James P. Bowers, PE
R. William Rudolph, Jr., PE

4/5/94
Proposed 7 borings - convert 2 to MWs
needs:
1) wells referenced to msl
2) soil samples analyzed for MEK, MIBK, TOG, BTEX TPHg TPHdiesel
3) submit MW construction diagram
4) pipings - still on site
5) need deposit

March 18, 1994
SCI 820.002

Ms. Susan Hugo
Alameda County Health Care Services Agency
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Work Plan
Soil and Groundwater Contamination Characterization Investigation
MIBK Underground Tank Release
6707 Bay Street
Emeryville, California

Dear Ms. Hugo:

Presented herein is a work plan to further characterize the extent of soil and groundwater contamination associated with a release of methyl isobutyl ketone (MIBK) from the previous tanks at the referenced site. Based on a July 27, 1993 meeting with representatives from the Alameda County Health Care Services Agency (ACHCSA) and the Regional Water Quality Control Board (RWQCB), we understand that in order to obtain site closure or approval for long term monitoring, the extent of groundwater contamination must be defined and soil conditions adjacent to the tanks must be evaluated. Where soil contamination exists, the extent of contamination must be defined. In this regard, we propose to perform the following tasks.

Task 1 - Field Investigation

Subsurface conditions will be explored by drilling 7 to 9 test borings, approximately 15 feet deep, at the approximate locations shown on Plate 1. Prior to drilling, the appropriate permits will be obtained. Drilling will be performed with a truck-mounted drill rig equipped with hollow-stem augers.

■ Subsurface Consultants, Inc.

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 510-268-0461 • FAX 510-268-0137

Our field engineer/geologist will observe drilling operations and prepare logs of the soils encountered. Soil samples will be obtained at frequent intervals in the borings. An organic vapor meter will be used to check all samples for volatile organic vapors. Soil cuttings generated during drilling will be placed in 55-gallon drums and left on-site. Upon completion of drilling, two test borings will be converted to monitoring wells. The remaining borings will be backfilled with bentonite chips and cement grout.

The two groundwater monitoring wells will be constructed of 2-inch-diameter schedule 40 PVC pipe having flush threaded joints. The lower portion of the wells will consist of machine slotted well screen having 0.02-inch wide slots. The annular space around the screened section will be backfilled with Lonestar No. 3 sand. A bentonite seal, approximately 12 inches thick will be placed above the sand. The annulus above the bentonite seal will be backfilled with cement/bentonite grout. The wellheads will be set below grade and will be secured by locking well covers. The wells will be installed in accordance with RWQCB guidelines.

The wells will be developed by surging and removing water until the water becomes relatively clear. At least 48 hours after development, the wells will be purged and groundwater samples will be obtained using disposable samplers. Water samples will be placed in pre-cleaned containers and refrigerated until delivery to the analytical laboratory. The water samples will be accompanied by Chain-of-Custody records. The development and purge water will be placed in steel drums and left on site for later disposal.

Task 2 - Analytical Testing

Analytical testing will be performed by a State of California Department of Health Services (DHS) certified analytical laboratory. Two soil samples from each boring and the groundwater sample from each well will be analyzed for volatile organic compounds in accordance with EPA Method 8240. The results of the investigation will be summarized in a written report, complete with a description of field procedures, boring logs, site plan and analytical test reports.

We look forward to your favorable review of our work plan. If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.

R. William Rudolph

R. William Rudolph
Geotechnical Engineer 741 (expires 12/31/96)

MK:RWR:JPB:sld

Attachment: Site Plan

cc: Mr. Kirk Jamieson, Pettit& Martin - 101 California St. SF 94111
Mr. James McClay, MRCP Realty - P.O. Box 24122 Oakland 94623
Mr. Rich Hiett, RWQCB

MW-6 dry
MW-7 extraction

PARKING AREA

MW-1

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

DRIVEWAY

MW-8

PB-1

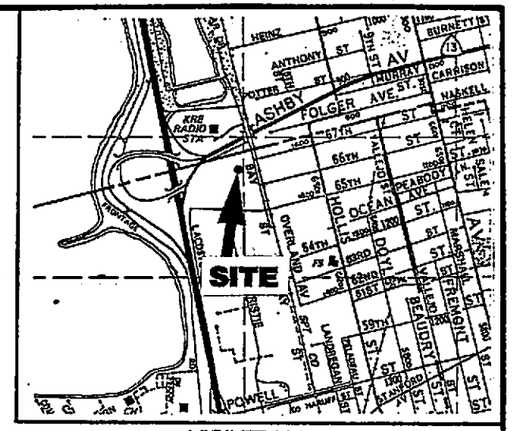
PB-2

SIDEWALK

BAY STREET

MW-3

WAREHOUSE FACILITY



VICINITY MAP

- MONITORING WELL
- TEST BORING
- VAPOR EXTRACTION WELL
- PASSIVE VAPOR RECHARGE WELL
- APPROXIMATE LOCATION OF PREVIOUS UNDERGROUND STORAGE TANK
- APPROXIMATE EXTENT OF TANK EXCAVATION
- PROPERTY LINE
- PROPOSED MONITORING WELL
- PROPOSED TEST BORING

N

APPROXIMATE SCALE (feet)

0 10 20

SITE PLAN

Subsurface Consultants

6707 BAY STREET – EMERYVILLE, CA

JOB NUMBER	DATE	APPROVED
820.001	4/12/93	

PLATE 1