



GETTLER-RYAN INC.

TRANSMITTAL

TO: Ms. Madhulla Logan
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Environmental Health Services
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Alameda, California 94502

DATE: June 26, 1998
PROJ. #: 140061.02-1
SUBJECT: Work Plan
Tosco 76 Facility No.0018
6201 Claremont Avenue
Oakland, California

FROM:

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COMMENTS:

We are sending this Work Plan at the request of Tosco Marketing Company. If you have any questions, please call me at (925) 551-7555.

cc: Ms. Tina Berry, Tosco Marketing Company



GETTLER-RYAN INC.

WORK PLAN FOR A LIMITED SUBSURFACE INVESTIGATION

at

Tosco 76 Branded Facility No. 0018
6201 Claremont Avenue
Oakland, California

Report No. 140061.02-1

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June 26, 1998

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INTRODUCTION

At the request of Tosco Marketing Company (Tosco), Gettler-Ryan Inc. (GR), has prepared this Work Plan for a limited subsurface investigation to evaluate soil and groundwater conditions beneath the subject site. This Work Plan was prepared in response to a letter from the Alameda County Health Care Services Agency (ACHCSA) dated May 27, 1998. The proposed work includes: preparing the site safety plan; obtaining the required soil boring permit; advancing five soil borings using a GeoProbe® or similar direct-push technology; collecting and submitting selected soil and grab groundwater samples for chemical analysis; and preparing a report presenting the findings of this investigation.

The scope of work proposed in this Work Plan is intended to comply with the State of California Water Resources Control Board's *Leaking Underground Fuel Tanks (LUFT) Manual and California Underground Storage Tank Regulations, 1994*, the Regional Water Quality Control Board's (RWQCB) *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*, and the ACHCSA guidelines.

SITE DESCRIPTION

General

The subject site is an active service station located on the northern corner of the intersection of Claremont and College Avenues in Oakland, California (Figure 1). Site aboveground facilities consist of two service islands and a station building. Gasoline underground storage tanks (USTs) are located immediately south of the station building in the common pit that fully encompasses the former gasoline UST pit. A former waste oil UST was located near the southern corner of the station building. Pertinent site features are shown on Figure 2.

Geology and Hydrogeology

The subject site is located at the eastern margin of the East Bay Plain, approximately 3.5 miles east of the eastern shore of San Francisco Bay. The local topography is relatively flat at an elevation of approximately 210 feet above mean sea level. As mapped by E. J. Helley and others (1979), soil in the site vicinity consists of late Pleistocene alluvium consisting of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand and gravel. The nearest surface water is Claremont

Creek, approximately 0.1 mile northeast of the site. Based on the site topography, the regional groundwater flow in the vicinity of the site is inferred to be toward the southwest.

Previous Environmental Work

In March 1997, two 12,000-gallon gasoline USTs and associated product lines were replaced and one 280-gallon waste oil UST was removed at the subject site. Three holes of approximately ¼-inch in diameter were present on top of the former waste oil UST. The former gasoline USTs did not have holes or cracks. Kaprealian Engineering Inc. (KEI) collected soil and grab groundwater samples during UST and product line replacement activities. One soil sample (WO1) was collected from native soil beneath the former waste oil UST at a depth of approximately 8 feet below ground surface (bgs). Four soil samples (D1 through D4) were collected from native soil beneath the former product dispensers at a depth of approximately 2 feet bgs. Four native soil samples (A1, A2, B1 and B2) were collected from the former gasoline UST excavation at an approximate depth of 16 feet bgs (just above groundwater). One grab groundwater sample was collected from groundwater standing in the former gasoline UST excavation. Sample locations are shown on Figure 2.

Total petroleum hydrocarbons as gasoline (TPHg), benzene or methyl tertiary butyl ether (MTBE) were not detected in the soil samples collected beneath the gasoline and waste oil USTs, or product dispensers with the exception of 2.6 parts per million (ppm) of TPHg detected in sample A2 and 1.4 ppm TPHg, 0.012 ppm benzene and 1.4 ppm MTBE detected in sample D1. Total oil and grease (TOG), total petroleum hydrocarbons as diesel (TPHd), volatile organic compounds (VOCs) or semi-volatile organic compound (SVOCs) were also not detected in the soil sample collected from beneath the former waste oil UST. However, the grab groundwater sample collected from the former gasoline UST excavation contained 6,100 parts per billion (ppb) TPHg and 54 ppb benzene. MTBE was not detected in the grab groundwater sample collected from the former UST excavation.

