



Environmental  
Science &  
Engineering, Inc.

ALCO  
HAZMAT

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November 24, 1993

Mr. Scott O. Seery  
Senior Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
80 Swan, Room 350  
Oakland, California 94621

**SUBJECT: WORKPLAN FOR SOIL STOCKPILE SAMPLING  
UST 1, 2, AND 3 SITE  
SANTA RITA CORRECTIONAL FACILITY  
DUBLIN, ALAMEDA COUNTY, CALIFORNIA  
ESE PROJECT NO. 6-93-5175**

Dear Mr. Seery,

Environmental Science & Engineering, Inc. (ESE) presents the following workplan on behalf of the Alameda County General Services Agency (GSA). The workplan addresses characterization of stockpiled soil excavated during the removal of three underground storage tanks (USTs) at the subject site (Figure 1 - Location Map). Data collected during this site work will assist the GSA in determining the proper method of disposal, recycling, or remediation of the stockpiled soil.

### BACKGROUND

In March 1988, Environmental Technology directed the removal of three USTs at the subject site (Figure 2 - Site Plan) under permit from the Alameda County Health Care Services Agency (HCSA). The GSA owned and operated two 5,000-gallon capacity USTs for the storage of Bunker C fuel oil and one 3,000-gallon capacity UST for the storage of diesel fuel. The fuel was used to operate a series of boilers formerly located at the site. All USTs were of single-wall carbon steel construction. The installation dates for the tanks are unknown.

During removal of the USTs, the HCSA witnessed the collection of eight soil samples from the base of the excavation. All samples were analyzed for total petroleum hydrocarbons as diesel fuel (TPH-D) and gasoline (TPH-G) using EPA analytical method 8015 (modified per CA LUFT) and total oil and grease (TOG) using Standard Method for Water and Wastewater (SMWW) 503E. Four samples (1A, 3A, 3B, and 3C) were reported to contain detectable concentrations of TPH-D and two samples (1A and 3C) were reported to contain detectable concentrations of TPH-G. All eight samples were reported to contain detectable concentrations of TOG ranging between 6 to 1097 parts per million (ppm).

≤ 15,500 ppm

not clear.  
Appears two  
(2) horizons  
borings  
advanced  
to NE corner  
of UST pit

A preliminary site assessment was performed by Gregg & Associates during March, 1988 to determine the areal extent of soil impacted with petroleum hydrocarbons. One soil sample was collected from each of the four soil borings drilled during the preliminary site assessment and analyzed for TPH-D and TOG. No detectable concentrations of TPH-D were reported for the four samples (1C, 3D, 3E, and 3F). Detectable concentrations of TOG were reported to range between 22 to 42 ppm. Based on these findings, Gregg & Associates supervised the overexcavation of impacted soil to the approximate limits indicated in Figure 2.

All findings were documented in an Underground Tank Removal and Site Remediation Report prepared by Gregg & Associates and submitted to the HCSA during May, 1988. To date, all soil overexcavated during the UST removal remains stockpiled at the site.

On November 3, 1993, ESE measured and mapped the stockpiled soil at the subject site. ~~ESE estimated the total volume of stockpiled soil at the site to be approximately 400 cubic yards.~~

In order to characterize this stockpiled soil, ESE will perform the following three tasks:

#### TASK 1 - STOCKPILE SOIL SAMPLING

ESE will collect samples at a frequency of one discrete soil sample per 50 cubic yards of stockpiled soil. Since approximately 400 cubic yards of soil are stockpiled at the property, ESE will collect a total of 8 samples. OK

Prior to work start, all onsite personnel will attend a brief health and safety tailgate meeting. The purpose of the meeting is to summarize the health and safety plan and describe the potential hazards. It is assumed that work will be performed in level D personal protective gear; however, air purifying respirators will be worn if necessary.

Soil stockpile sample locations will be marked on the pile using stakes or other temporary marking methods as shown on Figure 3 - Soil Stockpile Sample Locations. Each location will delineate approximately 50 cubic yards of soil.

