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ENVIRONMENTAL  
PROTECTION

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**ABBREVIATED WORK PLAN  
PHASE III SOIL AND GROUND WATER TESTING  
STID 553 - GRIMIT AUTO AND REPAIR  
1970 SEMINARY AVENUE  
OAKLAND, CALIFORNIA**

**August 9, 1995**

**Prepared by**

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**Geology / Engineering Geology / Environmental Studies**

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August 9, 1995

E-10-1A-163A  
HC/WP: SeminaryPhIIIWP

✓ Mr. Thomas Peacock, Supervising HMS  
Alameda County Department of Environmental Health  
Hazardous Materials Division  
1131 Harbor Bay Parkway, Suite 2nd Floor  
Alameda, California 94502

**RE: ABBREVIATED WORK PLAN  
PHASE III SOIL AND GROUND WATER TESTING  
STID 553 - GRIMIT AUTO AND REPAIR  
1970 SEMINARY AVENUE  
OAKLAND, CALIFORNIA**

Dear Mr. Peacock:

The purpose of this letter is to present an abbreviated soil and ground water sampling plan for the above-referenced site. The plan is abbreviated in that previously presented background material and details of investigation are not repeated. The purpose of our proposed services is to assist in continuing to assess the documented presence of soil and ground water contamination at the site, as required by the Alameda County Health Care Services Agency, and to provide a preliminary site remediation design and contractor request for bids.

This proposal is based on discussions on various occasions during the past months, as well as the previous investigations conducted by Kaldveer Associates and Hoexter Consulting. *The general scope of work, although modified, is based on our conceptual work plan submitted to Thomas F. Peacock, Supervising HMS with the Environmental Protection Division of the Alameda County Department of Environmental Health, dated January 26, 1995. This additional work and remediation was subsequently required by the Alameda County Health Department, as specified in a letter from Mr. Peacock dated April 4, 1995.*

## **LOCATION, OCCUPANCY AND OWNERSHIP OF SITE**

The site is located at 1970 Seminary Avenue, Oakland, California (Figures 1 and 2). The site is currently utilized as an automotive electrical repair facility, Amor's Auto Electric Repair. The property is owned by Mr. Doyle Gruit, and leased to the repair facility.

## **PURPOSE OF INVESTIGATION**

The primary purposes of the proposed investigation are to (1) further evaluate the presence of petroleum hydrocarbons in soil and shallow ground water at the site; (2) conduct a vapor extraction feasibility test; and (3) prepare preliminary vapor and ground water extraction design, as well as request for bid (RFB) for final design and installation of the system.

## **SCOPE OF INVESTIGATION**

The scope of investigation will consist of the following.

1. Preparation of this work plan.
2. Obtain necessary permits prior to the commencement of the field portion of the investigation.
3. Drilling and sampling of the subsoils and shallow ground water for lithologic evaluation and laboratory analysis. Development, purging and sampling of the wells.
4. Chemical analysis of soil and ground water samples to assess the presence and concentration of selected chemical compounds.
5. Remediation System Performance Test and Preliminary Design
6. Preparation of a final written report to present our findings, conclusions and recommendations.
7. Preparation of preliminary contractor RFB.

## **BACKGROUND**

The site was formerly operated as an automotive service and gasoline station. Four approximately 550 gallon steel tanks were installed on the site in the 1930's. These or replacement tanks were used until fueling service was discontinued, on September 30, 1989. Three of the tanks were used to store gasoline, the fourth tank was used to store waste oil. The tanks were removed on November 17, 1989. Holes were observed in two of the tanks at the time of their removal, and gasoline and oil were detected in native soils beneath the former tanks. There are no known estimates of quantity of fuel or waste oil lost. To our knowledge, there are currently no operating or additional abandoned underground tanks on the property.

One ground water monitoring well, and three exploratory borings were advanced at the site during August, 1990, and documented in a report by Kaldveer Associates (1990). An initial sample round of the monitoring well was conducted by Kaldveer for the 1990 report. Supplemental excavation of the waste oil tank pit was conducted on May 16, 1991; the

excavation was backfilled with clean, imported soils. Hoexter Consulting provided three quarterly ground water sampling events, in January, April, and August, 1992.

Hoexter Consulting later installed two additional monitoring wells, sampled all three wells, and completed a report which has been submitted to the Alameda County Health Department for review, and which has been approved. More recently, Hoexter Consulting conducted quarterly sampling in September and December, 1994, and April, 1995.

