

ALL ENVIRONMENTAL, INC.
3364 Mt. Diablo Boulevard
Lafayette, California 94549
(510) 283-6000
(510) 283-6121 FAX

FAX TRANSMITTAL SHEET

TO: Burney Chan

FAX NUMBER: 337 9335

FROM: Jennifer Anderson

MESSAGE: Workplan for Aeration - Handcopy
to follow.

5k to 10k Baker Tank.

Date: 11/6/96

Time: 2pm

Total No. of Pages: 10
(Including Cover)

AEI

ALL ENVIRONMENTAL, INC.

Environmental Engineering & Construction

ENVIRONMENTAL
PROTECTION
96 NOV 12 AM 9:20

November 6, 1996

Mr. Barney Chan
Alameda County Health Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

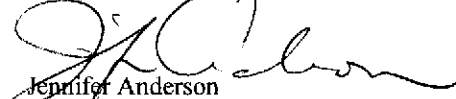
Re: 807 75th Avenue, Oakland, California

Dear Barney:

Enclosed you will find a copy of the Excavation and Aeration Workplan which describes methods for the remediation of petroleum impacted soil at the above referenced property.

Please review the workplan and if you have any questions don't hesitate to contact me at (510) 283-6000.

Sincerely,
All Environmental, Inc.


Jennifer Anderson
Project Manager

Corporate Headquarters:

3364 Mt. Diablo Blvd.
Lafayette, CA 94549
Phone: (510) 283-6000

Los Angeles Office:

111 N. Sepulveda Blvd., #250
Manhattan Beach, CA 90266
Phone: (310) 328-8878

November 6, 1996

Nov 1996

**ENVIRONMENTAL REMEDIATION
EXCAVATION & AERATION
WORKPLAN**

Omega Termite
807 75th Avenue
Oakland, CA 95621

Prepared for:

Mr. Allen Kanady
Omega Termite
807 75th Avenue
Oakland, CA 95621

Prepared by:

ALL ENVIRONMENTAL, INC.
3364 Mt. Diablo Blvd.
Lafayette, CA 94596
(510) 283-6000

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FIGURES

- FIGURE 1: SITE LOCATION MAP
- FIGURE 2: SITE PLAN

1.0 INTRODUCTION

This work plan describes activities to be performed to mitigate contaminated soil at the property located at 807 75th Avenue in Oakland, California (Figure 1). All Environmental Inc. (AEI) has prepared this work plan on behalf of Mr. Allen Kanady, in response to an August 23, 1996 letter from the Alameda County Health Care Services Agency (ACHCSA). The proposed remedial activities include limited excavation of additional contaminated soil, on-site aeration of contaminated soil and the import of clean material to partially backfill the excavation.

2.0 BACKGROUND

In September 15, 1996, three gasoline underground storage tanks (USTs) were removed from the property (Ref. - Underground Storage Tank Removal Final Report, October 10, 1996). The tanks consisted of one 500 gallon, one 1,000 gallon and one 8,000 gallon UST. The previous locations of the tanks are shown in Figure 2.

Soil samples were collected from beneath the 500 gallon and 1,000 gallon gasoline USTs and from the three sidewalls of the 8,000 gallon UST excavation. Concentrations of total petroleum hydrocarbons (TPH) as gasoline were present in the soil beneath the 500 gallon UST at concentrations of 4,300 ppm. Minor concentrations (41 ppm) of TPH as gasoline were present beneath the 1,000 gallon UST. Concentrations of TPH as gasoline above 100 ppm were present in the western and northwestern sidewall samples.

Groundwater was encountered during the excavation of the 8,000 gallon UST. A grab groundwater sample collected from the excavation indicated significant concentrations of petroleum hydrocarbon contaminants within the groundwater.

3.0 PROPOSED REMEDIAL PLAN

The proposed remedial plan involves the excavation of additional contaminated soil, the on-site remediation of petroleum hydrocarbon impacted soil, the removal of water and subsequent backfilling of the excavation.

3.1 SOIL EXCAVATION

Additional soil will be removed from beneath the former 1,000 gallon UST and from the western and northwestern sidewalls of the 8,000 gallon UST excavation. All sluff material will be removed from the existing excavation.

The extension of the existing excavation in the northern direction is limited by an existing building located approximately 10 feet to the north. The westward extension of the excavation is limited by a chain link gate located approximately 20 feet west of the current excavation. AEI will remove additional soil from beneath the 1,000 gallon UST to groundwater which is estimated at approximately 12 feet below ground surface.

