ENVIRONMENTAL
PROTECTION

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May 7, 1998

Mr. Rod Freitag
Alameda County GSA
1401 Lakeside Dr.
Oakland, California 94612

RE: WORKPLAN FOR THE JUVENILE HALL UST ABANDONMENT AT 2200 FAIRMONT DRIVE, SAN LEANDRO, CA.

Dear Mr. Freitag:

Enclosed is the Workplan for the above-referenced project. If you have any questions regarding this Workplan or any aspect of the project, please do not hesitate to call me at (510) 785-1111.

Sincerely,

CHRIS MERRITT FOR

Frank R. Poss
Senior Hydrogeologist

Enclosure

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DRAFT

WORKPLAN
FOR
UNDERGROUND STORAGE TANK
ABANDONMENT AND CLOSURE SAMPLING
JUVENILE HALL
2200 FAIRMONT DRIVE
SAN LEANDRO, CALIFORNIA

Prepared for

ALAMEDA COUNTY GENERAL SERVICES AGENCY
1401 Lakeside Drive, 11th Floor
Oakland, California

Prepared by

Professional Service Industries, Inc.
3777 Depot Road, Suite 418
Hayward, California 94545
(510) 785-1111

May 7, 1998
575-8G019

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STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

Information provided in this Workplan, for PSI Project Number 575-8G019, is intended exclusively for the use of Alameda County General Services Agency (GSA) for the evaluation of subsurface conditions as it pertains to the subject site. The professional services provided have been performed in accordance with practices generally accepted by other geologists, hydrologists, hydrogeologists, engineers, and environmental scientists practicing in this field. No other warranty, either expressed or implied, is made. As with all subsurface investigations, there is no guarantee that the work conducted will identify any or all sources or locations of contamination.

PSI reserves the right to deviate from the proposed scope of services outlined in this Workplan as needed to obtain the required information. If such deviation is necessary, PSI will make every attempt to seek prior approval from the client and the regulatory agency overseeing this project.

This Workplan is issued with the understanding that Alameda County GSA is responsible for ensuring that the information contained herein is brought to the attention of the appropriate regulatory agency. This Workplan has been reviewed by a geologist who is registered in the State of California and whose signature and license number appear below.

CHRIS MERRITT

Chris Merritt
Project Geologist

CHRIS MERRITT FOR

Tim O'Brien
Senior Geologist

1.0 INTRODUCTION

Professional Service Industries, Inc. (PSI) has been retained by Alameda County General Services Agency (GSA) to conduct an Underground Storage Tank closure-in-place and closure report for the Juvenile Hall located at 2200 Fairmont Drive in San Leandro, California (Figure 1). The purpose of the project is to close in place one 10,000 gallon diesel fuel underground storage tank (UST) and obtain soil samples from the vicinity of the tank ends and along the run of the piping leading from the UST to the building. The objectives of the project are:

- Obtain Permits from appropriate regulatory agencies for emplacement of soil borings and UST abandonment.
- To complete two soil borings to approximately 12 feet, one at each end of the tank and obtain soil samples from this depth for analysis.
- To complete approximately 10 soil borings to 3 feet deep along the run of the piping and obtain soil samples from this depth for analysis.
- To abandon the UST in place by filling it with approximately 54 cubic yards of 6 sack cement /sand slurry mix.
- To remove and dispose of or cap exposed vent piping as needed.
- To patch fill any gauging accesses with concrete.
- To prepare a closure report detailing abandonment activities and results of analysis on samples for submission to Alameda GSA and appropriate regulatory agencies.

The scope of work for this investigation includes: 1) preparation of this work plan and a health and safety plan; 2) marking boring locations for utility clearance by Underground Service Alert; 3) Obtain necessary permits for soil borings and UST abandonment; 4) completion of the soil assessment at the above-referenced site as outlined in this work plan; 5) Abandonment in place of one 10,000 gallon diesel UST; and 6) the preparation of a final closure report describing the methodology of abandonment and results of the investigation.

2.0 SITE HISTORY

This section presents a brief summary of the site. The Juvenile Hall is located on 2200 Fairmont Drive in San Leandro, California. The UST was installed in 1970. It is reported to be of single-walled steel construction with single wall steel piping. The base of the UST is reported to be 10 feet below ground surface. The tank and piping is currently free of residual product and has been rinsed. The UST is currently not in use. Currently there are no indications that the UST has had any unauthorized releases.