PROPOSED SCOPE OF WORK

GR proposes to advance five soil borings (SB-1 through SB-5) to evaluate subsurface conditions at the locations shown on Figure 2. GR Field Methods and Procedures are included in Appendix A. To perform this scope of work, GR proposes the following tasks:

Task 1. Pre-Field Activities

GR will prepare the site-specific safety plan, and obtain the necessary soil boring permit from the Alameda County Public Works Agency. A private underground line locator will be contracted to locate on-site subsurface utilities. Underground Service Alert (USA) will be notified a minimum of 48 hours prior to drilling.

Task 2. Soil Borings

Five soil borings will be advanced using a GeoProbe® or similar direct-push technology at the locations shown on Figure 2. Each boring will be hand-augered to 5 feet bgs to verify the absence of subsurface utilities. Drilling will be performed by California-licensed driller. A GR geologist will observe drilling, collect soil samples for chemical analyses, describe the encountered soil, and prepare a log of each boring. The exploratory soil borings will be advanced to approximately 2 feet into the saturated zone of the first encountered groundwater at which time probing will be terminated.

Soil samples for description and possible chemical analyses will be obtained from each boring continuously starting at a depth of 5 bgs. Soil from each sampled interval will be screened in the field for the presence of volatile organic compounds using a photoionization detector (PID). These data will be collected for reconnaissance purposes only, and will not be used as verification of the presence or absence of petroleum hydrocarbons. Screening data will be recorded on the boring logs. Although the actual number of samples submitted for chemical analysis will depend on site conditions and field screening data, we anticipate a minimum of one unsaturated soil sample from each boring will be submitted for chemical analysis as described in Task 3.

Grab groundwater samples will be collected from borings SB-1 through SB-5. Upon completion of sample collection the borings will be backfilled with neat cement to approximately 5 feet bgs. Soil cuttings generated during hand-augering will be placed in the upper five feet of each boring and compacted. Each boring will be capped with concrete at the surface level.

Task 3. Laboratory Analyses

All samples will be submitted to California state-certified Hazardous Material Testing Laboratory. Soil and grab groundwater samples will be analyzed for TPHg, benzene, toluene, ethylbenzene and xylenes (BTEX), and MTBE by EPA Methods 5030/8015/8020.