The general objective of the excavation is to remove most of the affected soil with a concentration of TPH as gasoline greater than 100 mg/kg. AEI will use a portable organic vapor meter (OVM) during the excavation activities in order to monitor hydrocarbon concentrations within the soil.

Confirmation soil samples will be collected from the sidewalls of the 8,000 gallon UST excavation. Soil samples will be collected at approximately one sample per 20 lineal feet of the exposed excavation sidewalls. Each soil sample will be analyzed by a state certified laboratory for TPH as gasoline (EPA 5030/8015), benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) (EPA 8020).

It is estimated that approximately 80 additional cubic yards of soil will be excavated from the site.

3.2 AERATION OF CONTAMINATED SOIL

The existing stockpiled soil and the excavated soil will be aerated on-site. Refer to Figure 2 for proposed aeration area. The soil will be spread on visqueen to approximately one foot in thickness.

3.2.1 Baseline Sampling

Following excavation, eight soil samples will be collected from the excavated soil. The samples will be combined into two composite samples for analysis. The samples will be analyzed for TPH as gasoline and BTEX to obtain baseline analysis. The results of the analysis will be used to determine how much soil can be exposed at once within the BAAQMD requirements.

Analytical data collected from the existing stockpiled soil will be used to determine the maximum amount of soil which can be aerated daily.

3.2.2 Air Monitoring Program and Engineering Controls

The air will be monitored during the times of maximum exposure, specifically during soil excavation, soil placement and soil tilling.

Real time air data will be collected using an OVM. In order to be conservative, AEI will compare the vapor levels, which will consist of a mixture of volatile constituents within fuels, to the OSHA

Permissible Exposure Limits (for workers exposed over an 8 hour period - time weighted average) for benzene, the most toxic of the gasoline constituents. The OSHA PEL for benzene is 1 part per million (ppm). In the event that a breathing zone vapor concentration of 1 ppm are encountered, then workers will wear the appropriate personnel protective equipment.

Aeration of the soil will occur in a paved area of the subject property, however due to the winter month aeration, control measures will be in place in case of precipitation. Berms will be installed around the aerating soil to prevent runoff from entering the storm sewer. The aerating soil will be covered with visqueen during periods of high precipitation to impede the introduction of rain water into the aerating soil.

Temporary fence will be installed around the open excavation and the aerating soil to restrict access and warning signs will be posted.

All air monitoring and soil sampling data will be made available to interested parties upon request.

3.2.3 Soil Tilling and Confirmation Sampling

Soil tilling will be performed in order to expedite the aeration process. The soil will be tilled every two weeks until OVM readings indicate the successful remediation of the soil. Confirmation soil samples will be collected to confirm the remediation of petroleum hydrocarbons. One soil sample will be collected per 50 in place yards of soil. Upon receiving approval from the ACHCSA, the remediation soil will be used to backfill the excavation.

3.3 EXCAVATION BACKFILL

After the affected soil is removed and confirmation samples collected, the excavation will be backfilled with baserock to replace the volume of the USTs and to stabilize the excavation above the groundwater table.

Following remediation, the formerly petroleum impacted soil will be used as backfill material. The excavation will be backfilled in one foot lifts and compacted to prevent long term settlement.

4.0 PERMITTING

AEI will notify CAL-OSHA and the Bay Area Air Quality Management District within five days prior to the initiation of any field work.

Groundwater will be pumped from the excavation and temporarily stored on site for eventual discharge to the storm sewer. Approval from the City of Oakland Sewer Department or the Regional Water Quality Control Board will be obtained by AEI for a one time discharge of pumped groundwater to the storm drain following chemical analysis.

5.0 HEALTH & SAFETY

A Health & Safety plan will be prepared by AEI to safeguard against chemical and physical hazards associated with excavation, sampling, and any on site soil treatments. AEI personnel working on site will be required to read and adhere to the Health and Safety Plan. A site safety officer will be responsible for implementing the Health and Safety Plan and observing the crew during field activities. Ambient air will be monitored intermittently using a organic vapor meter (OVM) while people are on the job site.

Safety meetings will be conducted daily, on site, prior to the initiation of any field work.