[REDACTED SECTION]

### SUMMARY OF SERVICES

There are four phases to the proposed services. The four phases are discussed in the following paragraphs.

**Phase I** We are currently evaluating bids for removal of the existing abandoned hydraulic lift. Based on the elevated levels of oil in the nearby monitoring well MW-1, and the operator's experience with the site operation, the lift was subject to leakage and is thus a potential source of soil and ground water contamination. Removal of the lift and as much of the surrounding soil as practical will significantly improve site soil and ground water quality. The lift is located immediately down-gradient from the former waste oil tank. Previous excavation at the waste oil tank removed as much contaminated soil as was possible; confirmation soil sampling indicated that contaminated soil remained at this location. Finally, gasoline-contaminated soils from the nearby USTs are present in well MW-1 ground water and their presence is anticipated in the hydraulic lift vicinity. Therefore, remediation of the lift will also result in remediation of gasoline and of contaminated soils from the former waste oil tank.

The lift will only be removed if economically feasible. The State UST Reimbursement Fund has preliminarily indicated to us that removal of the lift is not covered by the Fund. In addition, it appears that subsequent excavation of contaminated soil will also not be reimbursed, even though much of the contamination appears to be caused by up-gradient UST (fuel and waste oil) releases. The bids received to date are **not** economically feasible if State reimbursement is not received. If not economically feasible **at this time**, the lift area will be included in future remediation of the entire site.

**Phase II** The second phase will consist of an extensive subsurface investigation, to further define the extent of soil contamination and the complex ground water conditions at the site, which include a shallow perched ground water zone and lenses and possibly channels of alluvial materials. All wells drilled as part of this investigation are intended for use in the subsequent site remediation, which has been preliminarily conceptualized.

**Phase III** The third phase will consist of a vapor extraction performance test and preliminary remediation system design.

**Phase IV** The final phase will consist of a remedial action feasibility report and request for bids to install and operate the remediation system.

## SCOPE OF SERVICES

### Phase I: Possible Removal of Hydraulic Lift

As previously discussed, the hydraulic lift may be removed, and the immediately surrounding soil excavated.

1. Prepare request for bid for contractors (already completed).
2. Assist in evaluation of the bids (currently being conducted).
3. Observe removal of lift, and excavation of obviously contaminated soils.
4. Obtain confirmation soil samples from excavation. Four soil samples are budgeted, to be analyzed for (1) total Petroleum Hydrocarbons as Gasoline (TPH-G) with benzene, toluene, ethylbenzene, and xylenes (BTEX) distinction (EPA 8015/8020); (2) total petroleum hydrocarbons as diesel (TPH-D) (EPA 8015 modified); (3) oil and grease (total recoverable petroleum, TRPH, using SM 5520B/F, gravimetric with cleanup) and (4) halogenated volatile organic compounds (HVOC, EPA 8010).
5. Document in a brief report.

Please note that some aspects of this phase, particularly the actual lift removal, may *not* be subject to reimbursement by the State UST Cleanup Fund. Nevertheless, we recommend that bids be obtained for this work, to reduce the cost of the work and increase the likelihood of State reimbursement for at least some aspects of the work.

### Phase II: Subsurface Investigation

The subsurface investigation will consist of advancing approximately 13 borings, and completing eight (8) of the borings as wells.

1. We will install eight (8) monitoring/vapor recovery wells and drill approximately five (5) additional soil borings, and obtain soil samples at a minimum of five foot intervals. A photoionization detector (PID) may be used to screen samples for various volatile compounds detected by the instrument. The soil samples will be appropriately packed, refrigerated and transported to the chemical laboratory for possible testing. The augers, samples and equipment will be appropriately cleaned prior to the field investigation.

Our investigation will consist of installing two types of wells, one "standard" two-inch diameter monitoring well and seven smaller one-inch diameter percussion driven soil borings completed as shallow vadose and ground water monitoring wells. The purpose of the one-inch wells is to provide supplemental ground water data, as well as vapor recovery points for the planned site remediation.

The two-inch diameter well will be relatively shallow (22'), completed in the perched zone in the same manner as the existing MW-3, and located adjacent to the existing well MW-1, which is completed in both the perched

and the deeper water bearing sediments. The well will be completed to approximately 22 feet, and screened from 5 to 22 feet. The well will be completed to Regional Water Quality Control Board and local agency specifications. Although not budgeted, the well will be suitable for a ground water pump test, if subsequently required.

