

UNIVERSITY OF CALIFORNIA, BERKELEY

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SANTA BARBARA • SANTA CRUZ

OFFICE OF ENVIRONMENT, HEALTH AND SAFETY
UNIVERSITY HALL, 3rd FLOOR

BERKELEY, CALIFORNIA 94720

December 15, 1997

Pamela J. Evans
Environmental Health Services
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Soil and Water Investigation Proposal for Gill Tract, UC Berkeley, Albany, CA
Alameda County Site #6529

- References:
- | | |
|----------------------------|----------------------------|
| 1. Chu—Spencer, 9/3/97 | 4. Coleman—Spencer 11/5/97 |
| 2. Spencer—Coleman 9/15/97 | 5. Evans—Spencer 12/4/97 |
| 3. Spencer—Evans, 10/27/97 | |

Dear Ms. Evans:

In your letter dated October 27, 1997, you requested a soil and ground water investigation for the University of California, Berkeley (UC Berkeley) Gill Tract site where two underground fuel storage tanks were removed in August 1997. In response to that letter, we have enclosed a work plan entitled "Work Plan for Limited Soil and Water Investigation at the University of California, Berkeley—Gill Tract Research Facility, Alameda County Health Care Services Agency Site No. 6529" (prepared by Brown and Caldwell under contract with UC Berkeley Physical Plant-Campus Services). This work plan presents a limited subsurface investigation to define the "extent" and severity of petroleum hydrocarbons in the area of the former tanks.

We understand that there is no permit requirement from Alameda County Environmental Health Services, although a permit may be required from Andreas Godfrey at Alameda County Public Works if we drill monitoring wells.

Upon your approval of the work plan, Brown and Caldwell will complete the investigation. Results of the investigation will be submitted to you within 45 days after the completion of this phase of the work. We will notify you of the date and time before the work is started. If you need further information, please contact Anna Moore (643-9518) or Karl Hans (643-9574).

Sincerely,

Susan L. Spencer
Director

SLS/AM:tn
Attachments

Evans, Alameda County Environmental Health Services
12/15/97
Page 2

cc: (without attachments)

Leonard D. Long, Manager—Environmental Services, Brown and Caldwell

Sharon Fleming, Associate Dean for Research, College of Natural Resources

Ron Kiriaze, Associate Director, Utilities & Central Services, Physical Plant-Campus Services

Horace Mitchell, Ph.D., Vice Chancellor—Business and Administrative Services

Gordon Rausser, Dean, College of Natural Resources

(with attachments)

Barbara Rotz, Department Safety Coordinator, Gill Tract/Oxford Tract

Karl Hans, Manager—Air and Water Programs, EH&S

Anna Moore, EH&S Specialist, EH&S

B R O W N A N D C A L D W E L L

December 3, 1997
Revised December 9, 1997

Ms. Hari Krashna
Project Manager
University of California, Berkeley
Planning, Design, and Construction
2000 Carleton Street
Berkeley, California 94720-1380

0011-15.7

Subject: Revised Proposal
 Limited Soil and Groundwater Investigation
 Gill Tract Research Facility
 Albany, California

Dear Ms. Krashna:

Brown and Caldwell is pleased to present this revised proposal for conducting a limited soil and groundwater investigation at the University of California, Berkeley's - Gill Tract Research Facility (Site). The scope of work, included herein as Exhibit A, is based on ~~our~~ your comments to Brown and Caldwell's December 3, 1997 proposal to conduct a more extensive investigation at the Site. A cost estimate for completing the proposed scope of work is included as Exhibit B. Brown and Caldwell proposes to complete these services following our Existing Contract Terms and Conditions.

The attached Limited Soil and Water Investigation Work Plan has been prepared in response to Alameda County Health Care Services Agency's (County's) October 27, 1997 letter requiring the University to conduct an investigation to further define the extent and severity of the release of petroleum hydrocarbons to the subsurface at the subject site. The County's letter requested that the University submit for their approval a work plan to complete a soil and water investigation. It is our understanding that, should the University select Brown and Caldwell's proposed scope of work, the attached Exhibit A will be transmitted to the County as the Work Plan.

