean Teflon bailer, and will be promptly decanted into 40 ml VOA vials and/or one-liter amber bottles, as appropriate. The vials and/or bottles will be sealed with Teflon-lined screw caps, then labeled and stored in a cooler (on ice) for delivery to a state-certified

laboratory. Properly executed Chain of Custody documentation will accompany all samples. The sampling bailer will be cleaned with non-phosphate soap and clean water rinses between uses. The wells will be checked for depth to the water table and the presence of free product and sheen prior to sampling.

9. Laboratory Analyses:

Water and selected soil samples will be analyzed by Sequoia Analytical Laboratory in either Concord or Redwood City, California, a state-certified laboratory, for total petroleum hydrocarbons (TPH) as gasoline by EPA method 5030 in conjunction with modified 8015, TPH as diesel and TPH as paint thinner by EPA method 3550 in conjunction with modified 8015, and for benzene, toluene, xylenes, and ethylbenzene (BTX&E) by EPA method 8020, as recommended by the RWQCB, as specified in the Tri-regional guidelines.

The analytical results will be presented in tabular form, showing the sample depths, results, and the detection limits. The analytical results will be used to delineate the vertical and lateral extent of the contaminants in soil and ground water.

10. Hydrology:

The ground water flow direction will be determined from survey data and water table depths. The ground water flow direction will be shown on the Site Plan.

11. Discussion and Recommendations:

Results of Phase I (including discussion and recommendations) will be described in a technical report. The technical report will be submitted to the ACHCS, 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 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 have been 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 me at (510) 602-5100.

Sincerely,

Kaprealian Engineering, Inc.

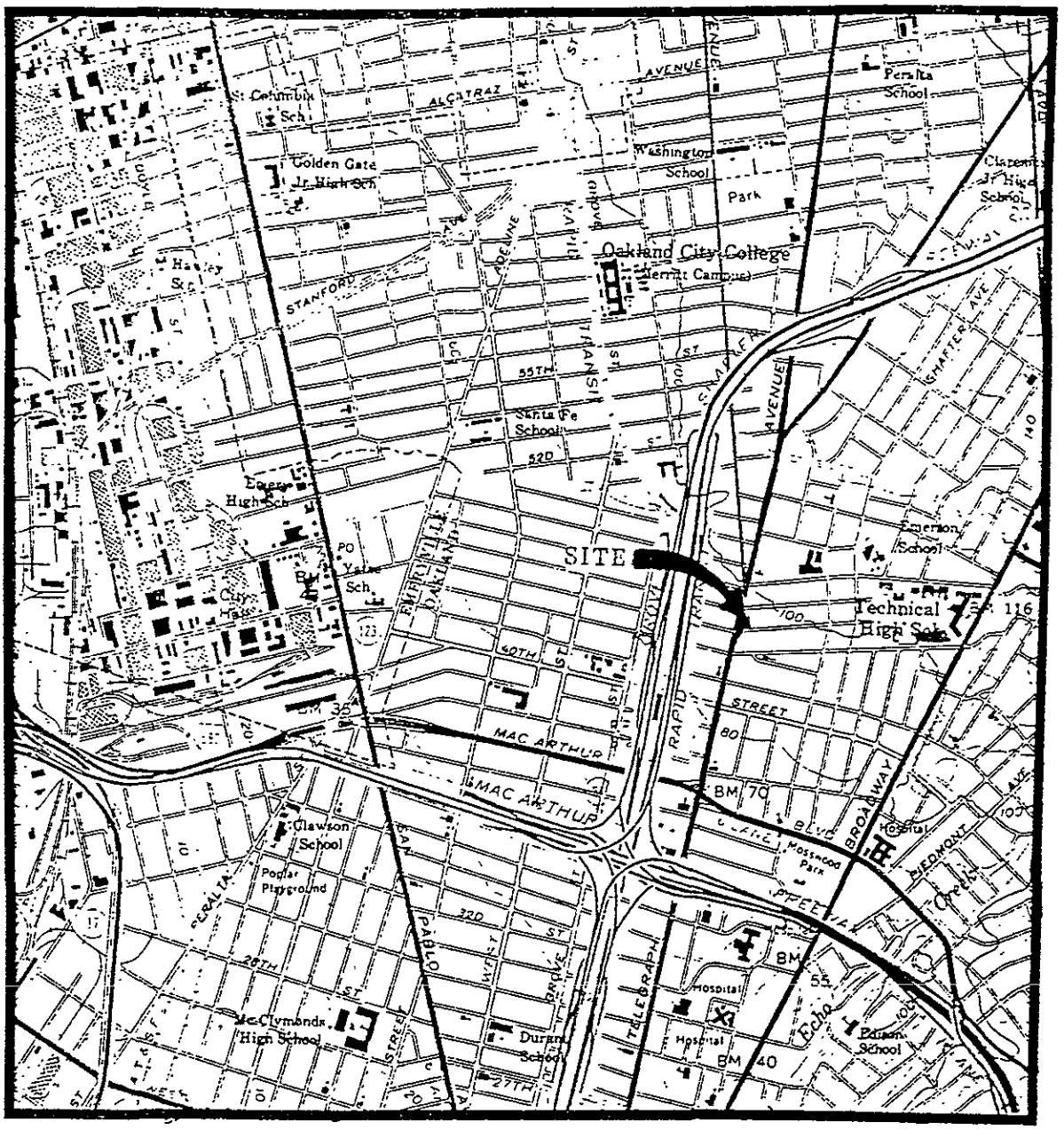
Joel G. Greger, C.E.G.
Senior Engineering Geologist

