Suite 212
100 West Rincon Avenue
Campbell, CA 95008

Geonomics Inc.

Contractor's Lic.
CA #478010
(408) 374-9116

ENVIRONMENTAL SERVICES DIVISION

Aug 12, 1988

Ms. Lizabeth Rose
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way
Room 200
Oakland, CA 94621

Dear Ms. Rose:

This letter is to submit a proposal for the subsurface investigation at the Desert Petroleum service station #795 located at 2008 1st St., Livermore, California. This investigation is required by the Alameda County Health Care Services (letter to John Rutherford dated May 20, 1988) because of documented hydrocarbon contamination of soils beneath the site.

This proposal addresses Items 1, 2, 3, and 4 of the Alameda County Health Services letter dated May 20, 1988:

ITEM 1 - TYPE AND QUANTITY OF HAZARDOUS SUBSTANCES RELEASED

The type of the contamination identified at the site is 400 ppm total volatile hydrocarbons (as gasoline) in a soil sample from probe DPL - 1. Soil samples from DPL - 3 and DPL - 4 did not indicate significant hydrocarbon contamination. Because the backfill material of Tank #2 is pea gravel, we were unable to take a soil sample below probe DPL - 2 where high vapor concentrations (>13,000 ppm) were detected. We suspect that the high vapors detected adjacent to the tank may result from overfill and/or spillage events. However, the specific origin and extent of the contamination is unknown at this time (see Geonomics, Inc. report dated March 10, 1988).

ITEM 2 - RESULTS OF INVESTIGATIONS TO DETERMINE THE EXTENT OF SOIL, GROUNDWATER OR SURFACE WATER CONTAMINATION DUE TO THE RELEASE

The attached report by Geonomics, Inc. dated March 10, 1988 describes the partial installation of vapor monitoring probes (wells), soil sampling, and laboratory analyses for the site. The results of the investigation are summarized under Item 1 (above).

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The proposed first phase of our investigation to define the extent of the contamination is listed below:

1. We propose to establish the horizontal and vertical extent of this contamination by installing one groundwater monitoring well and drilling two soil borings. The borings and well will be drilled with an 8 inch hollow stem auger which will be steam cleaned between holes. The boreholes would be sampled and the cuttings inspected visually and for odors for evidence of contamination during drilling. The soil samples taken with a hollow stem auger using a split spoon sampler would include reporting and lab analyses for total parts hydrocarbon TPH as gasoline plus benzene, toluene, ethylbenzene, and total xylenes (BTEX). Each soil boring will be 25 feet deep and located within 3 feet of DPL-1 and DPL-2. Soil samples will be taken at a depth of 15 feet and every 5 feet until completion of the boring (3 soil samples per boring). After completion the soil boreholes will be filled and sealed with neat cement. The groundwater well will be placed in a down gradient position with respect to tank #2. Soil samples for the well will be taken at a depth of 15 feet and every 5 feet until the groundwater table is reached (estimated to be about 50 feet). If groundwater is encountered at 50 feet the well will be completed 15 feet into the saturated zone. The locations of the borings and the well is shown on figure 1.

   Well Construction
   Figure 2 is a preliminary construction diagram which shows the general plan for constuction of the well. A detailed well installation report will be provided as part of the final report.

   Construction of the groundwater well will be in conformance with State Water Quality Board Standards, specifically as provided in the "Guidelines for Addressing Fuel Leaks" by the Bay Area Regional Water Quality Control Board unless explicitely modified by either the Alameda County Flood Control and Water Conservation District or the City of Livermore.

   For the proposed well at 2008 1st. St., Livermore, CA:

   - The casing will be 2 inch PVC, perforated from the bottom of the well to at least 5 feet above the top of the saturated zone.

   - The annular space around the well will be packed with clean graded #3 sand from the bottom to 2 feet above the perforated casing.

   - The well will be sealed with 0.5-1 foot of bentonite pellets above the sand followed by neat cement slurry to the surface. The seal will be as extensive as possible and will in no case be less than 5 feet without a specific variance fron the city of Livermore and Zone 7.

   - The wellhead will be sealed with a water tight threaded cap and secured with a stovepipe type locking vault.

   - Well identification will be affixed on the interior of the security vault.

   -The well will be developed by surging and bailing with a stainless steel

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bailer until turbidity is diminished and temperature and pH are stabilized.

Goundwater Sampling
A groundwater sample taken after development will be obtained, handled, and analyzed in accordance with State Water Quality Control Board and applicable EPA standards.

Specifically:

- After the well has been allowed to stabilize for at least 72 hours it will be sampled to observe the presence of floating product. If present, the amount of floating product will be assessed using a clear bailer.