Environmental Engineering And Consulting

P.O. Box 8045, WALNUT CREEK, CA 94596-1220 • 3480 BLSKIRK AVENUE, SUITE 150, PLEASANT HILL, CA 94523-4342
(510) 937-9010 FAX (510) 937-9026

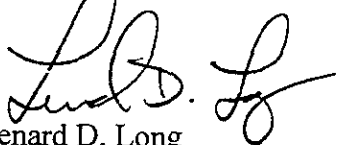
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Ms. Hari Krashna
December 3, 1997
Revised December 9, 1997
Page 2

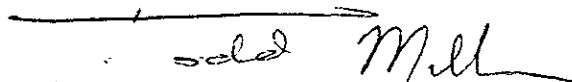
If you have any questions regarding the proposed scope of work, estimated costs, or term and conditions attached, please contact me at (510) 210-2510.

Respectfully Submitted,

BROWN AND CALDWELL



Lenard D. Long
Manager - Environmental Services



Todd A. Miller
Registered Geologist No. 6328

TM:LDL:paa

Exhibit A Scope of Work
Exhibit B Estimated Cost

EXHIBIT A

WORK PLAN FOR LIMITED SOIL AND WATER INVESTIGATION AT THE UNIVERSITY OF CALIFORNIA, BERKELEY - GILL TRACT RESEARCH FACILITY ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY SITE NO. 6529

International Technology Corporation removed and disposed of two 500-gallon underground storage tanks (USTs) from the University Of California, Berkeley - Gill Tract Research Facility (Site) in August and September 1997. Their report, dated October 1997, noted detectable concentrations of petroleum hydrocarbon compounds in the subsurface soil and shallow groundwater in the immediate vicinity of the two USTs. Alameda County Health Care Agency (County) in their letter dated October 27, 1997 required that a soil and water investigation (SWI) be conducted to "define the extent and severity of the release" and a Work Plan describing the SWI be submitted for County review and approval. The following presents the scope of work requested by the University for conducting a limited soil and groundwater investigation in the vicinity of the former USTs.

Limited Subsurface Soil and Shallow Groundwater Investigation

Brown and Caldwell proposes to further define the "extent and severity" of the petroleum hydrocarbons release by collecting *in situ* soil and shallow groundwater samples in the immediate vicinity of the former UST locations. Samples will be collected utilizing the direct push drilling technique. Direct push drilling has been selected over conventional techniques because it minimizes the waste material generated during the investigation. Samples will be submitted to a stationary laboratory for analysis. Investigation activities and analytical results will be summarized in a draft letter report and submitted to the University for review and comment. A final report will be prepared for submittal to the University and the County.

***In Situ* Soil Sampling.** Three soil borings (see attached site sketch for locations) will be advanced by a California licensed water well driller using a direct push sampling system. Boreholes will be completed by continuously coring to approximately 12 feet below ground surface (bgs), or 3 feet below first encountered groundwater, whichever is deeper. Final borehole depths will be based on specific conditions encountered in the field.

The direct push sampling system utilizes 4-foot-long by 2-inch-diameter steel coring rods lined with clear isobutylene (or similar material) tubes. The tubes will be removed from the steel corer and the soil inside classified according to the Unified Soil Classification System. In

addition to evaluating the borehole lithology, the tubes will be cut into 1-foot sections and the ends of each section screened for the presence of petroleum hydrocarbons with a photoionization detector (PID). The lithology and PID reading will be recorded on the borehole log next to the depth interval from which the data were obtained.

Soil samples for laboratory analysis will be collected at approximately 3.5-4 feet bgs and 7.5-8 feet bgs. The samples will be obtained by cutting the soil core at the appropriate depth, covering the ends of the sample with Teflon sheeting, sealing the ends with plastic caps and tape to provide an airtight seal. The samples will then be labeled with the borehole identification number, the depth of the sample, the sampler's initials, and the date collected, and placed into a resealable plastic bag and stored in a cooler containing crushed ice until being delivered to the analytical laboratory. The soil samples submitted for laboratory analyses will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel fuel (TPHd) following EPA Method 8015 Modified, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) following EPA Method 8020.

