SCI Subsurface Consultants, Inc.

ENVIRONMENTAL PROTECTION
96 AUG 16 PM 1:57

R. William Rudolph, P.E.
President

August 14, 1996
SCI 133.005

Mr. Barney Chan
Alameda County Health Care Services Agency
Environmental Protection Division
1131 Harbor Bay Parkway, Suite # 250
Alameda, California 94502-6577

Work Plan Addendum
Further Site Characterization
Ninth Avenue Terminal Area
Port of Oakland
Oakland, California

Dear Mr. Chan:

This letter presents an addendum to Subsurface Consultants, Inc. (SCI) Site Characterization Work Plan dated June 4, 1996. SCI substantially performed the investigation tasks presented in the referenced work plan, the results of which were presented in a report dated August 9, 1996. In general, the study indicates that the property has been impacted by past chemical releases. However, additional investigation and research are required to further evaluate impacts to the site and identify potential source areas prior to development of a corrective action plan (see attached plan). SCI proposes to perform the following tasks as part of the ongoing study:

- **Additional Research.** SCI will continue to review files and interview individuals to update and refine information regarding site activities.

- **Petroleum Hydrocarbon-Based Liquid Removal.** During field activities, 17 inches of floating product were observed within a manhole situated near the southern bulkhead. 770 gallons of the liquid were removed and placed in drums by Dillard Environmental Services. However, the liquid level went unchanged. Dillard will be retained in an attempt to remove the liquid to facilitate the evaluation of the orientation of pipelines which enter and exit the

3736 Mt. Diablo Boulevard ■ Suite 200 ■ Lafayette, California 94549 ■ (510) 299-7960 ■ FAX (510) 299-7970

171 12th Street ■ Suite 205 ■ Oakland, California 94607 ■ (510) 268-0461 ■ FAX (510) 268-0137

manhole. Once the liquid is removed, pipeline locators will be retained to trace the pipelines. Test pits will be excavated along the identified alignment(s) to check the pipeline construction details.

- **Hydrogeologic Investigation.** The preliminary study indicates that shallow groundwater has been impacted by a variety of compounds primarily including petroleum hydrocarbons, heavy metals, and MEK. To further investigate the extent of dissolved and floating contaminant impacts, as well as evaluating groundwater flow directions, SCI proposes to install 14 monitoring wells. Well locations are shown on the attached site plan. A comprehensive sampling and analytical event will be performed inclusive of the new wells and 5 existing wells. The testing program will include the following tests:

    1. TVHg
    2. TEHd and TEHo/g
    3. Oil/Grease
    4. VOC w/ library search
    5. SVOC w/ library search
    6. Heavy Metals
    7. PCB's

- **Additional Investigation in Selected Areas.** Based on the results of the preliminary study and subsequent site reconnaissance, investigation should be performed in selected areas to supplement the existing data. SCI proposes obtaining soil and grab groundwater samples from 6 additional borings extended at the locations shown on the attached site plan. The rationale for these borings follows:

    - Two monitoring wells will be installed and two borings will be drilled in the area of the former Port Petroleum leasehold area to further evaluate impacts in this area, which is in the area of a large 1973 oil spill. Two monitoring well samples, two grab groundwater samples and 3 soil samples will be analyzed for the following:

        - TVHg
        - TEHd and TEHo/g
        - Oil/Grease
        - VOC w/ library search
        - SVOC w/ library search
        - Heavy Metals
        - PCB's

- One monitoring well will be installed in the area of the former American Bitumuls leasehold area to further evaluate of oil releases in this area. One monitoring well sample and 1 soil sample will be analyzed for the following:

    - TVHg
    - TEHd and TEHo/g
    - Oil/Grease
    - VOC w/ library search
    - SVOC w/ library search
    - Heavy Metals
    - PCB's

- One boring will be drilled at the location of the existing KOT above ground storage tank which reportedly stores diesel. A test boring was drilled previously along the storm drain alignment approximately 20 feet west of the tank. The data from the boring suggests that there have been impacts in this area from diesel releases. The proposed boring would be situated in close proximity to the tank, in an area of observed surface staining. One soil and a grab groundwater sample from this boring will be analyzed for TEHd and BTEX.

- Two borings will be drilled at the approximate location of the underground storage tanks situated west of Building H232. The tanks reportedly contained oil and may still exist beneath a modular office building. A soil and a grab groundwater sample will be analyzed from each of the borings for TEHd, Oil & Grease, and BTEX.

- Four borings will be drilled at locations of observed surface staining at the Lakeside Metal Recycling building. Two soil samples and grab groundwater samples will be obtained from each of the borings. The samples will be analyzed for:

    - TVHg
    - TEHd and TEHo/g
    - Oil/Grease
    - VOC w/ library search
    - SVOC w/ library search
    - Heavy Metals
    - PCB's

The results of these services would be presented in a supplemental data report.

If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

Jeriann N. Alexander, PE, REA
Project Manager

JNA:RWR:sld

Attachment: Site Plan

cc: Mr. Jonathan Redding
Fitzgerald, Abbott, & Beardsley

Ms. Michele Heffes
Deputy Port Attorney

Mr. Jeff Rubin
Port Environmental Scientist