3.0 SCOPE OF WORK

PSI has prepared this Workplan and a site specific health and safety plan. The health and safety plan (HSP) was developed in compliance with Title 8 of the California Code of Regulations, Section 5192 to establish the procedures necessary to prevent employees from encountering the potential hazardous materials that may be encountered during field work at the site. The Workplan will be submitted to Alameda County Department of Environmental Health (ACDEH) for approval. At least 48 hours prior to drilling activities, PSI will conduct a site reconnaissance to mark soil boring locations. PSI will then contact Underground Service Alert (USA) to identify buried utilities that may underlie the areas of investigation. The fieldwork for the auguring, soil sampling, and abandonment will be conducted in accordance with the field procedures outlined in Appendix A.

3.1 UST ABANDONMENT PROCEDURES

PSI will notify the appropriate regulatory agencies prior to the commencement of work. On the day of the scheduled abandonment, the UST will be visually inspected and checked with a GASTEK LEL meter and PID to verify absence of product within the UST. After verifying the absence of product, the UST will be filled with 6-sack sand/cement slurry utilizing concrete pumping equipment until it has received a volume of mix at least equal to the volume of the UST.

UST = 10,000 gallons
7.5 gallons per cubic foot
UST = 1333.33 cubic feet
27 cubic feet per cubic yard
49.38 cubic yards to fill UST

After filling, concrete will be utilized to patch fill and gauging ports flush with the surrounding pavement.

3.2 SITE ASSESSMENT AND SAMPLING METHODOLOGY

This section describes the methodology that will be used to conduct the soil investigation. The objectives of these sampling procedures are to establish protocols for investigating the potential presence of potentially hazardous constituents and to minimize the potential for cross-contamination during sampling operations.

3.2.1 SOIL BORINGS

Two boring locations (Figure 2) will be drilled to provide chemical data on the soil at the UST. The borings will be located immediately adjacent to each end of the UST. An additional quantity of borings (approximately 10) will be advanced at 20 foot intervals along the run of the piping to a depth of 3 feet to provide chemical data on soils in this area.

Drilling will be conducted via hand auger. Should refusal be encountered at the tank end provisions have been made to retain the services of a geoprobe unit to obtain these samples. If obstructions are encountered during drilling, the borehole location will be relocated several feet from the obstruction. Upon completion of augering, the 12 foot holes will be backfilled with neat cement in accordance with the Alameda County General Services Agency and local requirements. The 3 foot borings will be filled with the cuttings removed from the holes.

Soil will be described by a PSI Geologist and recorded on a field boring log for each of the 12 foot borings drilled. The data recorded on the logs will be based on examination of retrieved soil cuttings obtained from the auger, and drilling conditions observed in the field. Boring logs will include information regarding the location of the boring, type of sampler used and geologic descriptions of materials encountered. Soils will be classified according to the Unified Soil Classification System (USCS). Other information to be recorded on the logs include indications of potential contaminants and the occurrence of and depth-to-water. Organic vapor analyzer (OVA) measurements for soil samples and/or auger cuttings will be recorded on the field boring logs.

Soil samples will be collected by a PSI geologist working under the supervision of a State of California registered geologist. The samples will be collected in 6-inch-long brass or stainless steel tubes. Upon retrieval of the sampler, one tube will be preserved for chemical analyses. The soil samples will be logged on chain-of-custody records and transported to McCampbell Analytical Laboratories of Martinez, California, a California Department of Health Services certified hazardous materials testing laboratory, following chain-of-custody protocol.

3.2.2 STORAGE AND DISPOSAL OF GENERATED WASTES

PSI is not anticipating the generation of significant quantities of wastes due to the nature of the investigation and conditions at the site. Should retrieved soils contain significant quantities of petroleum hydrocarbons they will be placed in a DOT approved container for offsite disposal. The method of the cuttings and liquids disposal will be based upon receipt and review of the laboratory analytical results. PSI will arrange for the management and appropriate disposal of soil and water generated during the field activities.

4.0 LABORATORY ANALYSIS PROGRAM

The soil and groundwater samples collected during this investigation will be submitted to McCampbell for analysis. A summary of the types of analyses and analytical methods is presented below.