Soil cuttings generated during the drilling procedure will be placed in 5-gallon plastic buckets and stored on-site. Reusable downhole equipment will be steam-cleaned or washed with laboratory-grade, non-phosphate detergent, rinsed with tap water, and rinsed twice with deionized water prior to and between uses. Wash water will be stored on-site in 55-gallon drums prior to disposal. Location of on-site underground utilities will be the responsibility of the University.

In Situ Groundwater Sampling. *In situ* groundwater samples will be collected from each of the three borings by placing a temporary 1-inch-diameter, slotted and blank, polyvinyl chloride (PVC) casing into each boring. Groundwater will be allowed to fill the temporary casing and come to equilibrium with the atmosphere. Then, using a 3/8-inch-diameter stainless steel bailer, a groundwater sample will be collected from inside the casing. Prior to collecting the groundwater sample, the temporary casing will be purged by removing one to three bailer volumes of water. A representative groundwater sample will then be collected with the bailer and transferred to the appropriate sampling containers. Samples being collected for analysis of volatile compounds will be visually inspected to ensure that no air bubbles remain within the sealed bottles. Sample containers will be labeled with the borehole identification number, samplers initials, and date of collection, placed in a re-sealable plastic bag and stored in a cooler containing crushed iced until being delivered the analytical laboratory. Samples will be submitted to the laboratory for analysis of TPHg, TPHd, BTEX, and MTBE.

Groundwater monitoring wells will not be installed as part of this investigation. Purge and wash water will be contained on-site in steel 55-gallon drums until disposal of the purged water can be arranged.

Sample Handling

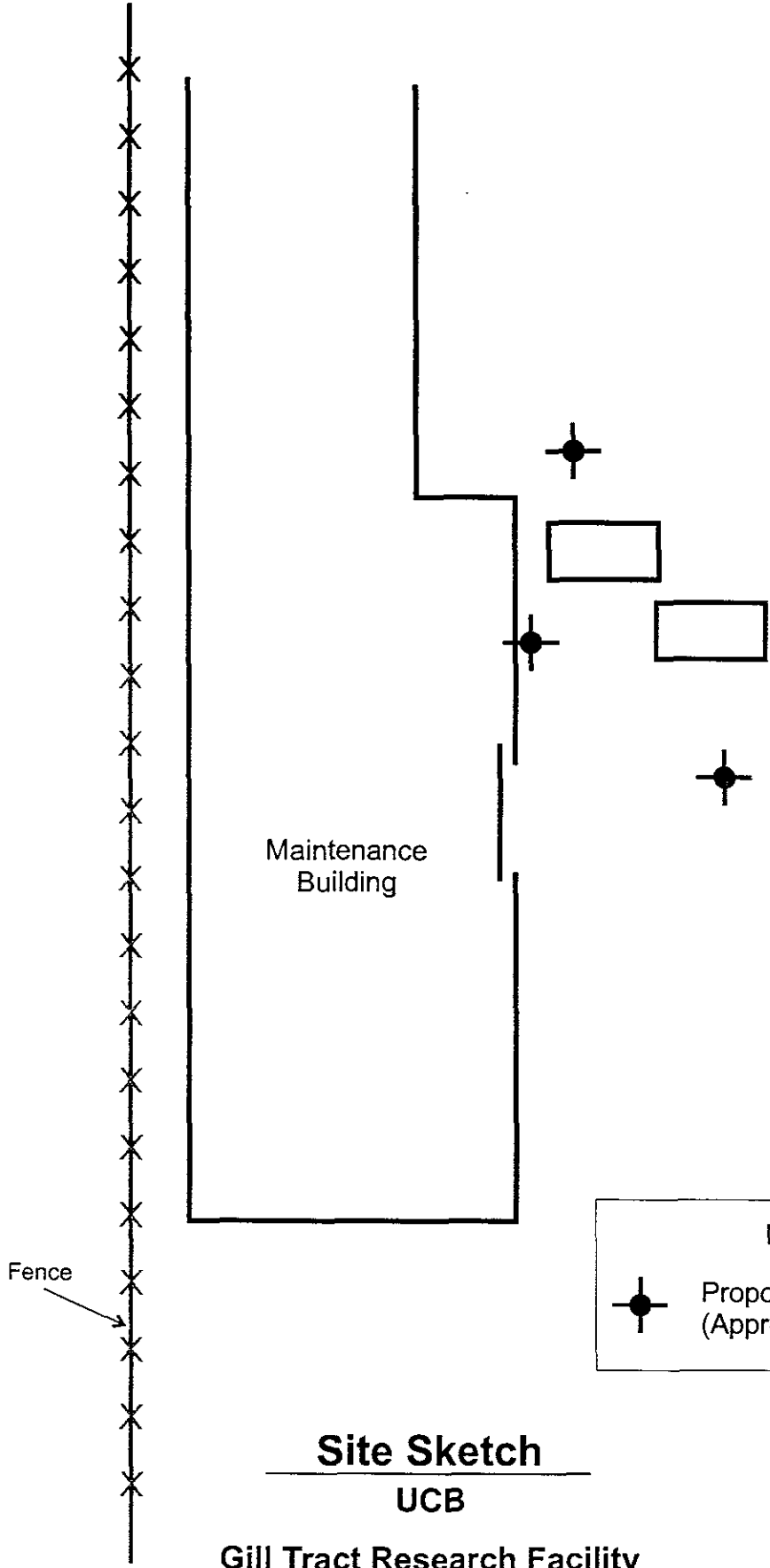
Samples are handled during collection and shipment in such a way as to ensure maximum sample quality and integrity. All samples will be collected by experienced Brown and Caldwell field personnel. The samples will be collected in containers that are appropriate to the sample material and the required analyses. All containers will have been precleaned by the analytical laboratory or the container manufacturer. All non-disposable, down-hole sampling equipment will be decontaminated prior to and between use by washing in laboratory-grade detergent, rinsing with tap water, and then rinsing with deionized water.