- A groundwater sample will be taken after seven to ten well volumes of water have been removed from the well and the water level has recovered to 80% of its initial level. Water produced during purging will be stored in 55 gallon drums prior to appropriate disposal.

- After purging several well volumes, the water samples will be obtained (using either a teflon bailer or teflon bladder pump) and handled in a manner which minimizes the loss of volatile constituents from the sample. Samples will be collected in 40 ml. vials, immediately refrigerated and maintained in that condition until delivered to the state certified testing laboratory.

- Samples will be tested for total petroleum hydrocarbons (as gasoline) and BTEX.

- Chain-of-custody documentation will be maintained and provided in the final report.

ITEM 3 - METHOD OF CLEANUP IMPLEMENTED TO DATE, PROPOSED CLEANUP ACTIONS, AND APPROXIMATE COST OF ACTION TO DATE

It is premature to consider methods of cleanup of the site before the investigation in Item 2 is completed.

ITEM 4 - METHOD AND LOCATION OF DISPOSAL OF RELEASED HAZARDOUS SUSTANCE

It is premature to consider the haulage of contaminated soil because of several options available for on-site treatment.

Please advise us if this proposal is acceptable so we may promptly proceed with this project. We have scheduled installation of the monitoring well and borings for August 31, 1988. If you have any questions regarding any aspects of the proposal please call.

