Work plan Tank #23

Environmental
Science &
Engineering, Inc.

September 18, 1992

Project No. 6-92-5423

Mr. Jim de Vos
Buildings Manager
Alameda County General Services Agency
4400 MacArthur Boulevard
Oakland, California 94619

SUBJECT: Santa Rita Jail, Dublin, California

Dear Mr. de Vos:

Environmental Science and Engineering, Inc. (ESE) submits this workplan for the excavation and removal of diesel-impacted soil from the Tank No. 2942-23 site located on Engineer's Hill, Santa Rita Jail, Dublin, California (Figure 1 - Location Map). This site work is proposed in response to the recent discovery of diesel-impacted soil during the removal of one underground storage tank (UST).

SITE BACKGROUND

The County of Alameda General Services Agency (GSA) owned and operated one 1,000 gallon diesel fuel UST located on Engineer's Hill (Figure 2 - Site Map). The tank fueled a boiler located in a building adjacent to the tank (Figure 3 - Tank Plan), and was of single wall, carbon steel construction. The installation date of the tank is unknown.

TANK HISTORY

ESE removed and disposed of Tank No. 2492-23 on May 18, 1992. Prior to site work, the tank was found to be empty and no removal of tank fluids was conducted. This site work was conducted under permit from Alameda County Health Care Agency (HCSA) and the Doherty Regional Fire Authority (DRFA). Tank removal and soil sampling was witnessed by representatives of HCSA and DRFA. The empty tank was transported as a hazardous waste and disposed by Erikson Environmental of Richmond, California.

During tank removal, external corrosion of the tank shell was noted (four to five holes of 1/8-inch to 3/4-inch diameter). No visible soil contamination was observed in soil beneath the tank. Soil within the excavation consisted of silty clay of low to moderate plasticity. No odor of petroleum was observed in excavated soil. No ground water was encountered in the excavation.

One soil sample was collected by ESE personnel from the west end of the excavation pit as directed by the HCSA representative at a depth of approximately ten feet below ground

surface (approximately two feet below tank invert). This sample was analyzed for Total Extractable Hydrocarbons as diesel (TEH), Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), and Total Oil and Grease (TOG). Analysis of the sample reported non-detectable concentrations of BTEX and non-detectable concentrations of TOG. Analysis for TEH as diesel indicated a concentration of 190 milligrams per kilogram (mg/Kg).

After tank removal, the excavation was barricaded and left open. No backfill of the pit was conducted. Excavated soil stockpiles (approximately 25 cubic yards) remain on site.

A tank closure report (dated June 25, 1992) for this site was prepared by ESE and submitted to HCSA for review. Copies of permits, manifests, and laboratory analytical reports are included in this report. A copy of this report is attached to this work plan for reference (Attachment No. 1).

SCOPE OF WORK

In lieu of soil borings, ESE proposes to characterize and excavate soils impacted by diesel fuel. In view of the relatively low concentration of TEH measured in the below-tank soil sample (190 mg/Kg) and the lack of observable diesel release at the site, ESE anticipates that limited excavation will provide effective removal of diesel-impacted soil. ESE proposes the following scope of work be conducted:

- ESE will mobilize a backhoe for removal of diesel-impacted soil from the excavation. ESE will excavate and remove the following soils:

  1) TEH concentrations greater than or equal to 100 mg/Kg; and

  2) BTEX concentrations greater than or equal to State of California drinking water standards.

  These cleanup goals are proposed based upon conversations between GSA and ESE. It is our understanding that GSA has discussed these goals with HCSA and anticipates HCSA acceptance.

- ESE will collect soil samples from the excavation sidewalls and the excavation floor on a ten-foot grid. A minimum of one sample will be collected from each wall of the excavation. Samples will be collected in accordance with ESE soil sampling procedures (Attachment No. 2). Soil excavation and removal will continue until analysis of all samples results in TEH and BTEX concentrations which meet the cleanup goals stated above.

- ESE will contract with a State of California certified mobile laboratory to analyze soil samples. As a preliminary screening tool, samples will initially be analyzed for Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1. This analytical method provides a low-cost, rapid-turnaround alternative to TEH and BTEX analysis.

Upon completion of the excavation and collection of final confirmation samples, each confirmation sample will be analyzed for TEH (EPA Method 8015M) and BTEX (EPA Method 8020).

- One sample per twenty cubic yards of excavated spoils will be collected. Each sample will be analyzed for TEH and BTEX to evaluate the impact of diesel fuel on this soil. Excavated soil will be transported to the "Old Graystone" area where it will be placed on plastic sheeting and covered with plastic sheeting. The plastic sheeting will be anchored to prevent accidental removal. Treatment or disposal of this soil is not part of ESE's contracted scope of work.