Each sample container will have a label affixed in the field that identifies the date and time of sample collection, name of sampler, job number, and a unique sample number. This information will be recorded on the boring log or in the field records. Samples will be stored and shipped to the laboratory in a cooled chest. Only analytical laboratories certified by the California Department of Health Services will be used for analysis of samples.

A chain-of-custody form will be used to record possession of samples from the time of collection to the time of arrival at the laboratory. The sample-control officer at the laboratory will verify sample integrity and confirm that they were collected in the proper containers, preserved correctly, and that there is an adequate volume for analysis. If these conditions are met, the samples will be assigned a unique log number for identification throughout analysis and reporting. The log number will be recorded on the chain-of-custody form and in the bound log book maintained at the laboratory. The sample description, date received, client's name, and other relevant information will also be recorded.

Schedule

Brown and Caldwell expects to complete the field investigation portion of the proposed work within 15 days following approval of the Work Plan by the County. A draft site investigation and evaluation report will be prepared for the University's review and comment within 30 days following the completion of the field work. Brown and Caldwell will submit a final report to the University and County within 7 days following receipt of the University's comments to the draft report.



Former USTs

Maintenance Building

Fence

No Scale



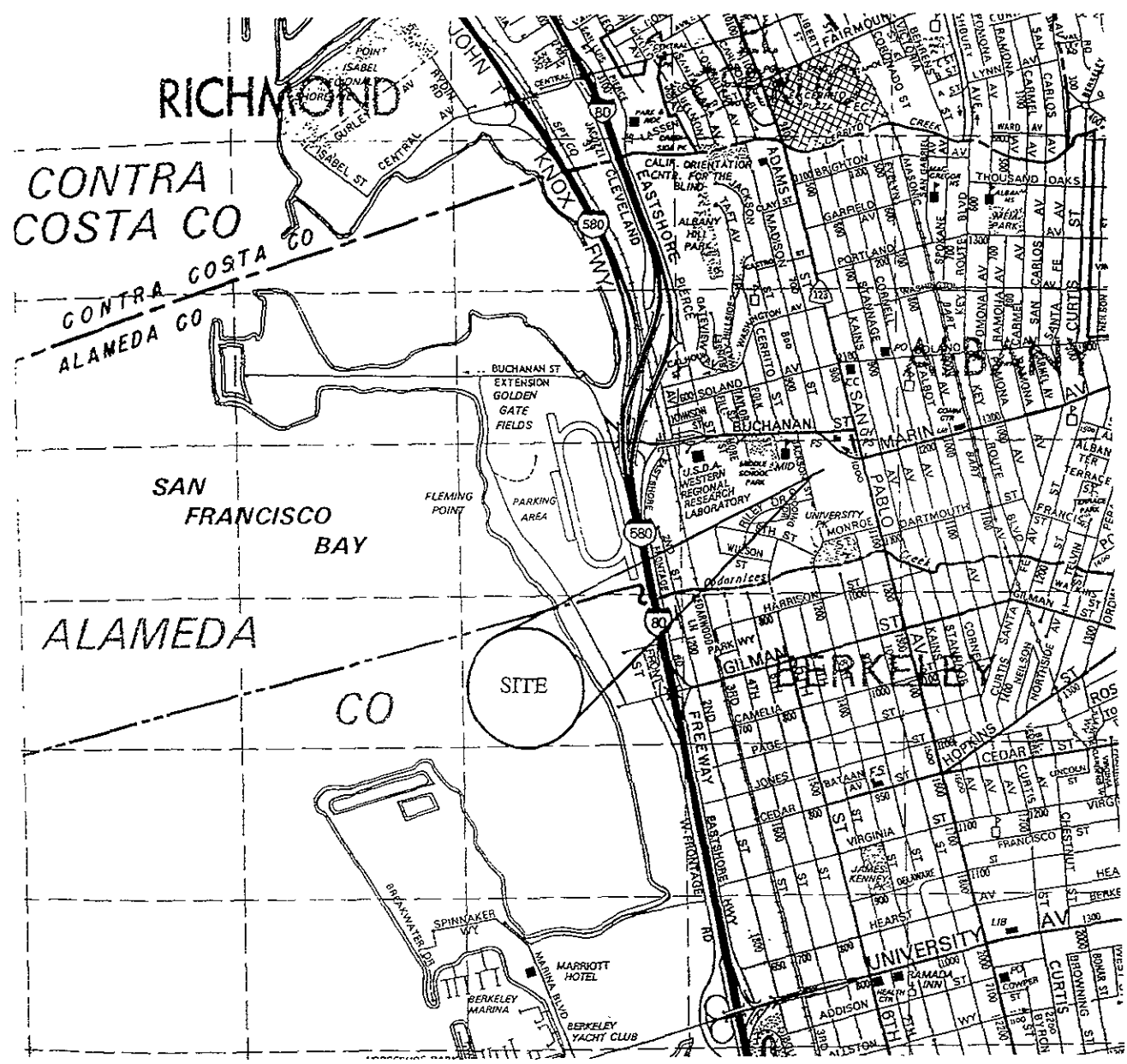
Proposed Boring Locations (Approximate)

