

February 11, 1988
SCI 209.006

Mr. Larry Seto
Alameda County Environmental
Health Department
Division of Hazardous Materials
470 27th Street, Room 322
Oakland, California 94612

Groundwater Monitoring Well
and Sampling Plan
150th Avenue & East 14th
Street Project
San Leandro, California

Dear Mr. Seto,

This letter presents the details of a proposed monitoring well and groundwater sampling plan for the referenced project. This plan has been prepared in response to a request from the Alameda County Health Care Services Agency (ACHCSA).

In general, SCI proposes to install one groundwater monitoring well at the location shown on the attached sketch (Plate 1). The well will be situated about 5 feet west of the area excavated during contaminated soil remediation. The proposed well location is judged to be on the "downgradient" side of the excavation. We judge that the probable direction of groundwater flow in the area is generally toward the bay, as shown on Plate 1.

Prior to well installation, a Groundwater Protection Ordinance Permit will be obtained from the Alameda County Flood Control and Water Conservation District (Zone 7). The well will be installed in accordance with Zone 7 and state regulatory requirements.

The well will be installed in a test boring drilled with a truck-mounted, hollow-stem auger rig. Soil samples will be obtained at 5-foot intervals within the boring. The augers and sampling equipment will be steam-cleaned prior to drilling operations. The sampling equipment will also be steam-cleaned between each sampling interval.

Schematic details of the monitoring well are shown on Plate 2. In general, the well will consist of 2-inch-diameter PVC pipe. The pipe will be machine-slotted below a point 2 feet above the groundwater table; solid pipe will be used above this point. The

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well materials will be steam-cleaned prior to well construction. The annular space will be filled with sand where the pipe is slotted. A bentonite seal will be placed above the filter sand. Cement/bentonite grout will be used to fill the annulus above the bentonite seal. A waterproof cap, locking lid and "christy box" will be provided at the surface.

The well will be developed by removing between 5 and 10 well volumes of water. A groundwater sample will be taken after development. A steam-cleaned Teflon bailer will be used for development and groundwater sampling.

The groundwater sample will be retained in containers which are pre-cleaned by the suppliers according to EPA protocol. Groundwater samples will be refrigerated on site in an ice chest and will remain under refrigeration until delivered to the analytical laboratory. Appropriate chain-of-custody forms will accompany the samples to the laboratory.

The groundwater sample will be tested for (1) Total Petroleum Hydrocarbons (TPH) (EPA Method 8015, modified), (2) volatile organic compounds by gas chromatography/mass spectroscopy with additional identification of the 10 highest peaks (EPA Method 624), and (3) total oil and grease (Standard Method 503E). Quantification of benzene, toluene, xylene and ethylbenzene (BTX&E), will be provided by EPA Method 624.

If you have any questions, please call. When the proposed plan is approved, we will schedule drilling and well installation as soon as practical.

Yours very truly,

Subsurface Consultants, Inc.



James P. Bowers
Geotechnical Engineer 000157 (expires 3/31/91)

JNA:JPB:RWR:ch

Attachments: Plate 1 - Site Plan
Plate 2 - Schematic of Well Details

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2 copies submitted

cc: Mr. Kevin Reese
Building Regulation Inspector
City of San Leandro
San Leandro, CA 94577

Mr. Dan Christopolus
C&H Development Company
3744 Mt. Diablo Blvd., Ste. 301
Lafayette, CA 94549