License No. 1633
Exp. Date 6/30/92

Timothy R. Ross
Project Manager

/bp

Attachments: Location Map
Site Plan

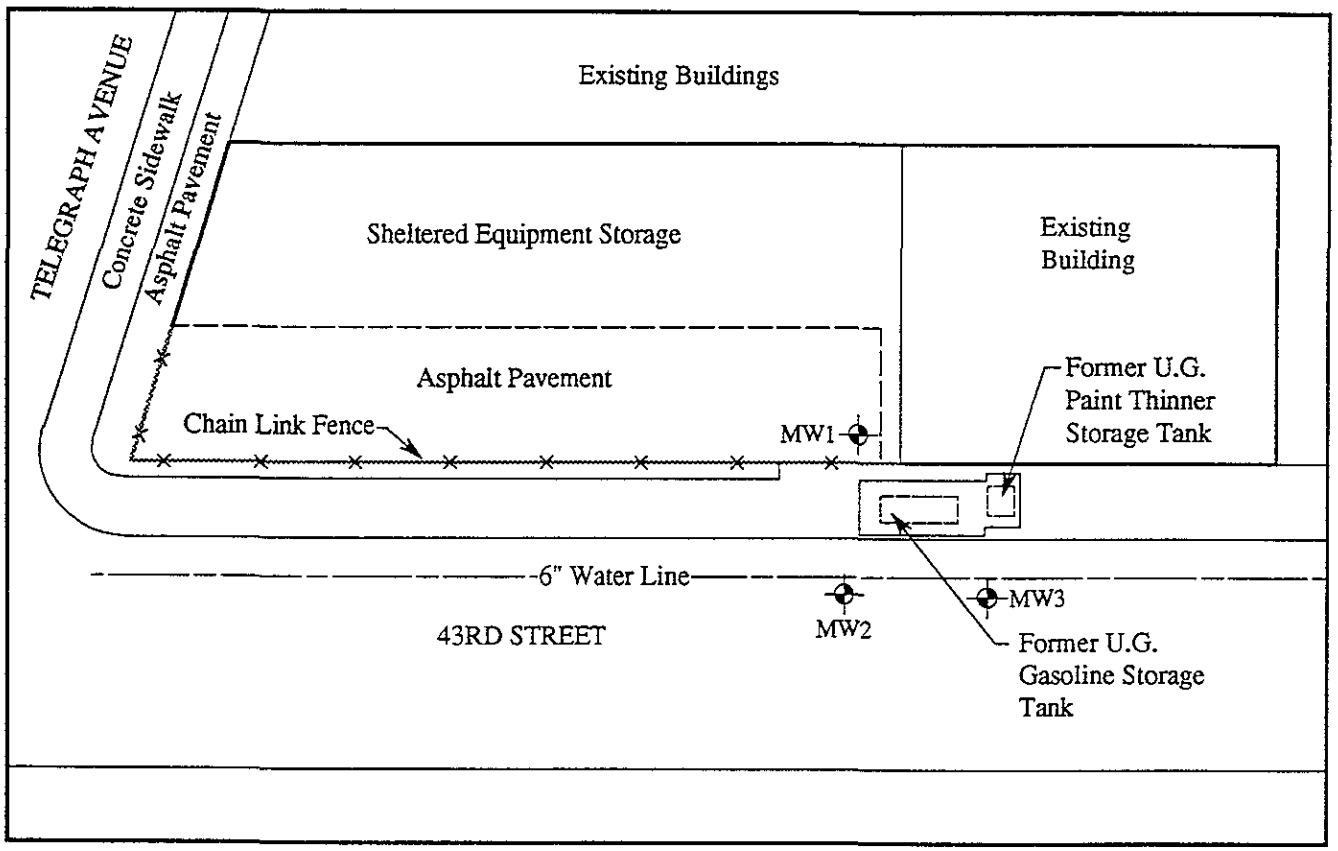


Base modified from 7.5 minute U.S.G.S. Oakland West Quadrangle (photorevised 1980)

0 2000 4000

Approx scale feet

KAPREALIAN ENGINEERING INCORPORATED	WELLS FARGO BANK (WALTER BLUMERT CO, INC.) 490 43RD STREET OAKLAND, CA	LOCATION MAP



LEGEND

Monitoring well (proposed)

0 30 60

Approx. scale feet

SITE PLAN

KAPREALIAN ENGINEERING INCORPORATED

WELLS FARGO BANK
(WALTER BLUMERT CO, INC.)
490 43RD STREET
OAKLAND, CALIFORNIA

FIGURE
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