- The excavation will be filled and compacted with clean import fill purchased from a local quarry.

- Upon completion of site work, ESE will prepare a site closure report, documenting site work activities and presenting results of the analytical testing.

HEALTH AND SAFETY

ESE has prepared a Health and Safety Plan (HSP) for this sitework (Attachment No. 3). This plan is intended to ensure the safety of ESE personnel and subcontractors, as well as visitors to the site. The HSP will be reviewed by all personnel and subcontractors prior to commencement of site work.

ESE appreciates the opportunity to perform this scope of work. Please contact Patrick Galvin at (510) 685-4053 with any questions regarding this project.

Sincerely,

ENVIRONMENTAL SCIENCE & ENGINEERING, INC.

Patrick Galvin
Senior Engineer

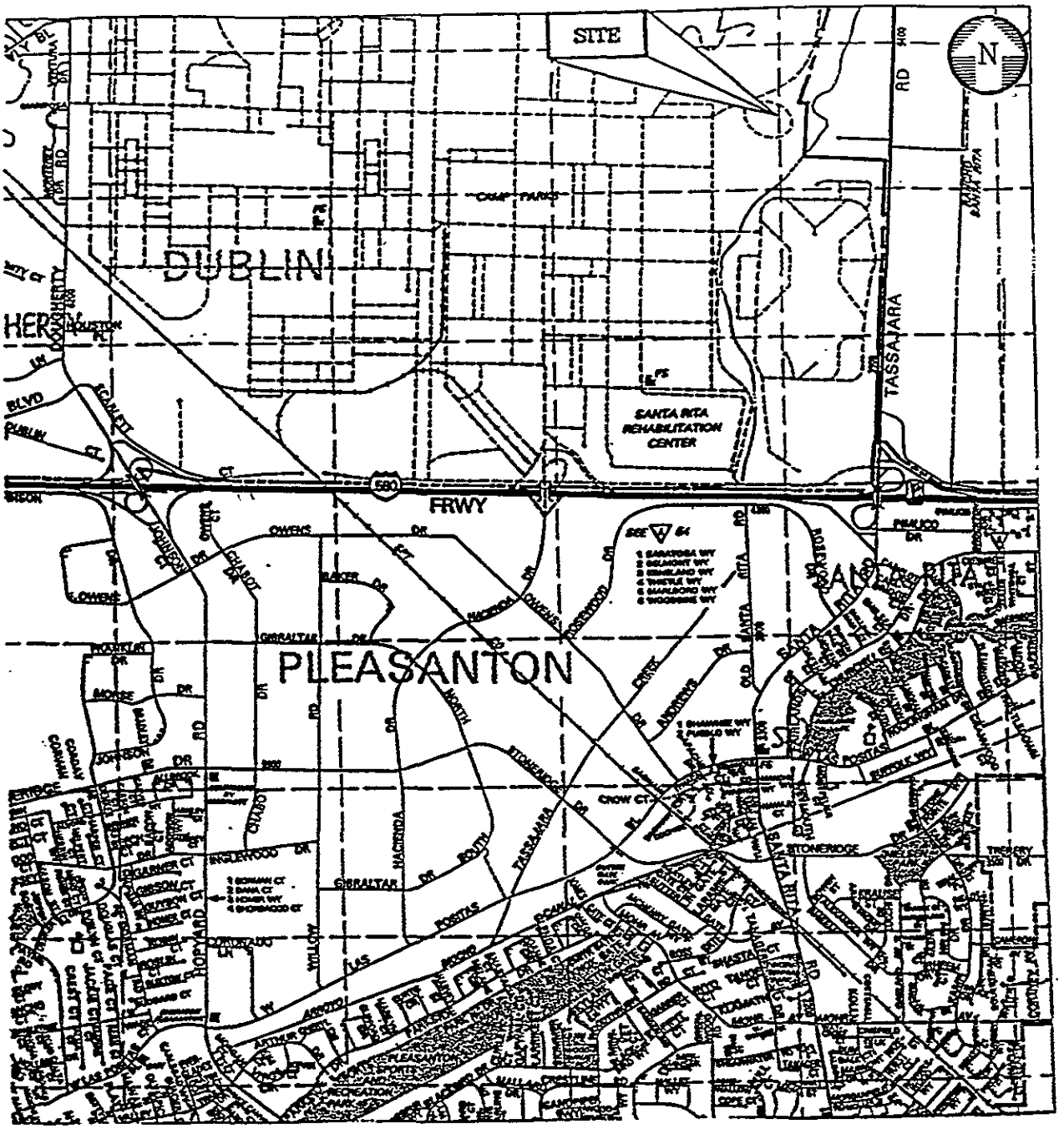
Susan S. Wickham, RG
Senior Geologist

REGISTERED GEOLOGIST
SUSAN S. WICKHAM
#3851

PEG:peg

Figures (3)
Attachments (3)

FIGURES



SCALE OF SINGLE MAP PAGES
1 INCH TO 2200 FEET

ESE A CLOUGH COMPANY
Environmental Science & Engineering, Inc.