Sincerely,

Thomas S. Nett

Thomas S. Nett
Geologist

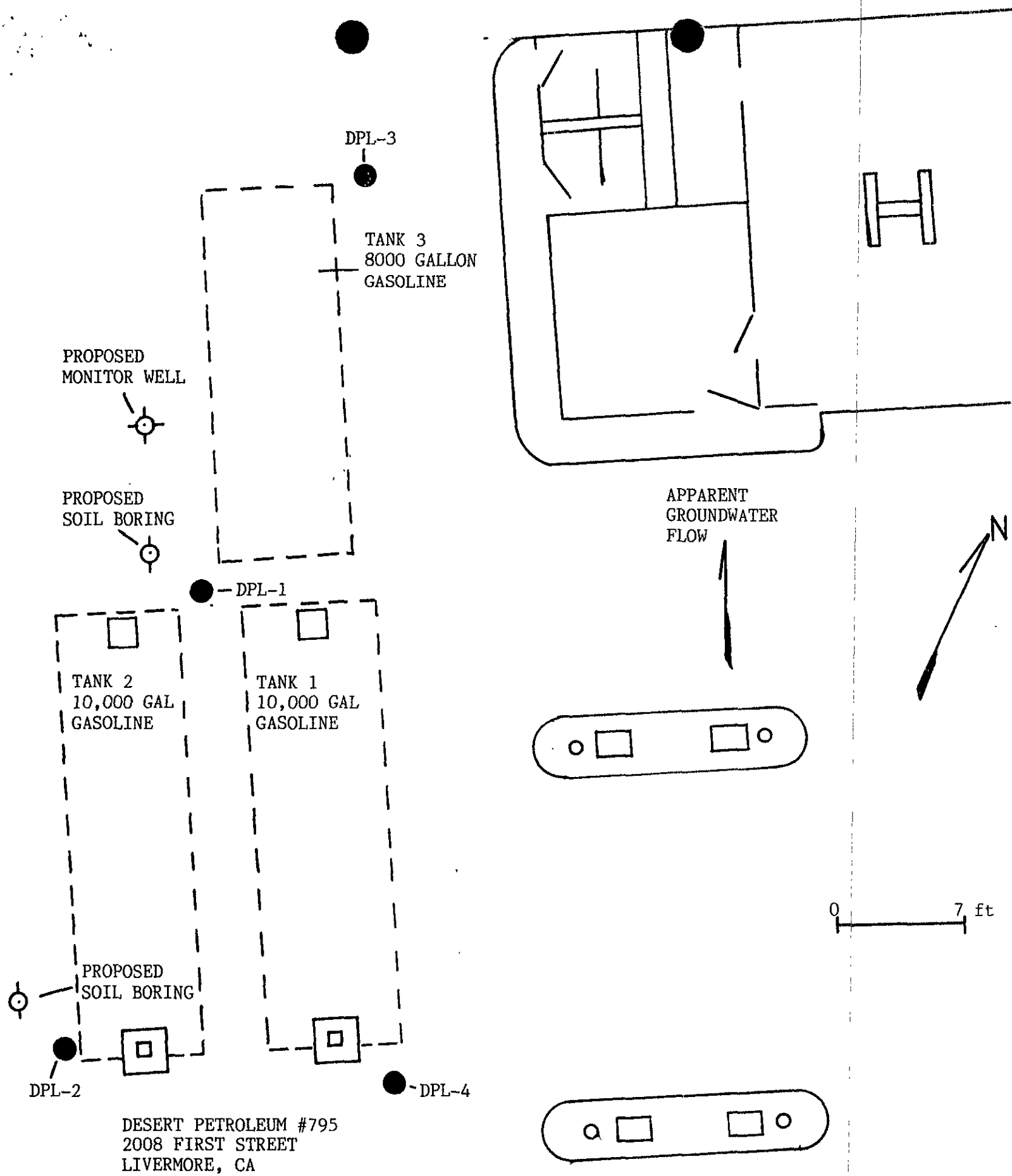
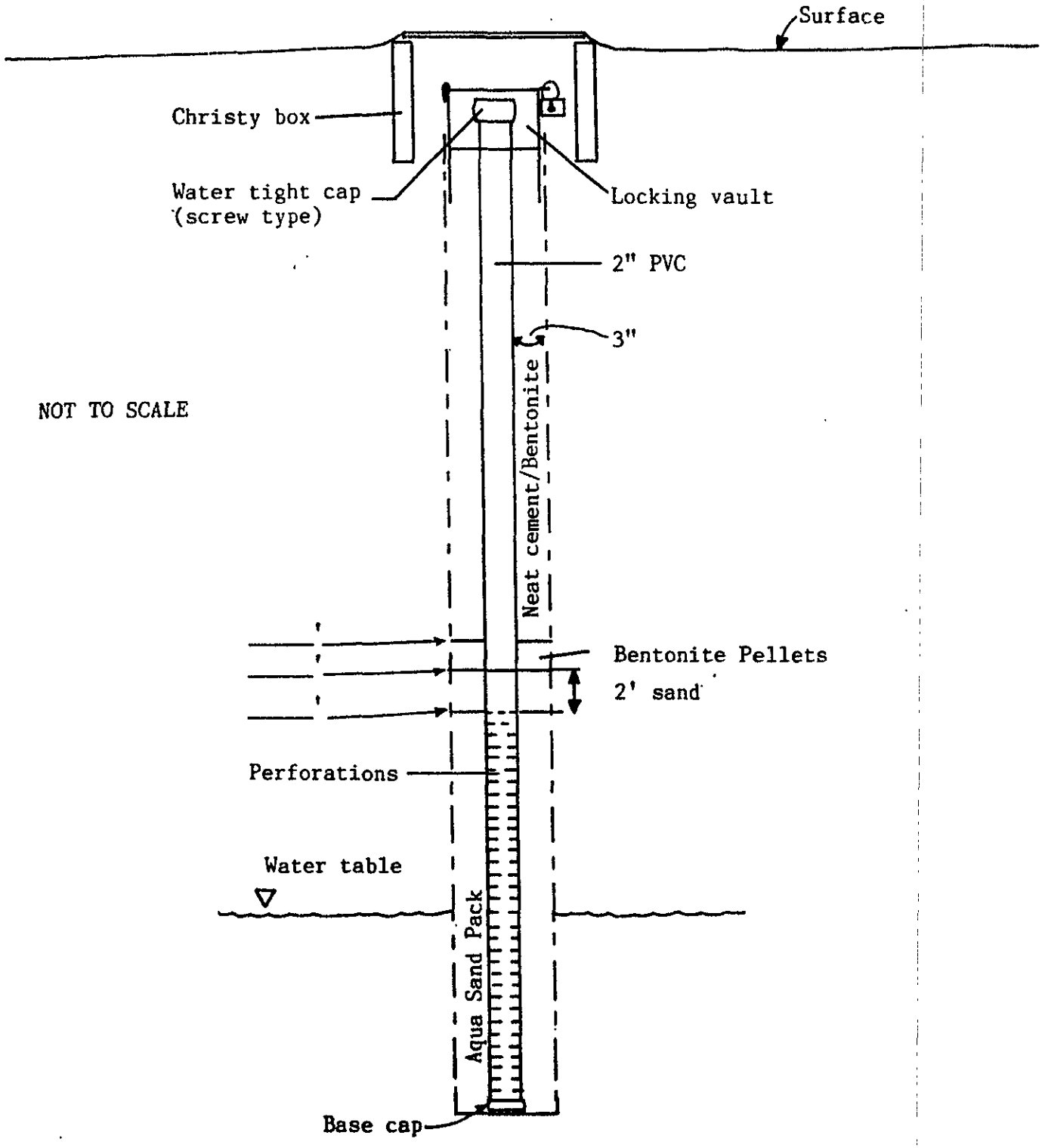
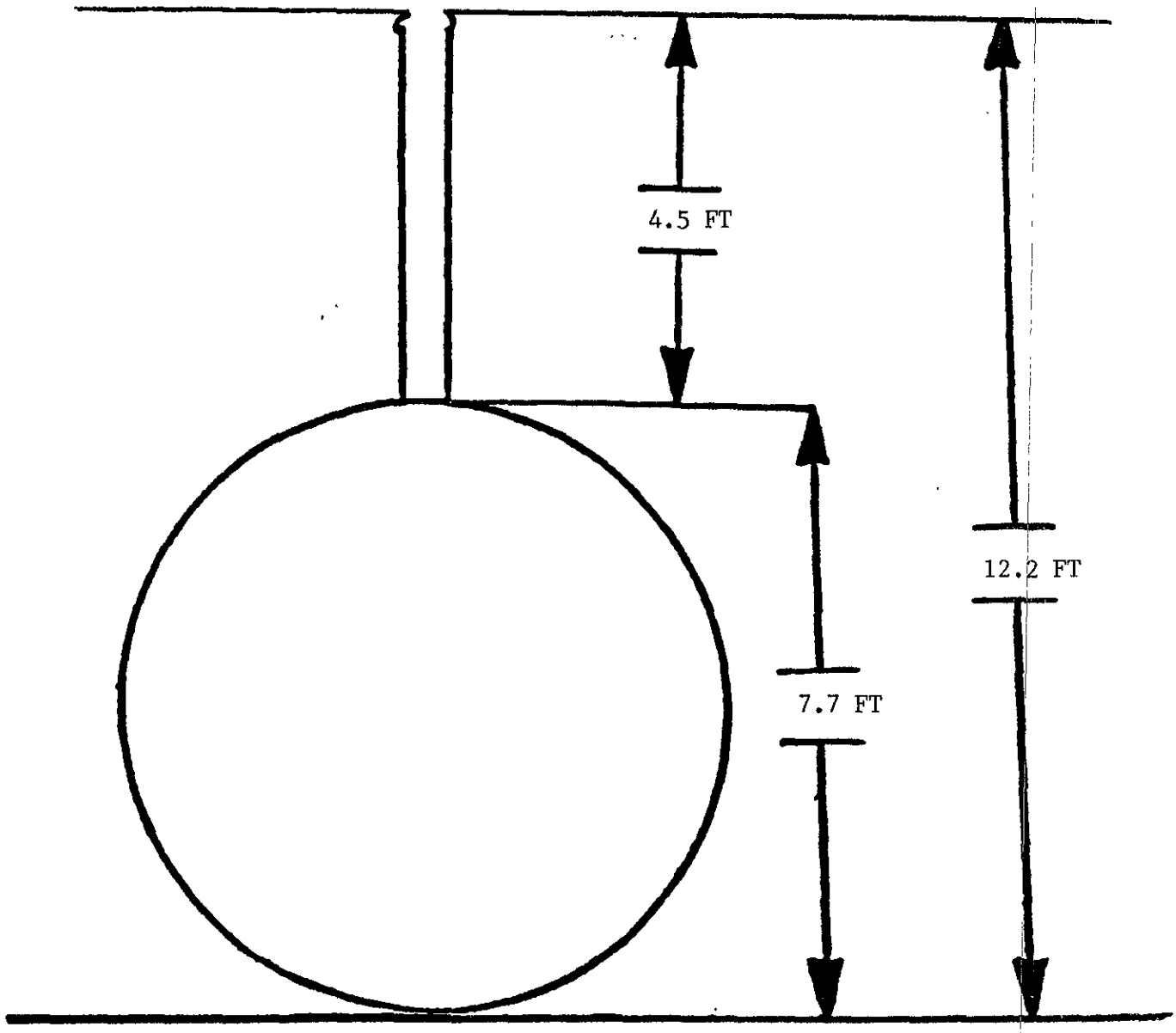

DPL-3
TANK 3
8000 GALLON
GASOLINE
PROPOSED
MONITOR WELL
PROPOSED
SOIL BORING
DPL-1
TANK 2
10,000 GAL
GASOLINE
TANK 1
10,000 GAL
GASOLINE
APPARENT
GROUNDWATER
FLOW
N
0
7 ft
PROPOSED
SOIL BORING
DPL-2
DPL-4
DESERT PETROLEUM #795
2008 FIRST STREET
LIVERMORE, CA

Figure 1

Figure 2 Well Construction Diagram





All three tanks show same profile dimensions.

Figure 3