One soil sample will be collected at each location at a random depth ranging between one and one-half foot to three and one-half feet. The maximum height of the stockpile was observed to be four feet. A sample will be collected by augering to the specified depth at each location within the stockpile using a hand auger and, subsequently, driving a six-inch long sampler lined with a new, thin-wall brass sleeve. The sampler will be advanced into the soil by manually dropping a weighted handle onto a rod attached to the sampler. Shredded plastic, concrete fragments, and other inert debris will not be included in the sample. Upon retrieval, the sample will be immediately capped with teflon-lined plastic caps, sealed with tape, labeled and documented on a chain of custody form. The sample

Mr. Seery  
November 4, 1993  
Page 3

will then be placed under ice in a cooler. Upon completion of the sampling, the samples will be transported under chain of custody documentation to McCampbell Analytical of Pacheco, California (a State-certified laboratory). All sample locations will be noted in field notes prepared at the site. All sampling equipment will be cleaned between each sample location using a soap and water solution followed by a clean water rinse.

### TASK 2 - SAMPLE ANALYSES

Each of the 8 samples collected will be analyzed for the following:

- TPH-D using EPA Method 8015 (modified per CA LUFT), and
- BTEX using EPA Method 8020.

### TASK 3 - REPORT PREPARATION

Upon receipt of the laboratory analytical results for the stockpile samples, ESE will evaluate the data and prepare a brief report of the work. This report will describe sampling methodology and locations and present the analytical results in tabular form. Based on findings, ESE will present recommendations regarding soil treatment or offsite disposal.

Please contact Bart Miller at (510) 685-4053 with any questions or comments regarding this work.

Sincerely,  
ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

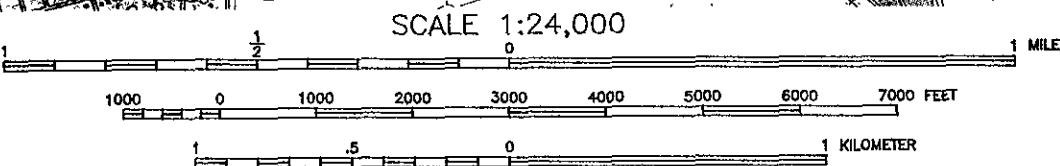
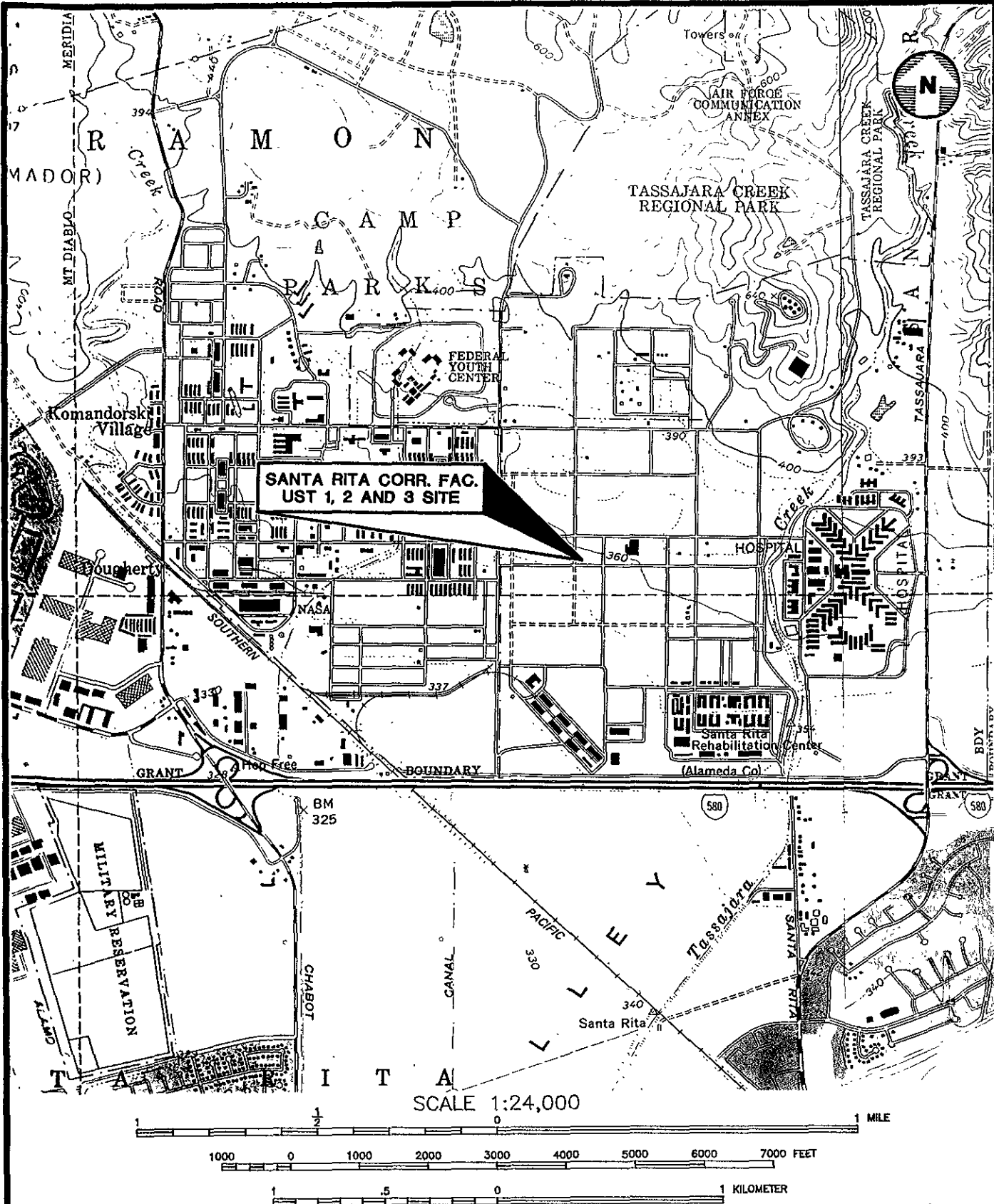