Task 4. Reporting

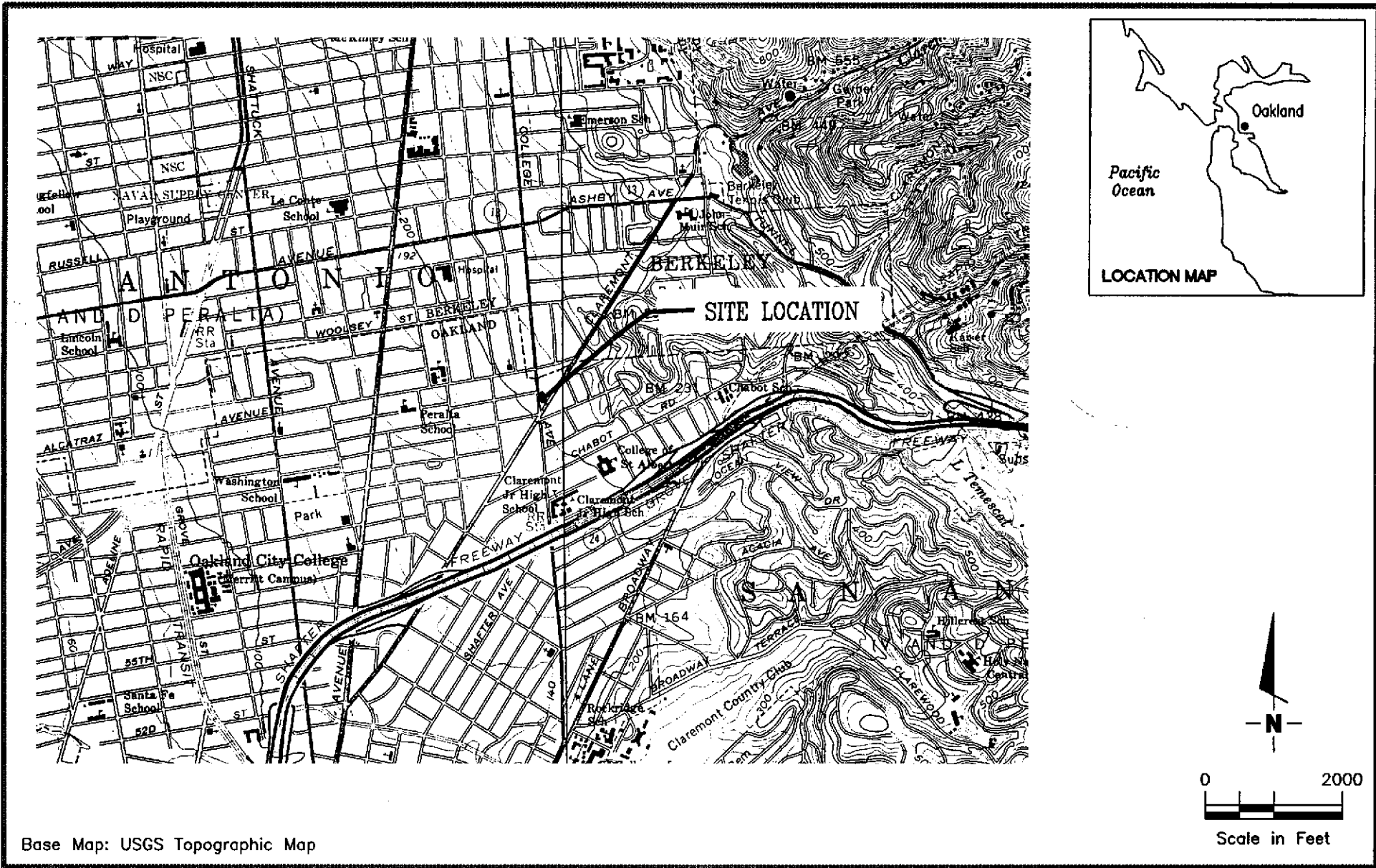
Following receipt and analysis of all data, a report will be prepared which summarizes the procedures and the results associated with this investigation. This report will be submitted to Tosco for their use and distribution.

PROJECT STAFF

Ms. Barbara Sieminski, a Registered Geologist in the State of California (R.G. No. 6676), will provide technical oversight and review of the work. Mr. Douglas J. Lee, Project Manager, will supervise and direct field and office operations. GR employs a staff of geologist, engineers, and technicians who will assist with the project.

SCHEDULE

Implementation of the proposed scope of work will commence upon receipt of regulatory approval and a soil boring permit.



Base Map: USGS Topographic Map



Gettler - Ryan Inc.

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VICINITY MAP

Tosco 76 Branded Facility No. 0018
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Oakland, California