ALAMEDA COUNTY GSA
SANTA RITA JAIL FACILITY
DUBLIN, CA

FIGURE 1
LOCATION MAP

DRAWN BY	APPROVED BY	REVISED
RSW		
DATE	FILE NAME	PROJ. NO.
6/25/92		6-92-5423

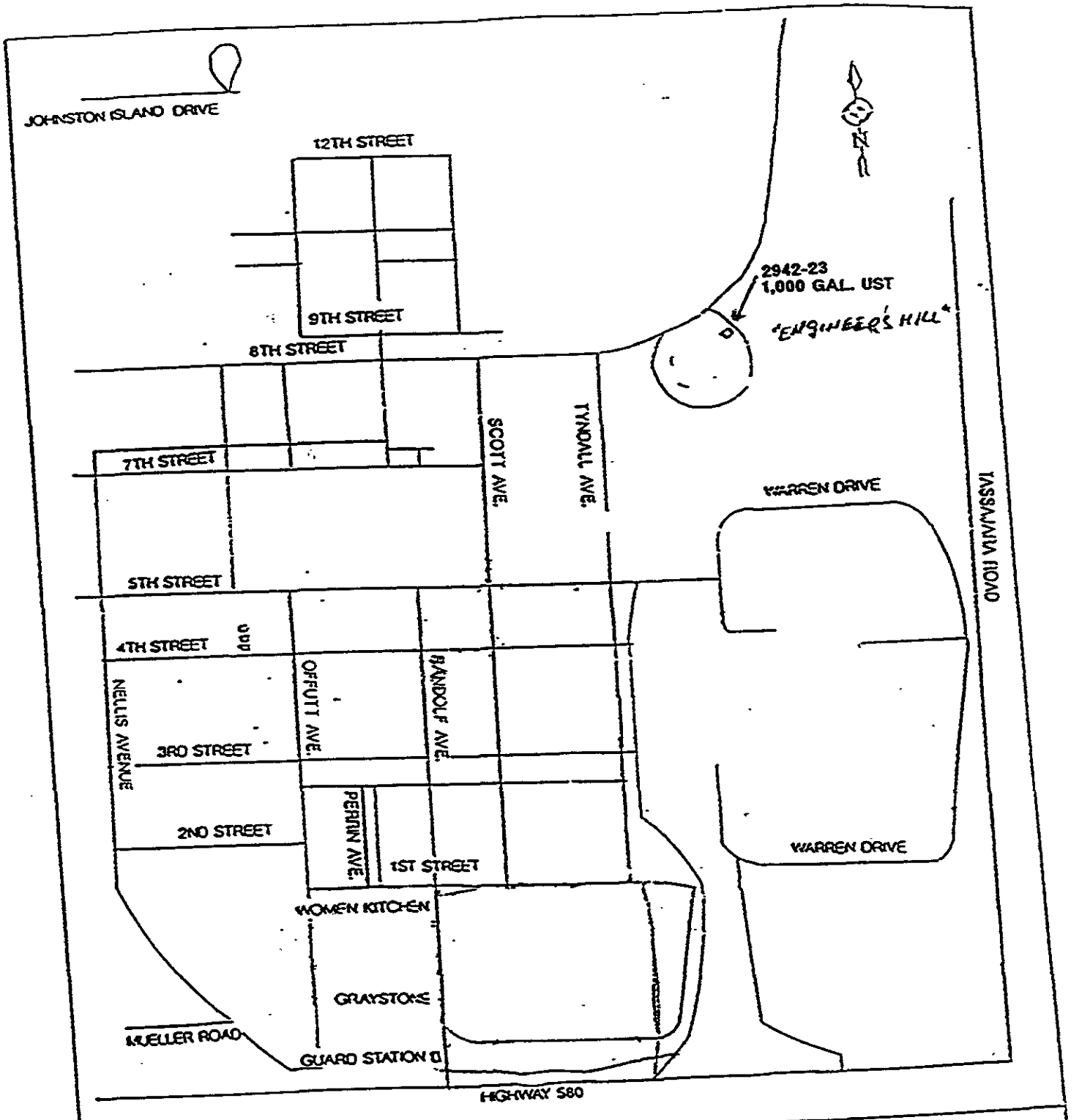
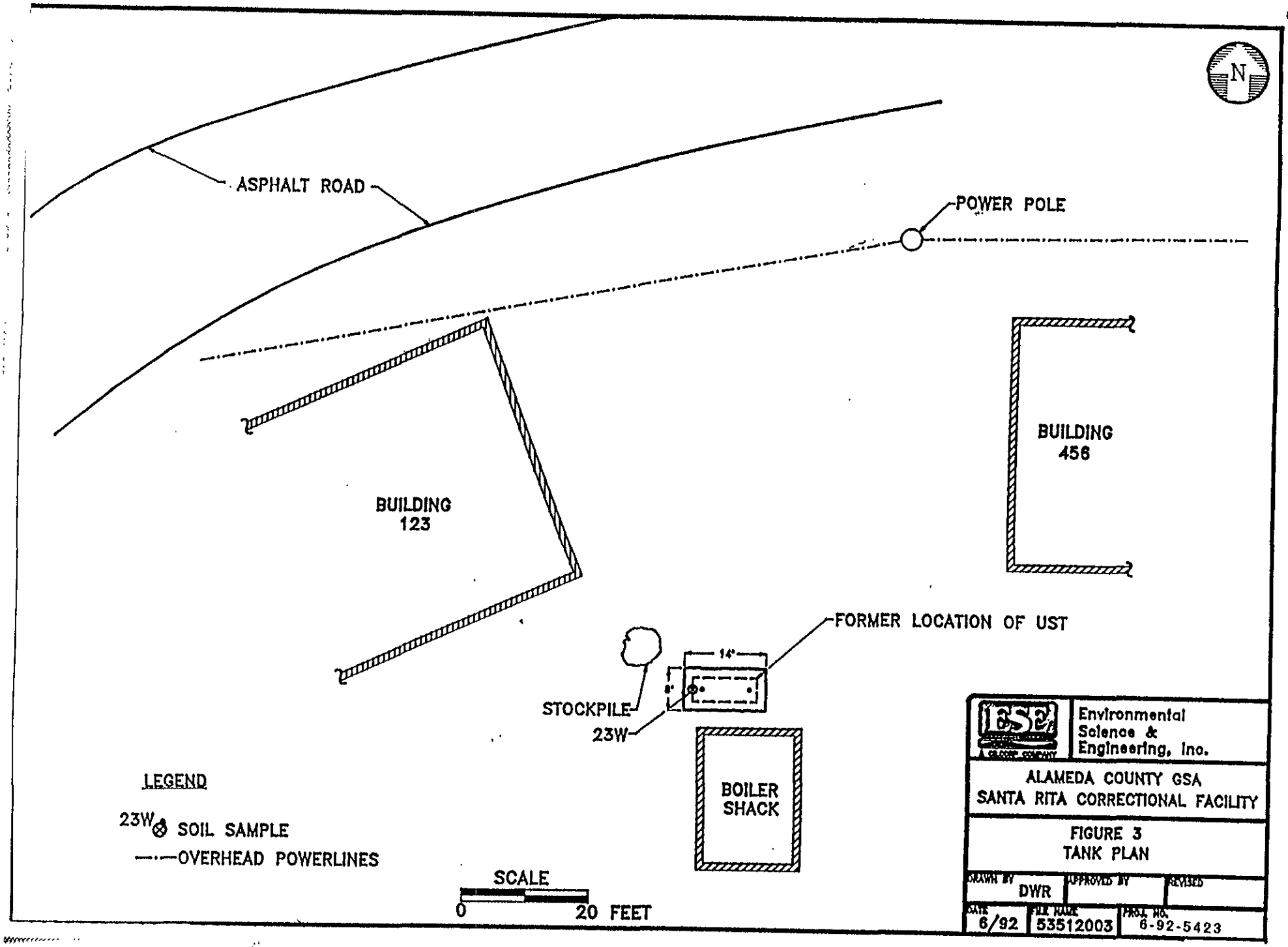


Figure 2 Site Map

LOCATION OF UST 2942-23
AT SANTA RITA JAIL FACILITY
DUBLIN, CALIFORNIA


N
ASPHALT ROAD
POWER POLE
BUILDING 123
BUILDING 456
FORMER LOCATION OF UST
14'
STOCKPILE
23W
BOILER SHACK
LEGEND
23W SOIL SAMPLE
OVERHEAD POWERLINES
SCALE
0
20 FEET
ESE
Environmental Science & Engineering, Inc.
ALAMEDA COUNTY GSA
SANTA RITA CORRECTIONAL FACILITY
FIGURE 3
TANK PLAN
DRAWN BY DWR
APPROVED BY
REVISED
DATE 6/92
FILE NAME 53512003
PROJ. NO. 6-92-5423

ATTACHMENTS

1) **Tank Closure Report**

2) **Soil Sampling Procedures**

3) **Health and Safety Plan**