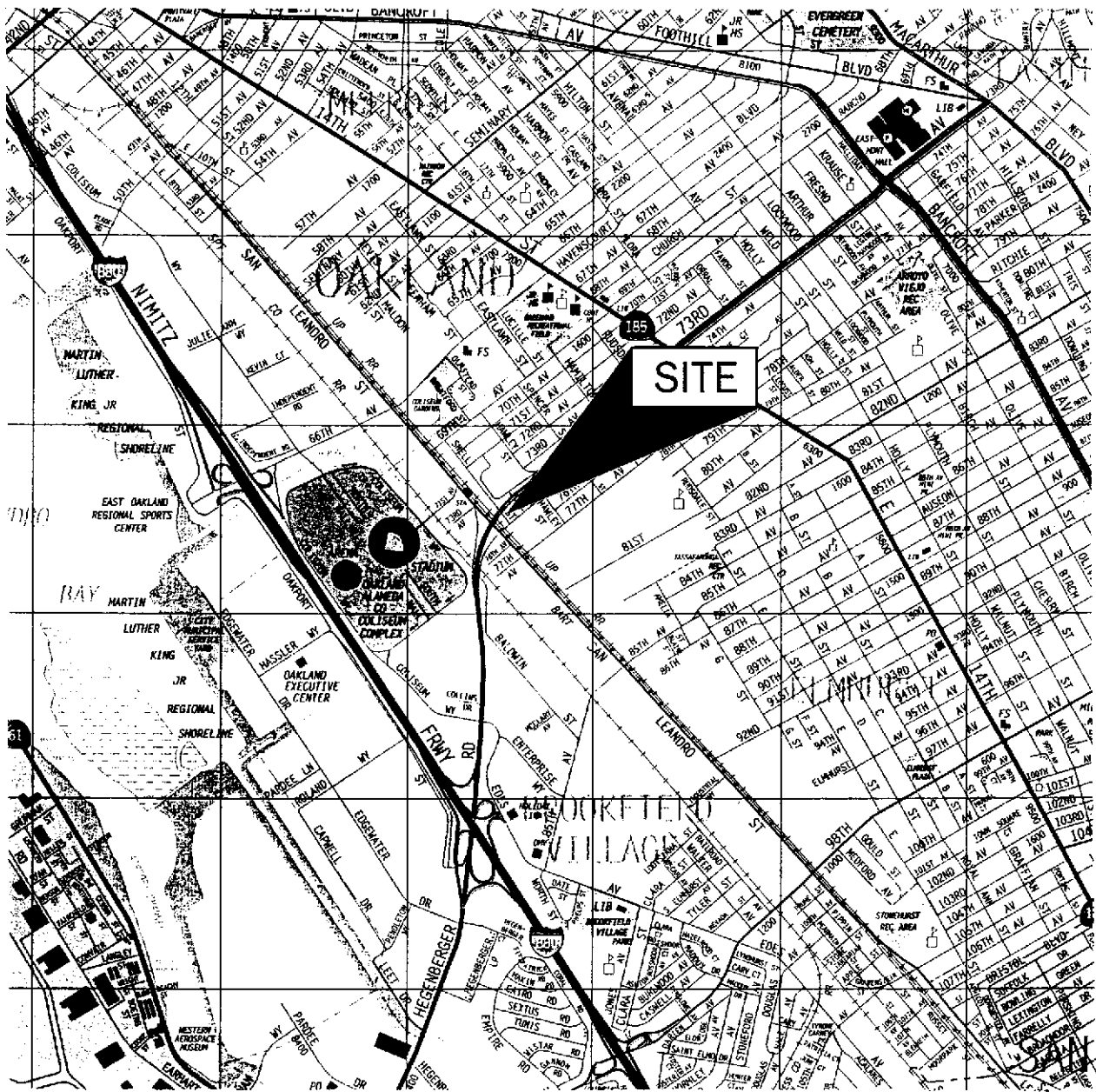
6.0 ESTIMATED SCHEDULE

Activities associated with the proposed site remediation will begin following the Alameda County Health Services Department approval of the workplan.

Once excavation begins, it is estimated that excavation, soil sampling, chemical analysis, and backfilling will be completed within a period of 5 weeks. The length of time need to remediate the soil via on-site aeration will largely depend upon the weather during the winter months. AEI estimates that aeration will occur for three months, weather permitting.

7.0 FINAL REPORT

A final report of methods and findings, that summarizes the remediation work performed by AEI, will be prepared and delivered to the client and a copy will be delivered to the Alameda County Health Services Department.