The soil samples collected from each end of the UST and along the piping runs will be analyzed according to the following methods:

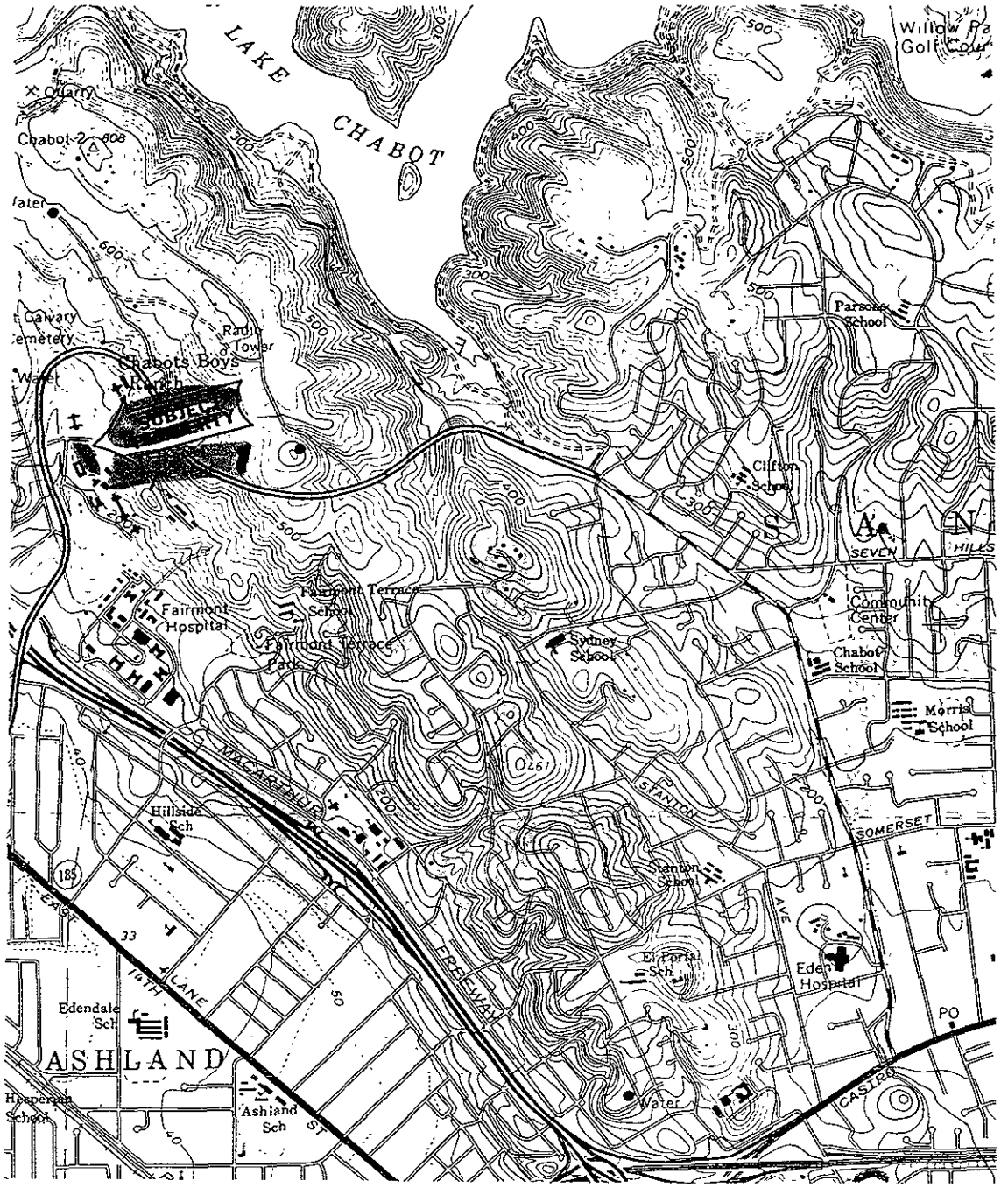
- TPH-D in accordance with the California Department of Health Services (DOHS) Method.
- BTEX in accordance with the United States Environmental Protection Agency Method 8020.

5.0 INVESTIGATION REPORT PREPARATION

Upon completion of the pre-field and field activities described in this Workplan, a Draft Closure Report will be prepared presenting the abandonment procedures, investigative methodology implemented, findings, conclusions, and recommendations for further actions, if appropriate. The draft report will include:

- Project name, location and date work is being performed;
- Name, Title and Company of person performing the work;
- Actual begin and end times of work;
- Description of work being performed;
- Additional notations, observations or remarks to further characterize or clarify work being performed;
- Equipment utilized on site; and
- Change orders issued during site activities.