Site Sketch

UCB

Gill Tract Research Facility

NORTH ↑



SCALE OF MAP PAGES
1 INCH TO 1/4 MILE

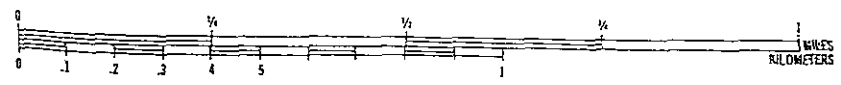
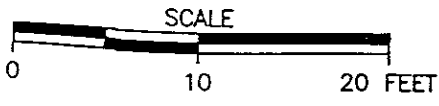
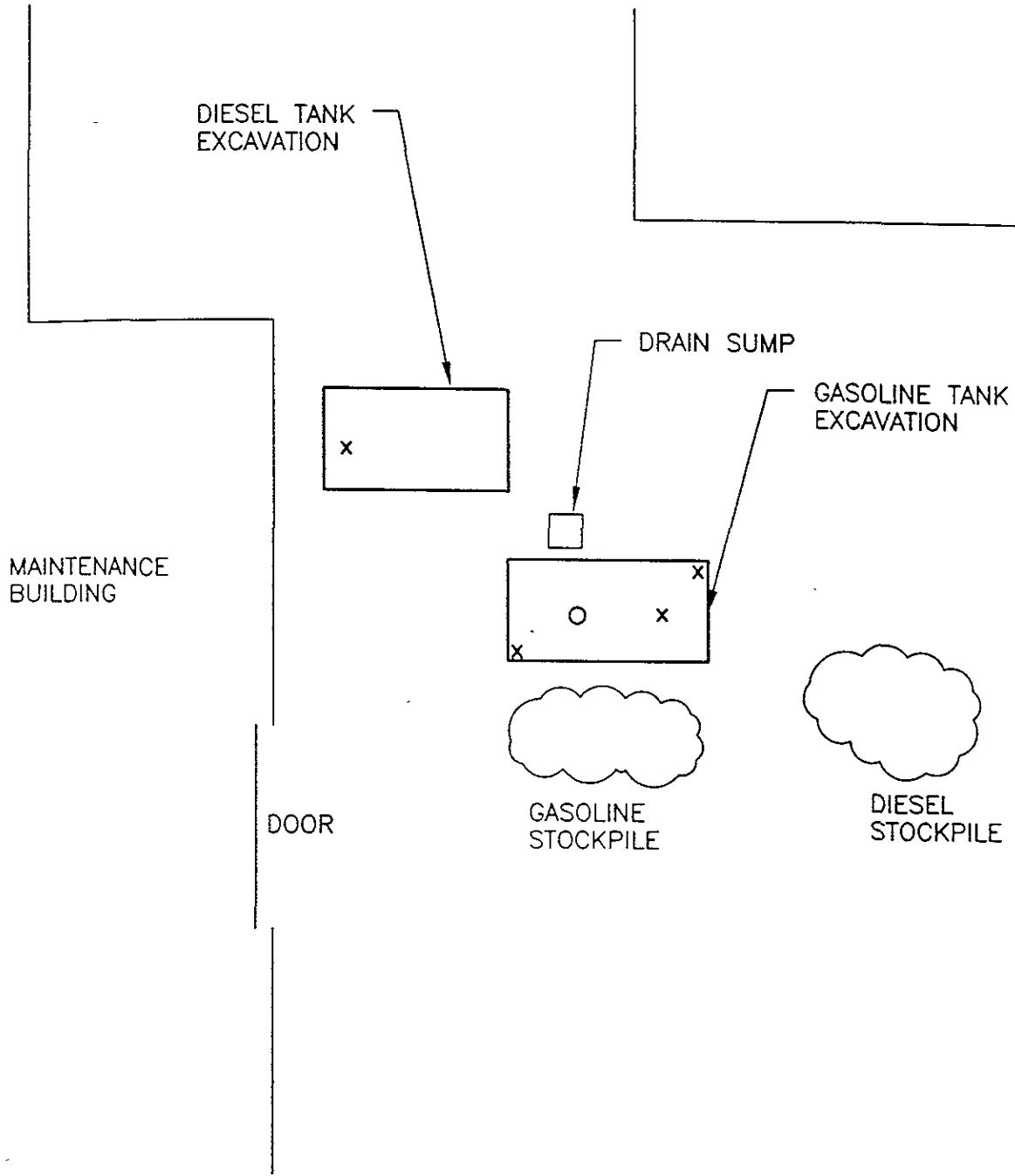


FIGURE 1
SITE LOCATION MAP

PREPARED FOR:

UC BERKELEY
GILL TRACT RESEARCH FACILITY





LEGEND

- x SOIL SAMPLE LOCATION
- O GROUNDWATER SAMPLE LOCATION

FIGURE 2

SITE MAP
AUGUST 1997

PREPARED FOR

U.C. BERKELEY
GILL TRACT RESEARCH FACILITY



INTERNATIONAL
TECHNOLOGY
CORPORATION