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October 25, 2002

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Alameda County
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Environmental Health

WORKPLAN
for a
SOIL VAPOR SURVEY
at
California College of Arts and Crafts
810 Clay Street
Oakland, California

94607

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
208 West El Pintado Road
Danville, CA 94526
(925) 820-9391

1.0 INTRODUCTION

This report presents Aqua Science Engineers, Inc. (ASE)'s workplan to conduct a soil vapor survey under the basement area of 810 Clay Street in Oakland, California. The scope of work presented is based on the requirements of the Alameda County Health Care Services Agency (ACHCSA) as requested in their letter dated June 3, 2002. During a telephone conversation with Ms. Eva Chu of the ACHCSA on July 30, 2002, Ms. Chu stated that there is no longer a need to define the vertical extent of contamination since other borings and monitoring well MW-1 are located nearby. This property was formerly owned and used by The Salvation Army. Please note that the property has been sold to California College of Arts and Crafts (CCAC), who is in the process of reselling the property. The contact information for CCAC is as follows:

Mr. David Kirshman
California College of Arts and Crafts
5212 Broadway
Oakland, CA 94618
(510) 594-3688

2.0 PROPOSED SCOPE OF WORK (SOW)

Based on the requirements of the ACHCSA, ASE's proposed SOW is as follows:

- 1) Obtain a drilling permit from the Alameda County Public Works Agency.
- 2) Push two vapor extraction points to 3-feet below ground surface (bgs) in the basement area and collect soil vapor samples.
- 3) Analyze one soil vapor sample collected from each point at a CAL-EPA certified analytical laboratory for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE).
- 4) Backfill each boring with neat cement.
- 5) Prepare a report presenting the results of the vapor sampling.

Details of the assessment are presented below.

TASK 1 - OBTAIN NECESSARY PERMITS

ASE will obtain a drilling permit from the Alameda County Public Works Agency (ACPWA). ASE will also notify Underground Service Alert (USA) to have underground utility lines marked in the site vicinity.

TASK 2 - PUSH TWO VAPOR COLLECTION POINTS TO 3-FEET BGS AND COLLECT SOIL VAPOR SAMPLES

ASE will push two vapor collection points to 3-foot bgs at the location shown on Figure 2. Vapor points will be pushed to 3-foot bgs using drilling rods driven with a 40-pound manual slide hammer. The bottom of the rod will contain an expendable point. Once at depth, the drive rod will be retracted separating the expendable point and the rods and creating the desired void for sample collection. A Geoprobe Point Run Tubing (PRT) system adapter and new, unused polyethylene tubing will then be advanced through the inner drive rod and secured to the expendable point holder at the base of the rods. The tubing will then be purged using the Geoprobe vacuum/volume system. The sample will be collected using a Tedlar bag with a vacuum box. The samples will be labeled with the site location, sample designation, date and time the sample was collected, and the initials of the person collecting the sample. The samples will then be delivered under chain of custody to a CAL-EPA certified analytical laboratory. The all sampling will be directed by a qualified ASE geologist.

All sampling equipment will be cleaned in buckets with brushes and a trisodium phosphate (TSP) or Alconox solution, then rinsed twice with tap water. All tubing will be discarded after each sampling event, and tubing will never be reused.

TASK 3 - ANALYZE ONE VAPOR SAMPLE FROM EACH LOCATION

One vapor sample will be analyzed at a CAL-EPA certified environmental laboratory for TPH-G by modified EPA Method 5030/8015, and BTEX and MTBE by EPA Method 8020.

TASK 4 - BACKFILL THE BORINGS WITH NEAT CEMENT

Following the collection of the soil vapor samples, the borings will be backfilled with neat cement to the surface.

TASK 5 - PREPARE A REPORT

ASE will prepare a report presenting the methods and findings of this assessment. This report will include a summary of the results, conclusions and recommendations. If hydrocarbon concentrations are detected, the concentrations will either be compared to the Risk-Based Screening Levels (RBSLs) presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated December 2001 or a site-specific risk assessment will be prepared. This report will be submitted under the seal of a California registered civil engineer or geologist.

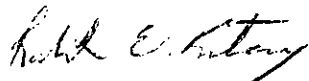
SCHEDULE

The property is currently in the process of being sold, and drilling is currently scheduled for November 1, 2002. The report should be available within three weeks of the sampling date.

