



Alameda County

FEB 18 2004

Environmental Health

February 13, 2004

Mr. Joseph Aldridge  
727 East 24th Street  
Oakland, CA 94606

RE: Limited Subsurface Soil Boring Investigation Work Plan  
1636 Trestle Glen Road, Oakland, California  
ACHCSA Fuel Leak Case # RO0002599

Dear Mr. Aldridge:

ACC Environmental Consultants, Inc., (ACC) presents this Work Plan (WP) to perform a limited subsurface soil boring investigation in the vicinity of one former underground storage tank (UST) which contained heating oil at 1636 Trestle Glen Road, Oakland, California (Site). The goals of the investigation will be to: 1) further characterize subsurface conditions and define the extent of suspect heating oil impact in soil and groundwater (if present); 2) collect representative soil and grab groundwater samples adjacent to the former heating oil underground storage tank (UST) and analyze samples for heating oil constituents; and 3) prepare a report of findings requesting full regulatory closure.

## INTRODUCTION

The Site is located along Trestle Glen Road in Oakland, California (Figure 1). While preparing to sell the subject property, a heating oil UST was identified in the front yard of the Site. ACC coordinated and oversaw all heating oil UST removal activities. These activities were summarized in ACC's Heating Oil Tank Removal Report (Report) submitted on October 24, 2003 to the Oakland Fire Services Agency (OFSA).

During removal, the heating oil UST was observed in good condition, with no observable holes. The heating oil UST was found to be in excellent condition and contained heating oil up into the fill pipe prior to removal. However, soil underneath the fill port end for the UST reported total petroleum hydrocarbon as diesel (TPHd) concentrations of 700 and 4,400 milligrams per kilogram (mg/kg), equivalent to parts per million (ppm). ACC directed the Contractor to excavate to approximately 11 feet below ground surface (bgs) and observed bedrock beneath the former UST. Heating oil-impacted soil was segregated and disposed of properly. Following review of the Tank Removal Report, the OFSA referred the case to the Alameda County Health Care Services Agency (ACHCSA).

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## SCOPE OF WORK

In order to further characterize subsurface conditions at the Site in regards to suspect heating oil impact, and address concerns of the ACHCSA, ACC proposes the following scope of work:

- Advance three (3) exploratory soil borings to total depths of approximately sixteen (16) feet below ground surface (bgs) or to bedrock refusal anticipated at approximately 12 feet bgs;
- Continuously core each soil boring to observe and log each foot of soil encountered and allow continuous screening of encountered soils with a ppbRAE photoionization detector (PID);
- Collect a minimum of two representative soil and one grab groundwater sample (if groundwater is encountered) in each soil boring in order to maximize the quality of data regarding subsurface conditions, the degree and extent of impact, and further assess the migration potential in soil and groundwater;
- Submit select samples to a state certified analytical laboratory for analysis of TPHd as heating oil by EPA Method 8021 for both soil and groundwater and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8015/8021B for groundwater only.
- Prepare a summary report of findings for submission to the ACHCSA. Included with the summary report will be an evaluation of sample analytical results, a discussion of hydrogeological conditions, discussion, and conclusions to approve the Site for regulatory closure as a "low risk groundwater case."

All work will be performed according to SWRCB Resolution No. 68-16, requirements of the DPH-LOP, and Tri-Regional Guidelines set forth by the Regional Water Quality Control Board (RWQCB).

## RATIONALE FOR PROPOSED SCOPE OF WORK

ACC proposes to advance three Geoprobe® soil borings to total depths of 16 feet bgs or to bedrock refusal. ACC proposed soil boring locations are shown on Figure 2. Based upon previous subsurface investigation performed during UST removal, ACC believes that three soil borings are adequate to characterize subsurface conditions and evaluate the potential for residual heating oil constituents to migrate in the subsurface. Exploratory soil boring locations have been chosen based on their proximity to the former UST and physical restrictions at the Site. All soil borings will be continuously cored, with soil logged by a staff geologist and screened for field indications of petroleum hydrocarbon impact such as characteristic odor, soil discoloration, or elevated PID readings. ACC will utilize a ppbRAE PID capable of reading parts per billion volatile constituents in air to aid in prioritizing soil samples for chemical analysis.

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During excavation performed at the time of UST removal, ACC observed silty clay soils underlain by competent bedrock. No groundwater or soil capable of becoming saturated was observed and the likelihood of collecting grab groundwater samples is small. However, to optimize grab groundwater sample collection, perforated PVC pipe will be placed down each soil boring, and the soil boring left open for the maximum time feasible. In addition, ACC will specifically evaluate the moisture content and estimated permeability of encountered soils in each soil boring to aid in evaluating migration potential in the subsurface.

Sample analysis will be for constituents of concern only. Currently, ACC proposes that soil samples be analyzed for TPHd by EPA Method 8021 and grab groundwater samples be analyzed for TPHd by EPA Method 8021 and for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8015/8021B.

ACC would like to perform this investigation as soon as this Work Plan is approved. ACC will obtain a soil boring permit and can schedule field work within one week of Work Plan approval.