FIGURES



psi Environmental Geotechnical Construction
Consulting • Engineering • Testing

1320 West Winton
Hayward, CA 94545
510-785-1111
Fax 510-785-1192

PROJECT LOCATION:
Alameda County Juvenile Hall
2200 Fairmont Drive
Hayward, CA

PROJECT NO
575-8G019

SOURCE
USGS Topographic Map
Hayward Quadrangle

DATE
1961, photorevised 1968 and 1973

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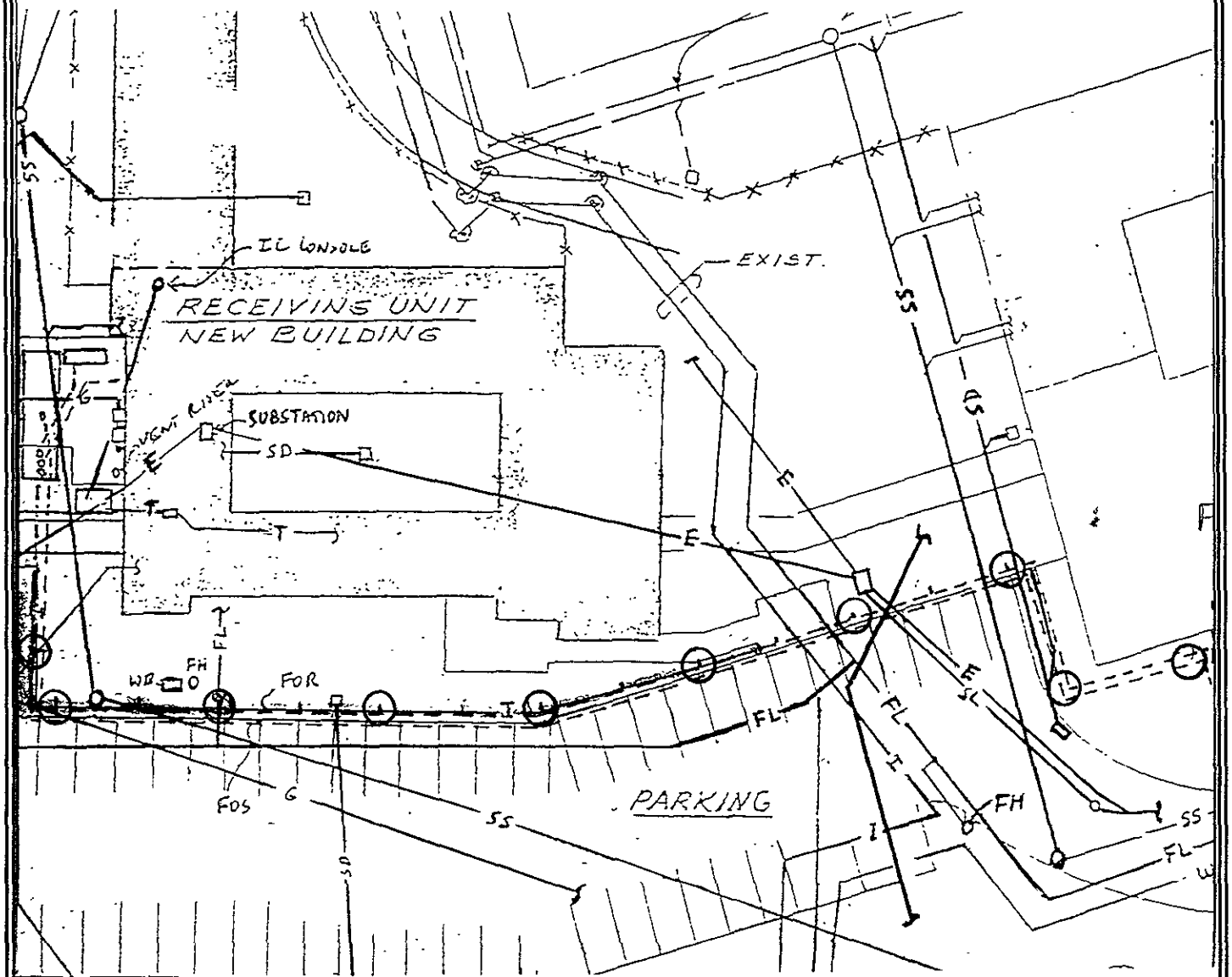

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SITE MAP WITH PROPOSED BORING LOCATIONS:
Alameda County Juvenile Hall
2200 Fairmont Drive
Hayward, CA.