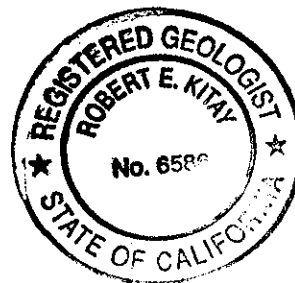
Should you have any questions or comments, please call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Robert E. Kitay, R.G., R.E.A.
Senior Geologist



cc: Mr. David Kirshman, California College of Arts and Crafts. 5212 Broadway, Oakland, CA 94618

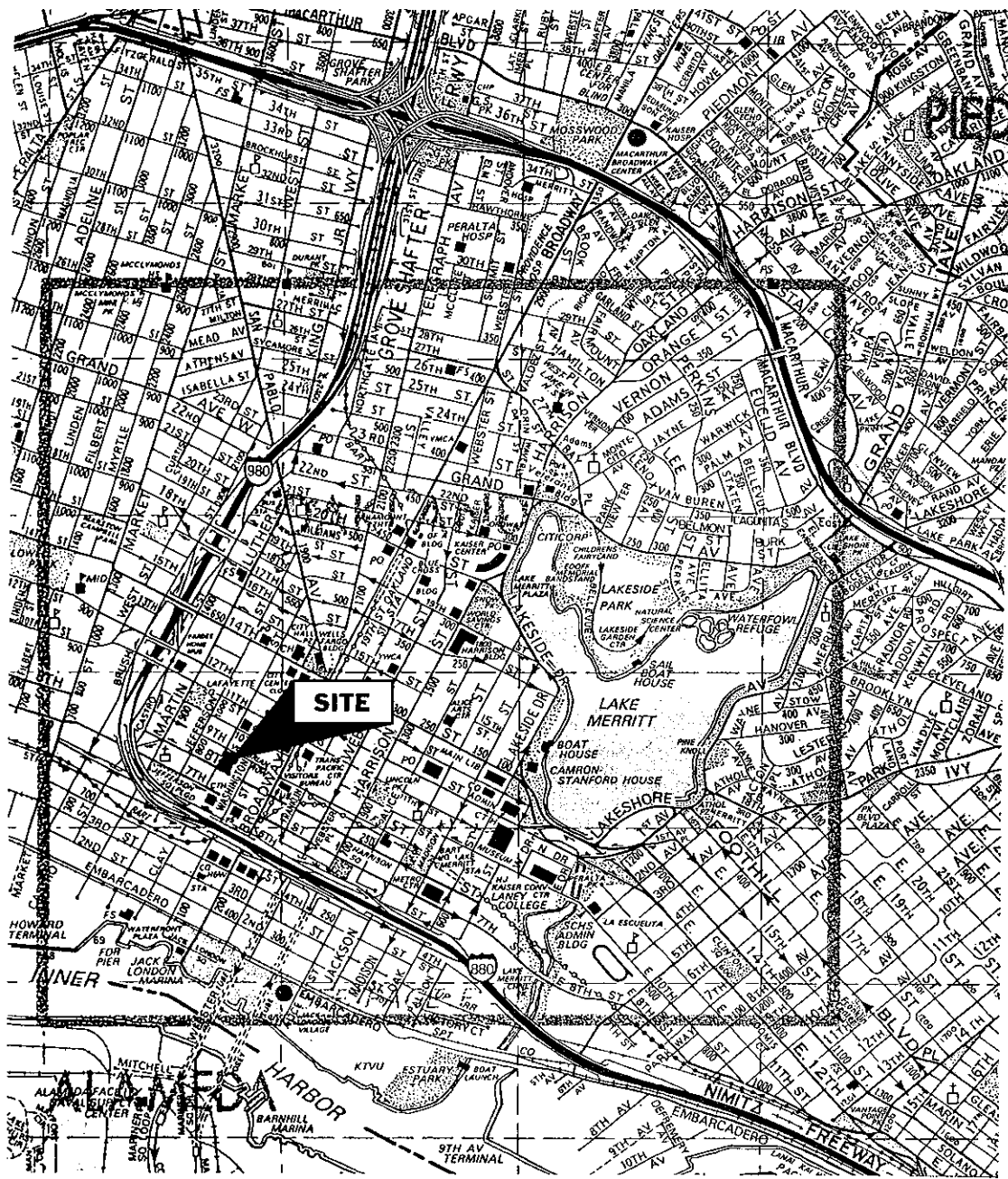
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Mr. Chuck Headlee, California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, CA 94612

FIGURES



NORTH



SITE LOCATION MAP

THE SALVATION ARMY
810 CLAY STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1



NORTH

SCALE
1" = 30'