#### **DRILLING PROGRAM**

ACC will contact Underground Services Alert to locate any underground public utilities prior to performing boring and sampling activities and obtain the necessary soil boring permit from the City and County of San Francisco, Department of Public Health, Monitoring Well Section. The proposed soil boring locations are illustrated on Figure 2.

Three borings will be advanced with hand-held, portable Geoprobe® drilling equipment from the surface to a depth of approximately 16 feet bgs or to bedrock refusal. Samples will be collected for analysis from each boring at depths estimated to provide the optimum information about subsurface conditions. All soil and grab groundwater sampling will be performed according to ACC sampling protocols approved by the ACHCSA.

Standard turnaround time for analytical results is 5 working days. Following drilling and sample collection, each soil boring will be abandoned with neat cement to just below the surface (3 to 6 inches). The soil boring will then be completed with concrete or soil to grade to match the surrounding material. Attached are ACC's "Soil Sampling in Boreholes" and "Grab Groundwater Sampling in Boreholes" protocols.

#### **REPORT PREPARATION**

A technical report discussing field work, observations and findings, analytical results, conclusions, and recommendations will be prepared for submission to the ACHCSA.

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#### HEALTH AND SAFETY PLAN

A site-specific health and safety plan which encompasses the proposed work at the site and complies with the requirements of 29 CFR Part 1910.120 will be prepared and present during field activities.

If you have any questions concerning this work plan, please call me at (510) 638-8400, ext. 109.

Sincerely,

A handwritten signature in black ink, appearing to read "D. R. DeMent". The signature is written in a cursive style with a large initial "D" and a stylized "DeMent".

David R. DeMent, RG, REA II  
Environmental Division Manager

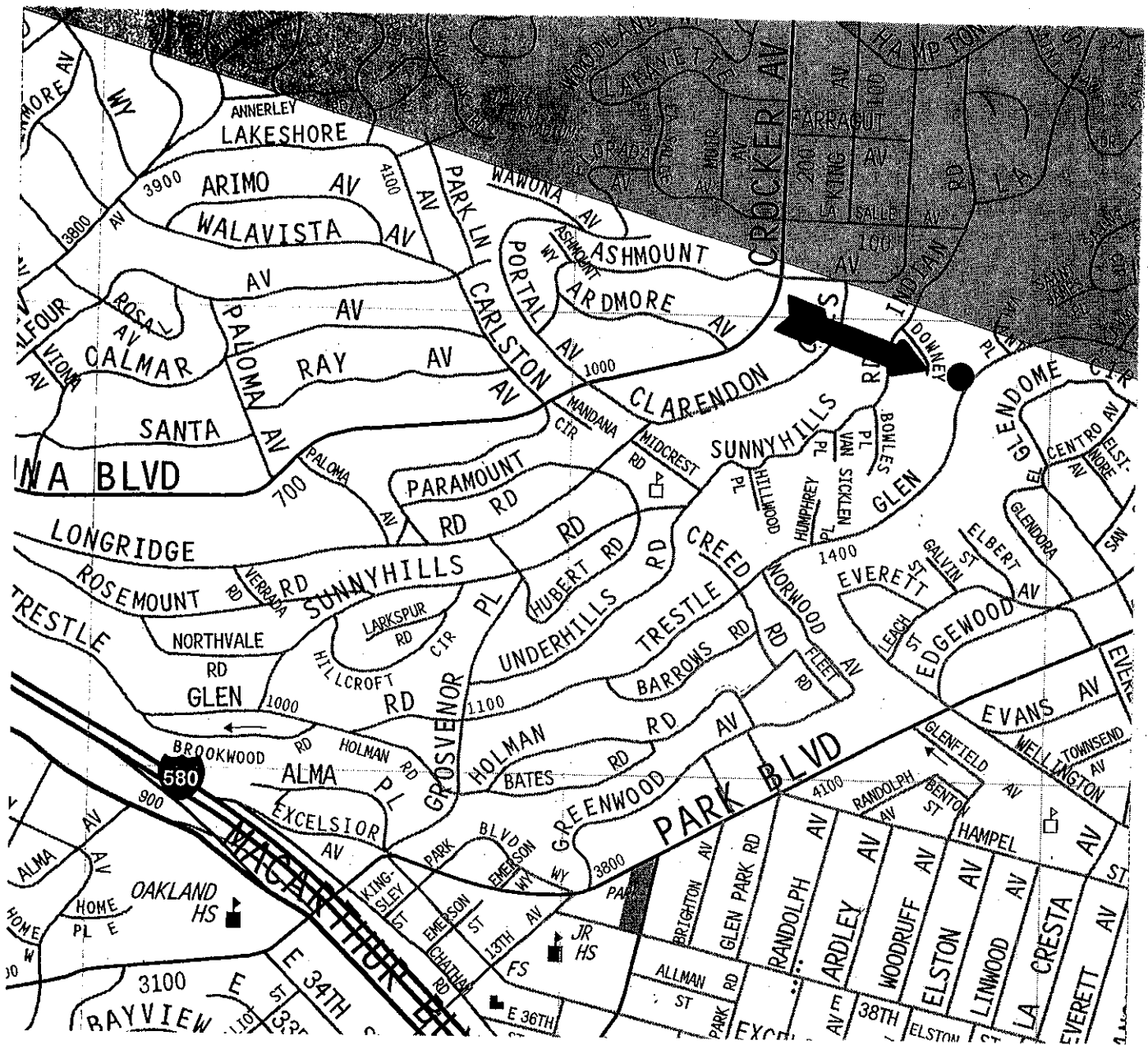
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Enclosures