PROJECT NO :
575-8G019

SOURCE.
USGS Topographic Map
Hayward Quadrangle

DATE
1961, photorevised 1968 and 1973

N

APPENDIX A

PSI STANDARD PROCEDURES

APPENDIX A
FIELD PROCEDURES

I. DRILLING OF SOIL BORINGS AND COLLECTION OF SOIL SAMPLES

The following procedures will be used for the drilling and sampling of the soil borings drilled at the site:

1. Drilling will be conducted by Advance Drilling of Campbell, California under the supervision of PSI. Drilling equipment will be pressure washed at the beginning of the day and between soil borings.

2. Prior to the commencement of drilling activities at the site, Underground Service Alert (USA) will be contacted to identify underground utilities in the areas that the borings will be located.

3. Boring logs for the soil borings drilled at the site will be prepared under the supervision of a State of California-registered geologist. The soil cuttings observed during drilling will be described in accordance with the Unified Soil Classification System.

4. Soil samples will be collected using a modified California Split Spoon at five foot intervals beginning at 5-feet below ground surface.

5. The sampler will be lined with three 6-inch long brass sleeves. The ends of the sample tubes will be covered with Teflon sheets and capped with polyvinyl chloride (PVC) end caps. The sample will be labeled, placed in a zip-lock bag and transported in a chilled cooler to the laboratory for analysis.

6. Soil samples will be assigned identification numbers such as B-1-5, where B-1 indicates the boring designation and -5 indicates that the sample was collected at 5 feet bgs. The samples will be labeled with the sampling designation, depth, date, client name, and project number.

7. Soil samplers will be washed between sampling intervals with Alconox soap followed by two deionized-water rinses.

8. Chain-of-custody procedures using chain-of-custody forms will be used to document sample handling and transportation.

9. A Century 128 organic vapor analyzer (OVA) and/or photoionization detector (PID) will be used to monitor volatile organic compounds (VOCs) in the ambient air during drilling at the site in accordance with the site health and safety plan. VOC concentrations in the soil will be measured and recorded on the borings logs for depths that soil samples were collected. VOCs in the soil will be measured at the sampling depths by partially filling a zip-loc bag with soil. The components of the soil are allowed to volatilize and fill the headspace in the tube for approximately 30 minutes prior to inserting the OVA probe through one of the end caps and recording the measurements.

10. Soil cuttings and steam wash water generated during drilling activities at the site will be contained in Department of Transportation (DOT) approved 55-gallon drums. The drums will be labeled with the contents, date, well or boring number, client name, and project number.

II FIELD DOCUMENTATION OF SAMPLING PROCEDURES

The following outline describes the procedures adhered by PSI for proper sampling documentation.

1. Sampling procedures will be documented in a field notebook that will contain:

    1. Sample collection procedures
    2. Date and time of collection
    3. Date of shipping
    4. Sample collection location
    5. Sample identification number(s)
    6. Intended analysis
    7. Quality control samples
    8. Sample preservation
    9. Name of sampler
    10. Any pertinent observations

2. Samples will be labeled with the following information:

    1. Sample number
    2. Well number
    3. Date and time sample was collected
    4. Sampler's name
    5. Sample preservatives (if required)

2. The following is the sample designation system for the site:

   For Borings the samples will be labeled (Boring Number)-(Depth) (i.e. sample collected from boring 4 at 10 feet would be B4-10)

   For water samples from wells the samples will be labeled (MW)-(Well number) (i.e. sample collected from monitoring well number three will be labeled MW-3)

3. Handling of the samples will be recorded on a chain of custody form which shall include:

   1. Site name
   2. Signature of Collector
   3. Date and time of collection
   4. Sample identification number
   5. Number of containers in sample set
   6. Description of sample and container
   7. Name and signature of persons, and the companies or agencies they represent, who are involved in the chain of possession
   8. Inclusive dates and times of possession
   9. Analyses to be completed