FIGURE

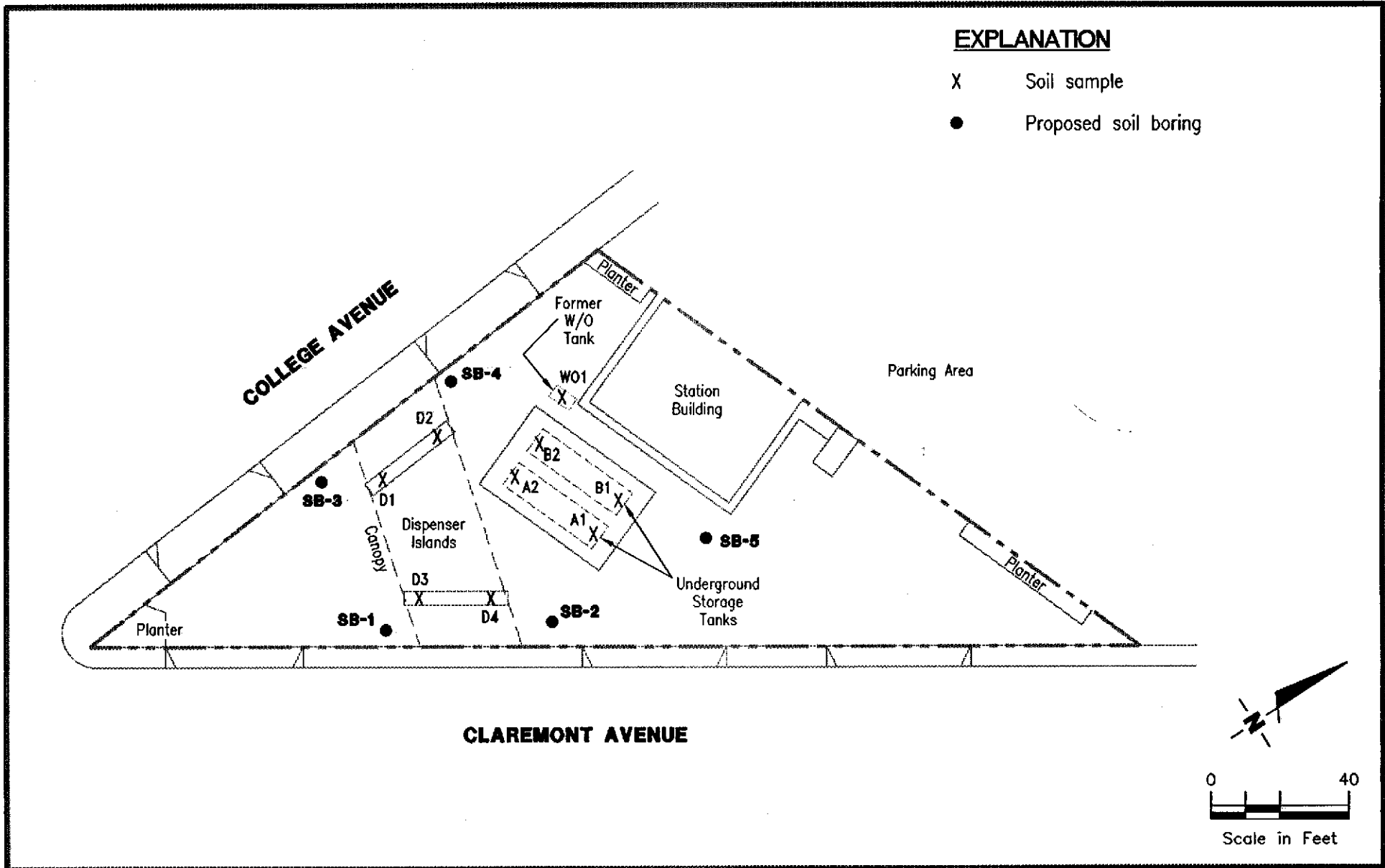
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DATE
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SITE PLAN
Tosco 76 Branded Facility No. 0018
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Oakland, California

FIGURE

2

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APPENDIX A

GR FIELD METHODS AND PROCEDURES

GETTLER - RYAN FIELD METHODS AND PROCEDURES

Site Safety Plan

Field work performed by Gettler-Ryan, Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the contents of these plans prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Exploratory soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring. Soil samples obtained with a Geoprobe® rig are collected from the soil boring with a split-barrel sampling device fitted with 1-inch-diameter, clean brass or plastic liners. The Geoprobe® drives the sampling device approximately 24 inches, and the filled sampler is then retrieved from the boring. The encountered soil is described using the Unified Soil Classification System (ASTM 2488-84) and the Munsell Soil Color Chart.

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Samples are selected for chemical analysis based on:

- a. depth relative to underground storage tanks and existing ground surface
- b. depth relative to known or suspected groundwater
- c. presence or absence of contaminant migration pathways
- d. presence or absence of discoloration or staining
- e. presence or absence of obvious gasoline hydrocarbon odors
- f. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves removing some soil from one of the sample tubes not retained for chemical analysis and immediately covering the end of the tube with a plastic cap. The PID probe is inserted into the headspace inside the tube through a hole in the plastic cap. Head-space screening results are recorded on the boring log. Head-space screening procedures are performed and results recorded as reconnaissance data. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Grab Groundwater Sampling

A temporary PVC screen is installed in the boring to facilitate a grab groundwater sample collection if necessary. Samples of groundwater are collected from the surface of the water in each boring using the teflon bailer or a pump. The water samples are decanted into laboratory-supplied containers appropriate for the anticipated analyses. Sample containers are then labeled and promptly placed in chilled storage for transport to the analytical laboratory. A Chain-of-Custody Record is initiated and updated throughout handling of the samples, and accompanies the samples to the laboratory certified by the State of California for analyses requested.