cc: Mr. Don Hwang, ACHCSA

FIGURES

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Source: Thomas Guide, Bay Area 2002

Title: **1636 Trestle Glen Road  
Oakland, California**

Figure Number: 1

Scale: None

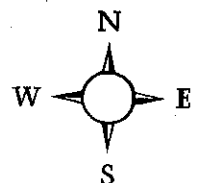
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Drawn By: TRB

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ENVIRONMENTAL  
CONSULTANTS

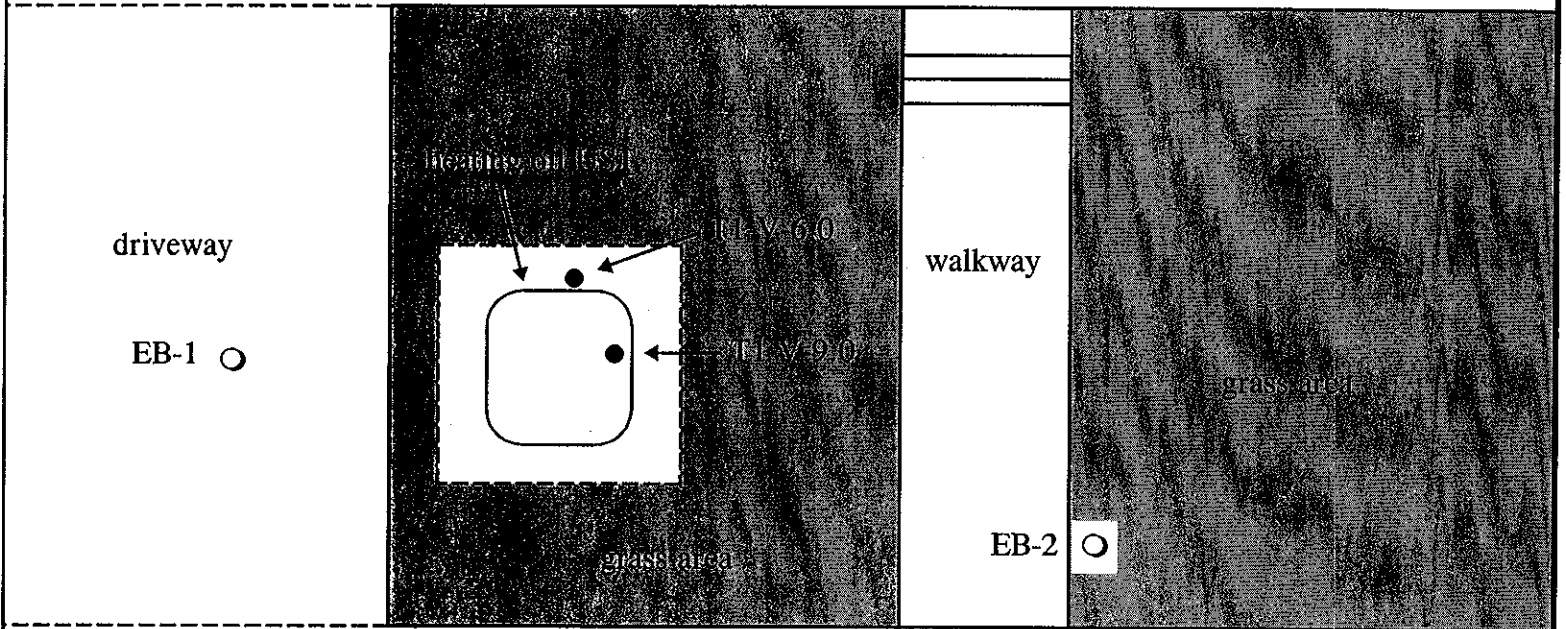
Date: 10/14/03

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garage

1636 Trestle Glen Road house



public sidewalk

EB-3 ○

grass area

Trestle Glen Road

Title: <b>Site Plan</b> <b>1636 Trestle Glen Road</b> <b>Oakland, California</b>	
Figure Number: 2	Scale: 1" = 5'
Project Number: 6769-001.01	Drawn By: TRB
<b>A • C • C</b> ENVIRONMENTAL CONSULTANTS	Date: 02/11/04
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**Legend**

- T1-V-9.0 ACC Soil Sampling Locations
- UST Removal Excavation Area
- EB-1 Proposed Soil Boring Location