The one-inch wells will be advanced with a portable, hydraulic hammer-driven soil coring system, which is capable of obtaining continuous soil samples. The samples are obtained by using the hammer to drive steel sampling rods into the ground. Two nested sampling rods are driven simultaneously, a small diameter inner sampling rod to obtain and retrieve the soil cores, and a larger diameter outer rod, which serves as a temporary drive casing to prevent sloughing of the formation while the inner rods are withdrawn from the hole. As the casing and inner rods are advanced, soil is driven into a 1-5/8 inch diameter, three foot long sample barrel attached to the end of the inner rods. Following completion of the sampling, the boring will be converted into a one-inch diameter monitoring well. These wells will be completed to approximately 22 feet, and screened from 5 to 22 feet. The one-inch wells will be set within five foot deep, approximately six-inch diameter open borings, to provide sufficient annulus for an annular seal.

Five soil borings will also be extended to a depth of approximately 15 feet. These borings may be converted to wells if the location, in the judgement of the field geologist, is appropriate for vapor recovery.

2. The wells will be developed and sampled a minimum of 48 hours following their completion. The three existing monitoring wells will be sampled at the same time; *the cost for this work will be borne by the previously approved quarterly sampling proposal.*
3. The wellhead elevations will be surveyed by a licensed surveyor.
4. Chemical analysis by a California Department of Health Services certified analytical laboratory will variously consist of the following: (1) total Petroleum Hydrocarbons as Gasoline (TPH-G) with benzene, toluene, ethylbenzene, and xylenes (BTEX) distinction (EPA 8015/8020); (2) total petroleum hydrocarbons as diesel (TPH-D) (EPA 8015 modified); oil and grease (total recoverable petroleum, TRPH, using SM 5520B/F, gravimetric with cleanup) and halogenated volatile organic compounds (HVOC, EPA 8010).

We will variously analyze two soil samples per boring for locations near to the contamination source areas, and one soil sample per boring for more distant locations. Budgeted analyses are as follows:

<u>Analysis</u>	<u>Soil</u>	<u>Water</u>
TPH-G/BTEX	19	8
TPH-D	19	8
TRPH	19	8
HVOC	12	8

5. A report summarizing all of our work will be prepared following completion of the field investigation. The report will document all phases of the investigation, and will include background information; a description of the field investigation procedures and of the strata encountered in the investigation; well completion data; a tabular summary of the analytical data; the analytical laboratory report; our interpretation of the analytical data; the vapor extraction performance test results; the preliminary remedial system design; and our conclusions and recommendations.

### **Phase III: Remediation System Performance Test and Preliminary Design**

1. A vapor extraction performance test will be performed. The one- and two-inch wells installed during Phase II will be utilized for this test. Additional temporary probes may be installed during the performance test, which will be removed and the holes grouted sealed upon test completion.
2. A vapor extraction/ground water treatment system for site remediation will be preliminarily designed. We anticipate that the wells installed during Phase II will provide the majority of the vapor recovery wells required by the system.

### **Phase IV: Evaluation Report and Request for Bids**

1. A report presenting the preliminary vapor extraction/ground water treatment system design will be prepared.
2. The report will form the basis for bid (RFB) requests to contractors to prepare final design and install and operate the system. RFB to be prepared.

## **REPORTING**

Following completion of the tasks outlined in this sampling plan, a report will be prepared which summarizes the results of the investigation. If soil remediation is indicated, only a brief summary reporting will be prepared. If further excavation is not indicated, a more comprehensive report will be prepared as documentation of the investigation. The report will include soil and ground water analytical testing results and a tabular summary of the results; boring logs and a description of the strata encountered and other pertinent information; location, site plan and boring location maps; and our conclusions and recommendations, if any.

## **SCHEDULE**

The field investigation will be initiated upon approval of the work plan.

**CLOSING**

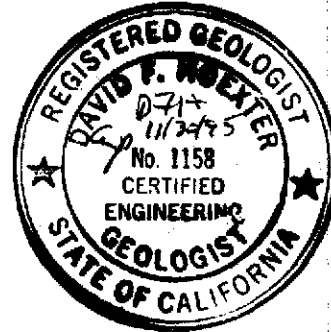
Thank you for expediting your review of this sampling plan. We trust this plan will satisfy your needs. Please call if you have any questions.

Very truly yours,

HOEXTER CONSULTING, INC.