J & M Meats Building

Parking

SB-3

Parking

Clay Street

Sidewalk

Basement #3

SALVATION ARMY BUILDING

Adjacent Building

Basement #4

Former Gasoline Station Area

Basement #2

BH-A

MW-1

SB-1

Basement #1

BH-B

Area of Attempted Borings

SB-2

Sidewalk

Eighth Street

LEGEND



Proposed Soil Vapor Sample Location



Monitoring Well Location



Soil boring drilled 4/99



Hand augered soil boring drilled in basement area



Soil boring drilled 1/99

PROPOSED SOIL VAPOR
SAMPLE LOCATIONS

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FIGURE 2



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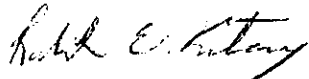
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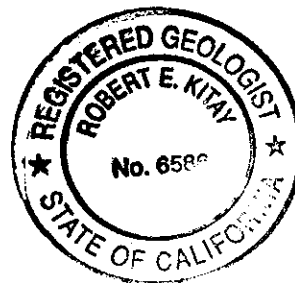
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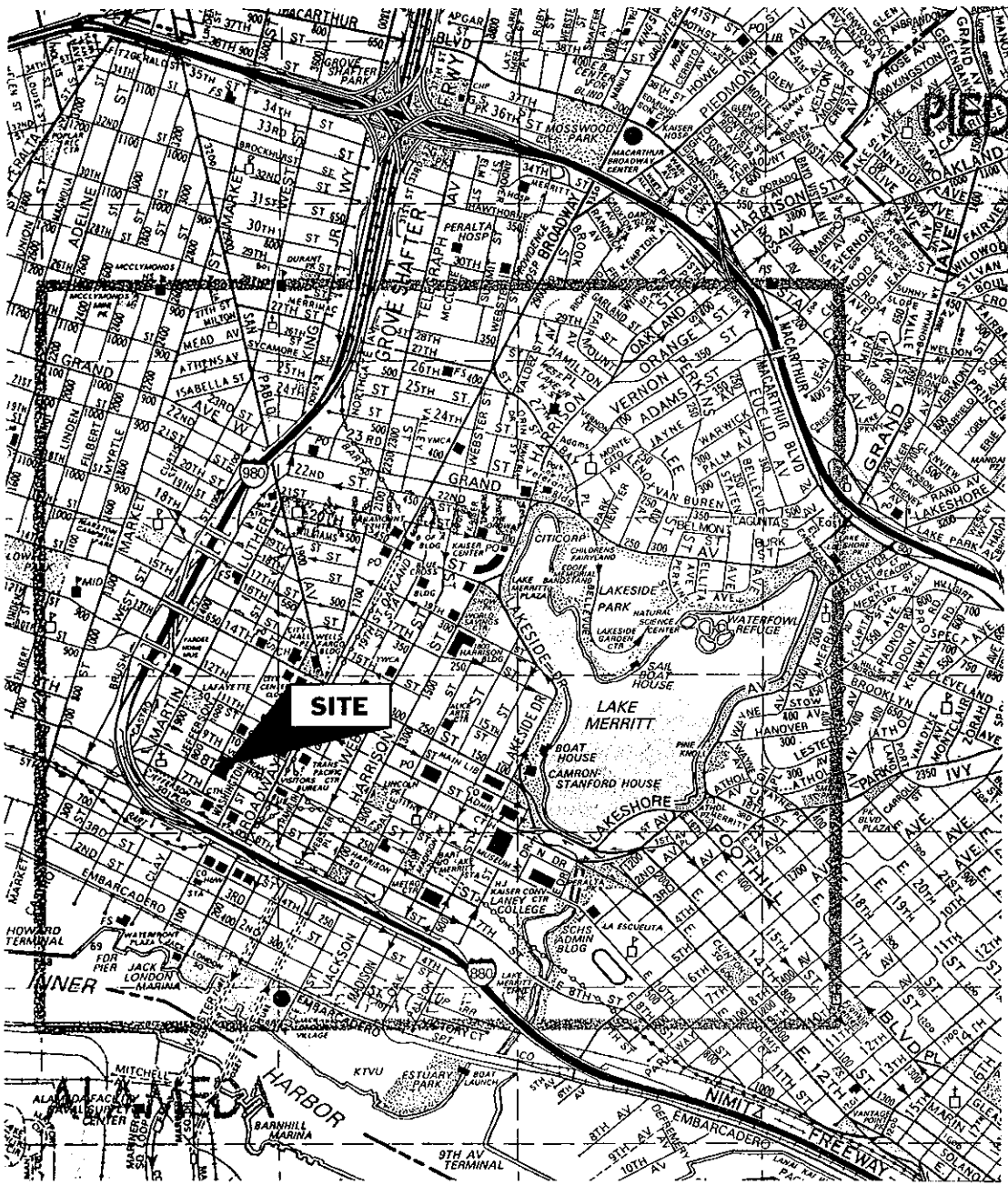
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