EAST 14th STREET

NEW
COMMERCIAL
BUILDING

PROBABLE DIRECTION
OF GROUNDWATER FLOW

EXCAVATED AREA

PROPOSED WELL
LOCATION

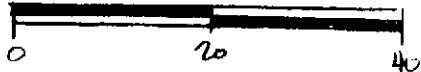
(E) SIDEWALK

150th AVENUE

PQ/E TRENCH



APPROXIMATE SCALE : FEET



PROPOSED MONITORING
WELL LOCATION

150th AVE ; EAST 14th ST - SAN LEANDRO

PLATE

JOB NUMBER

DATE

APPROVED

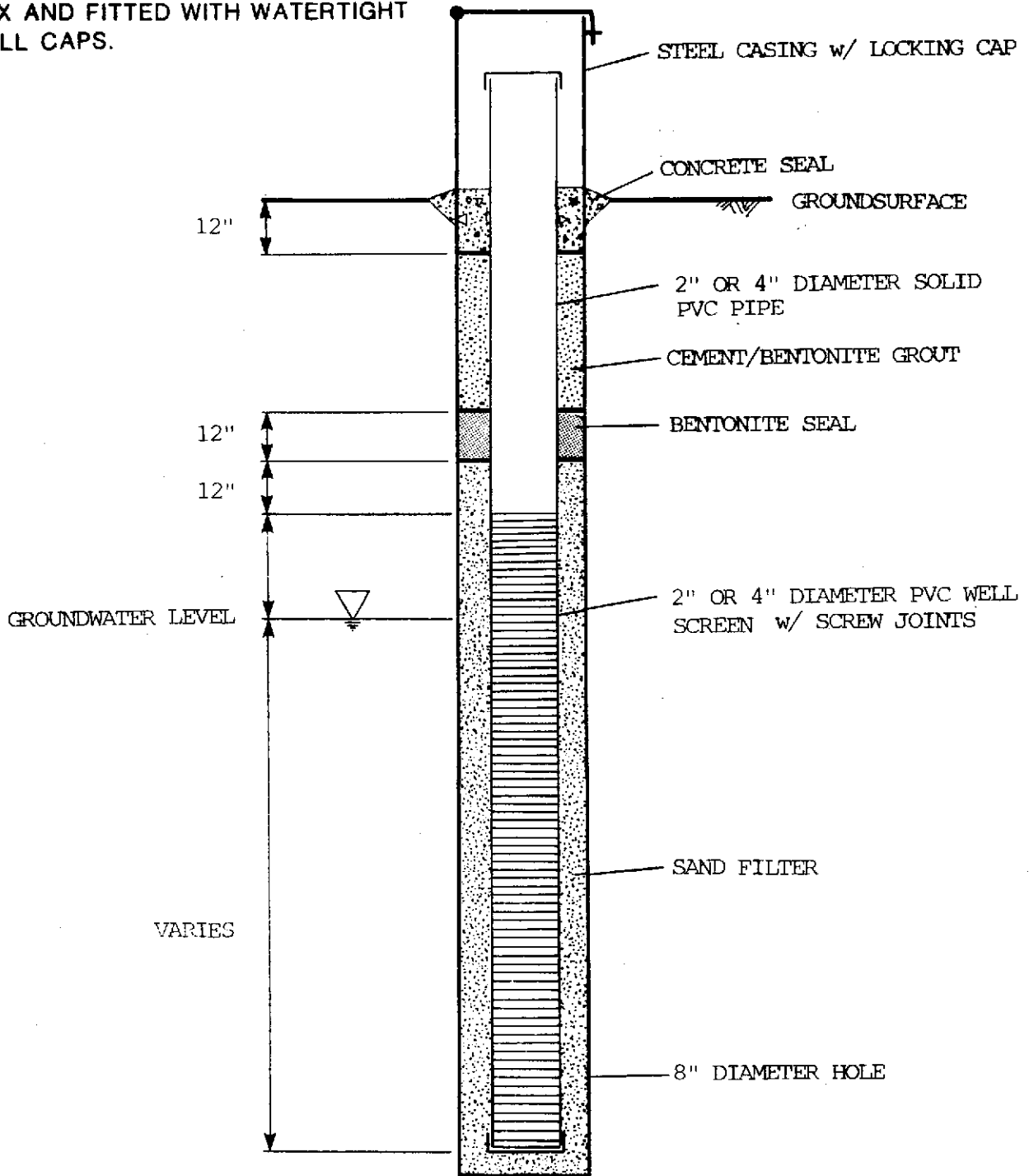
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BELOW GRADE INSTALLATIONS WILL BE PLACED IN A CAST IRON VALVE BOX AND FITTED WITH WATERTIGHT WELL CAPS.



GROUNDWATER MONITORING
WELL DESIGN

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JOB NUMBER

DATE

APPROVED

PLATE

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