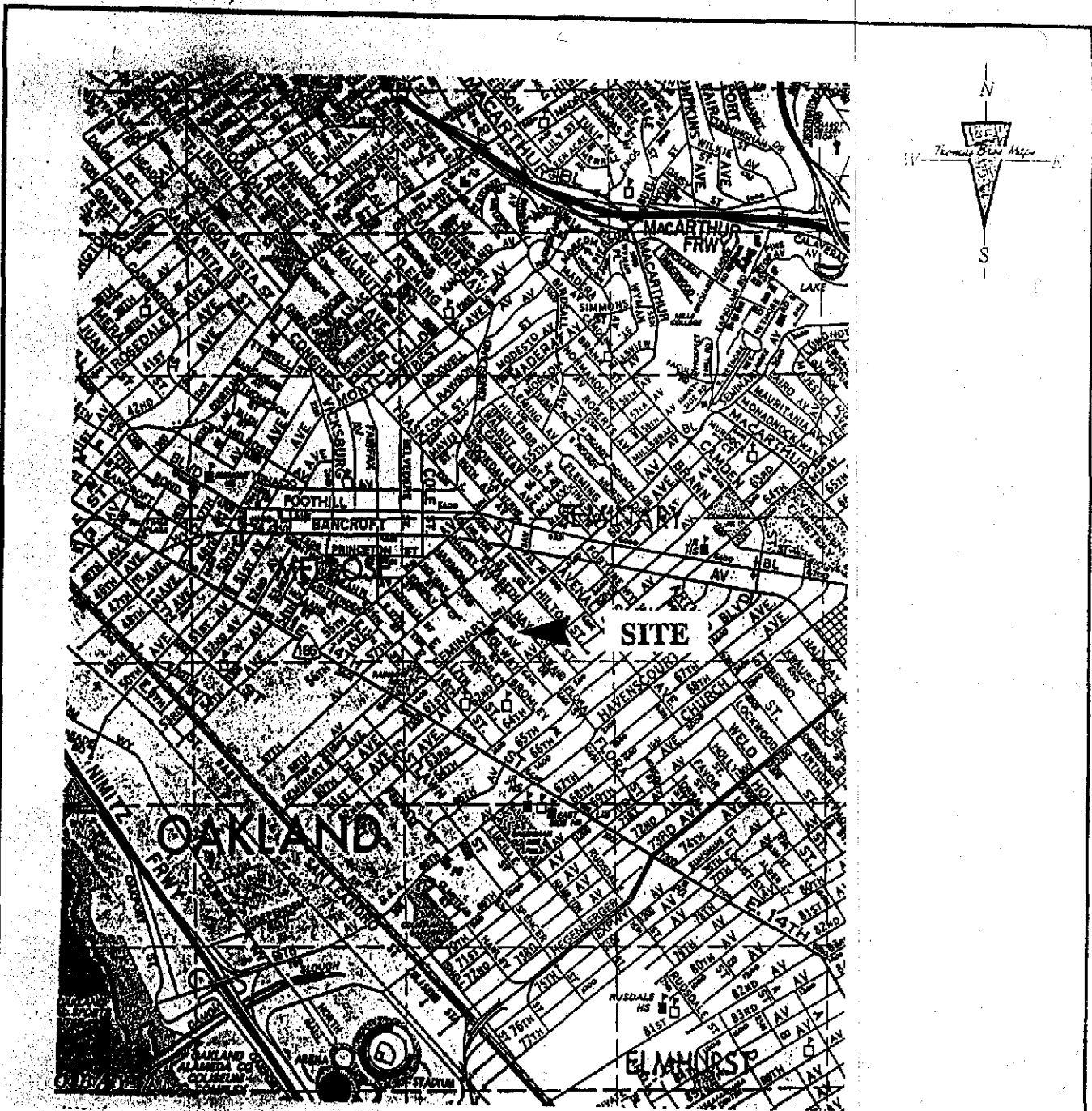
David F. Hoexter, RG/CEG/REA  
Consulting Engineering Geologist



**Attachments:**

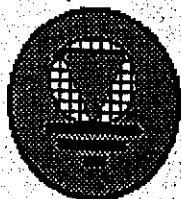
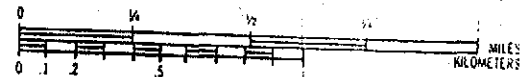
- Figure 1: Location Map
- Figure 2: Site Plan and Boring Locations





# ALAMEDA COUNTY

1991 *Thomas Guide*.