Bart S. Miller  
Project Geologist




Susan Wickham, RG 3851  
Senior Geologist

Attachment - Figures (x3)

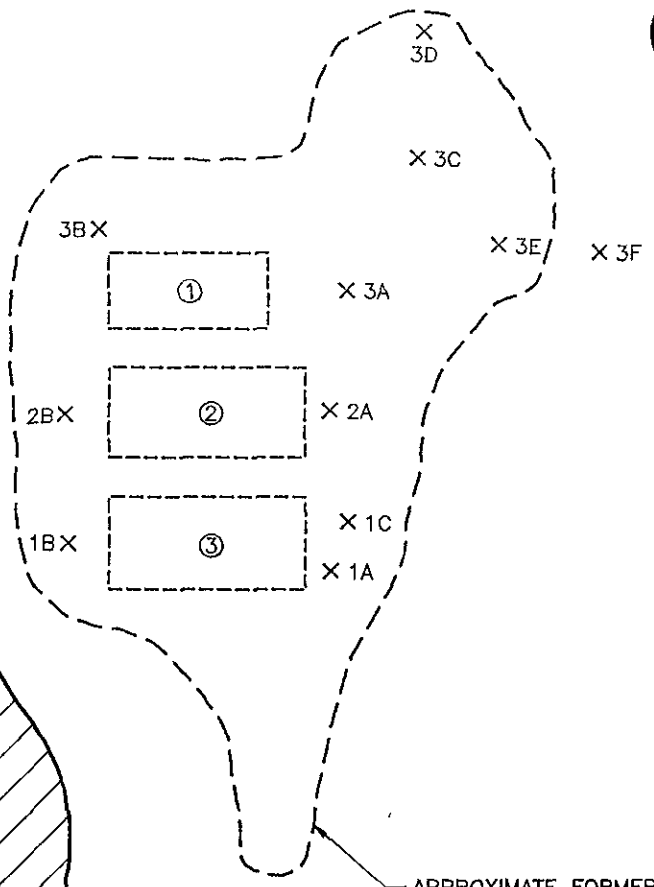
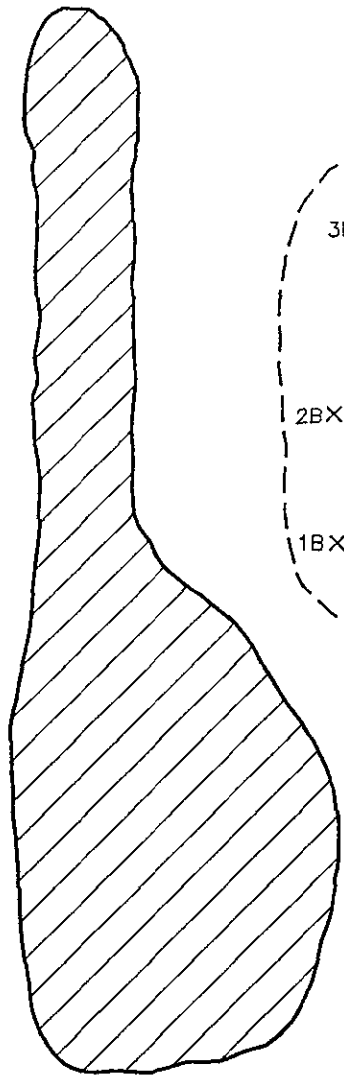


ADAPTED FROM U.S.G.S. DUBLIN AND LIVERMORE, CALIFORNIA 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS, 1980.