FROM:
THOMAS BROS. MAPS
1997

ALL ENVIRONMENTAL, INC.
3364 MT. DIABLO BOULEVARD, LAFAYETTE

SCALE: 1 IN = 2400 FT

APPROVED BY:

DRAWN BY: J.S. ANDERSON

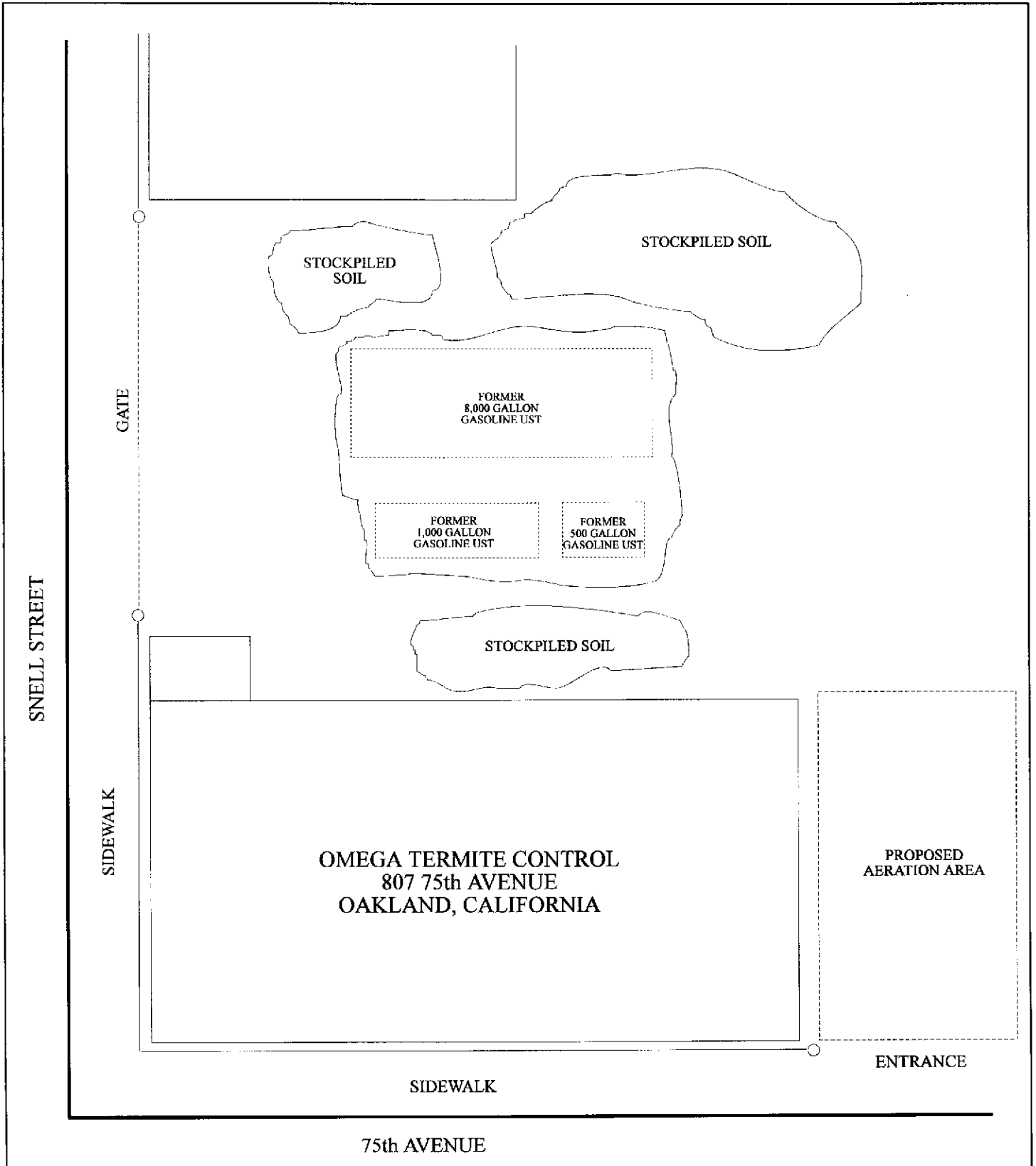
DATE: 10 OCTOBER 96

REVISED: J.S. ANDERSON

SITE LOCATION MAP

807 75th AVENUE
OAKLAND, CALIFORNIA

DRAWING NUMBER:
FIGURE 1



SNELL STREET

SIDEWALK

GATE

OMEGA TERMITE CONTROL
807 75th AVENUE
OAKLAND, CALIFORNIA

SIDEWALK

PROPOSED
AERATION AREA

ENTRANCE

75th AVENUE



← TO SAN LEANRO AVENUE

ALL ENVIRONMENTAL, INC.
3364 MT. DIABLO BOULEVARD, LAFAYETTE

SCALE: 1 IN = 10 FT

APPROVED BY:
CH

DRAWN BY: J. S. ANDERSON

DATE: 10 OCTOBER 96

REVISED: J.S. ANDERSON

SITE PLAN

807 75th AVENUE
OAKLAND, CALIFORNIA

DRAWING NUMBER:
FIGURE 2