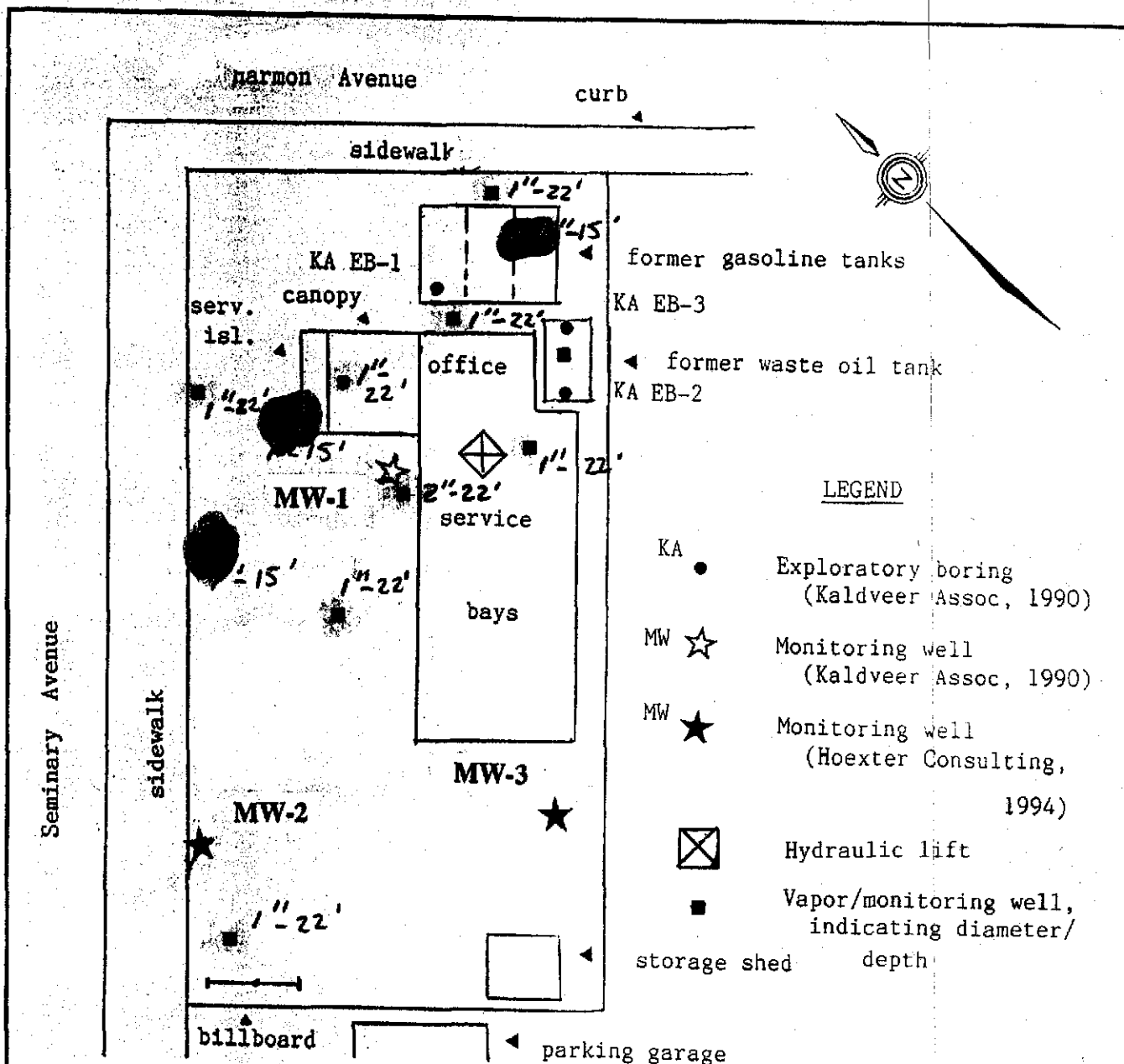


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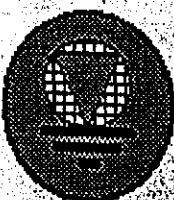
## LOCATION MAP

1970 Seminary Avenue  
 Oakland, California

Project No.	Date	Figure 1
E-10-1A-163A	August 9, 1995	



Base: Field sketch, 10/25/93



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**SITE PLAN**

1970 Seminary Avenue  
 Oakland, California

Project No.	Date	Figure 2
E-10-1A-163A	August 9, 1995	