 <p><b>Environmental Science &amp; Engineering, Inc.</b> A CILCORP Company</p>	<p>DATE 12/93</p>	<p><b>LOCATION MAP</b></p>	<p>FIGURE NO <b>1</b></p>
	<p>REVISD</p>		<p>ALAMEDA COUNTY GSA SANTA RITA CORRECTIONAL FACILITY DUBLIN, CALIFORNIA</p>
<p>4090 NELSON AVENUE, SUITE J CONCORD, CA 94520</p>	<p>CAD FILE 51751001</p>		



OFFUTT AVENUE




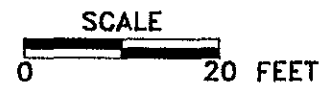
APPROXIMATE FORMER LIMIT OF EXCAVATION

4th STREET

DEAD END

**LEGEND**

- ① FORMER 3,000 GALLON DIESEL FUEL UST
- ② FORMER 5,000 GALLON BUNKER C FUEL OIL UST
- ③ FORMER 5,000 GALLON BUNKER C FUEL OIL UST
-  STOCKPILED SOIL
- 2BX FORMER SOIL SAMPLE LOCATION WITH SAMPLE NUMBER



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DATE	12/93
REVISED	
CAD FILE	51751002

**SITE PLAN**

ALAMEDA COUNTY GSA  
SANTA RITA CORRECTIONAL FACILITY  
DUBLIN, CALIFORNIA

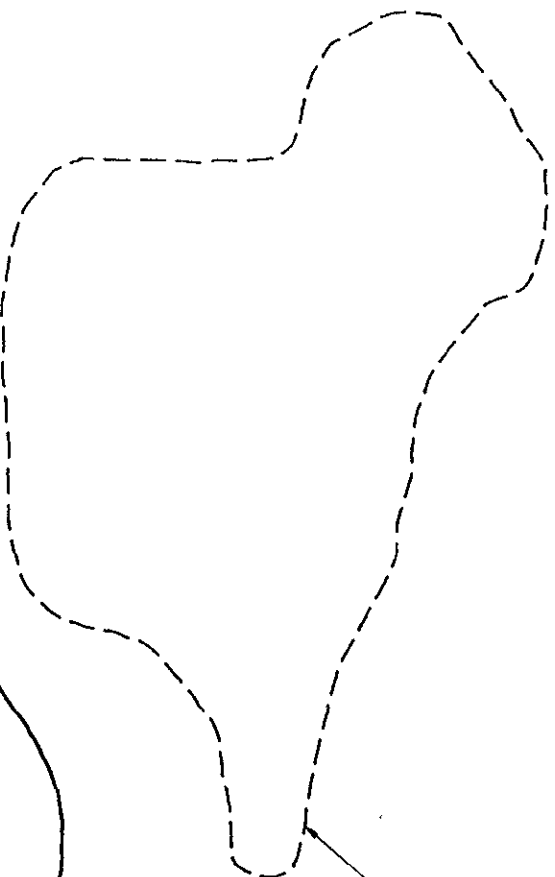
FIGURE NO.	<b>2</b>
PROJ. NO.	6-93-5175

4090 NELSON AVENUE, SUITE J  
CONCORD, CA 94520



OFFUTT AVENUE

- SP-1-3.5' → X
- SP-2-1.5' → X
- SP-3-2.5' → X
- SP-4-2' → X
- SP-5-3' → X
- SP-6-2.5' → X
- SP-7-1.5' → X
- SP-8-2' → X



APPROXIMATE FORMER LIMIT OF EXCAVATION

**LEGEND**

SP-4-2' X PROPOSED SOIL SAMPLE LOCATION WITH SAMPLE NUMBER AND DEPTH

\*NOTE: MAXIMUM HEIGHT OF STOCKPILE IS FOUR FEET

4th STREET

DEAD END



**Environmental Science & Engineering, Inc.**

4090 NELSON AVENUE, SUITE J  
CONCORD, CA 94520

DATE

12/93

REVISED

CAD FILE

51751003

SOIL STOCKPILE SAMPLE LOCATIONS

ALAMEDA COUNTY GSA  
SANTA RITA CORRECTIONAL FACILITY  
DUBLIN, CALIFORNIA

FIGURE NO.

**3**

PROJ. NO.

6-93-5175