



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105**

July 9, 1993

Mr. Stephen Chao
Naval Facilities Engineering Command
Western Division
900 Commodore Way, Bldg. 101
San Bruno, CA. 94066

Re: Draft Preliminary Assessment / Site Inspection Field Investigation Work Plan,
dated June 14, 1993

Dear Mr. Chao,

The U.S. Environmental Protection Agency (EPA) has reviewed the subject and provides the following comments. The document was reviewed by EPA and SAIC Geologist Mary Wesling. Call me at 415-744-2383 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Michael D. Gill".

Michael D. Gill
Remedial Project Manager
Federal and Technical Programs Branch

cc: Elizabeth Adams (RWQCB)
Josh Marvil (PRC) (Fax)
Fred Molloy (SAIC)
Chip Gribble (DTSC)

1895

Draft PA/SI Field Investigation Work Plan, dated June 14, 1993

General Comments

1. EPA's review indicates that this document does not adequately address the objective of the PA/SI for the potential source areas. Also, out of 52 buildings of interest, more than half have been discounted as potential sources. Documentation of the data used to eliminate these sites is not included in the work plan to enable sufficient evaluation of these recommendations.
2. A final work plan is scheduled to be completed on July 19, 1993 for the remaining 18 buildings (potential source areas). The mobilization of field activities is scheduled for the same day. This date is not realistic. It does not allow for time necessary for site walks in these areas or for the consideration of regulatory agency comments.

Specific Comments

1. Section 2.0, page 3, last para. The text refers to "preliminary mass allocation calculations" that "suggest a very small percentage of contamination is attributable to unidentified Navy sources." A reference document for these calculations is not provided. Please cite the reference document.
2. Section 4.1, page 8, para. 2. Out of 52 buildings of interest, more than half have been discounted by the Navy as potential sources; however the only explanation offered for these recommendations is the generic description in the preceding paragraph (page 8, para.1) for screening procedures and, in some cases, a well number in column 7 of Table 1. It is recommended that the following supporting information be used to justify the results:
 - distance of groundwater monitoring wells from specific potential sources,
 - direction of groundwater flow,
 - dates of groundwater analytical results, and
 - analytical results from soil sampling.
3. The Navy has not refuted nor referenced any of the specific analytical data used by Harding Lawson Associates (HLA, May 17, 1993) to name the specific source areas. An example of this is Building 6, where HLA cites Fall 1992 analyses indicating a "six- to nine-fold increase in the TCE concentrations...". Previous documentation is available that provides analytical data for storm and sanitary sewer sampling which the Navy has not considered in their recommendations.
4. Table 1. The comments that follow are presented by building number.
Building 1. Please describe what additional investigation is to be performed. Based on

Additional sampling of upgradient and downgradient wells with screened intervals located within the same aquifer and same approximate elevations is recommended. Channels maps should be presented that extend from south of Highway 101 through the South Gate Area.

Buildings 467, 505, 555. Because a former auto hobby shop would probably have a chemical use history as a vehicle maintenance and repair area, this area should be considered a potential source area. Although observed TCE levels in nearby upgradient and downgradient wells may be consistent with the regional plume, no well data downgradient of well 82A was available to support the Navy's conclusion that TCE concentrations detected in well 82A are a result of the regional TCE plume.

Building 543. Provide more detail on the data presented in the reference for this building (PRC & JMM) to verify that the TCE source exists in the upgradient A2 aquifer.

5. Section 4.1, page 20, top para. The Navy indicates that the results of the 18 site walkthroughs and possible resulting recommendations for further action will be conducted before the PA/SI workplan is finalized. This is making schedule assumptions that may make adequate task completion impossible.

6. Section 4.4, page 22, para. 3. A reference is made to preliminary subsurface maps that were used by the Navy to locate sand and gravel channels in the A1 zone sediments. In the final work plan, a reference document for these maps should be cited.

7. Section 4.5.2, page 28, para. 3. It is considered impractical for any well that does not recharge to within 80 percent within one hour to be purged of three well volumes. The correct procedure, for any well that does not recharge to within 80 percent within one hour, according to Section 10.3, step four (page 67) of the Final Field Sampling Plan (July 1, 1992), is to bail the well dry and then sample after 80 percent recharge has occurred. Please make this correction in Section 4.5.2.

8. Section 7.0, page 37, para. 3. The Navy shows that a tentative schedule for field activity calls for mobilization on July 19-20, 1993. This seems to assume that no modifications will be necessary to the final field work plan. Based on comment #5 above, mobilization of field activities should not be scheduled until specific time has been allowed for technical review of additional recommendations.

Editorial Comments

1. Section 4.1, page 8, para. 2. The text indicates that "no further action" is recommended for 26 of the buildings of interest; Table 1 lists only 24 buildings with recommendations of "no further action". Please clarify the correct number of buildings.

2. Section 4.1, page 8, para. 2. The Navy lists 17 buildings of interest scheduled for "site walkthrough". Building 146 has been omitted from this list, however on page 20 (para. 1), the total buildings has been corrected to 18. Please clarify this discrepancy.

historical solvent usage in hangars at Naval Air Stations, Hangar 1 is a probable source of solvent contamination in groundwater beneath and downgradient of Hangar 1. However, no source control wells are currently proposed in the vicinity of this area.

Building 6. This building should be included along with Buildings 29 and 31 as a possible source area of fuel or solvent contamination in the Expanded Site 9 Area. Although it is unclear whether the southwest portion of the Expanded Site 9 Area is a source area, it is not unreasonable to group all of the Navy's perceived Site 9 point sources into one Expanded Site 9 Area. It appears that both the regional plume and Navy sources within the Expanded Site 9 Area may be responsible for the TCE contamination in the Expanded Site 9 Area.

Buildings 17/19 Area. These buildings are presently not included in Table 1. Please provide data to verify whether elevated levels of TCE (MEW HydroPunch sample HP89-13 detected a level of 1740 ug/L) originate from a source in the Building 17/19 Area or from a regional plume.

Building 48 Area. This building is presently not included in Table 1. The Navy has stated that it believes that TCE concentrations detected in the A1 permeable zone in the vicinity of the Building 48 Area are attributed to the "upward vertical leakage" of elevated TCE concentrations from the A2 permeable zone. Additional geophysical data should be collected (cross-sections and channel maps extending from south of Highway 101 through the Building 48 Area) to confirm the "preferred migration pathway" or A1/A2 vertical gradient theory.

Building 88. Building 88 is a source of VOC contamination. Because TCE is a known degradation product of PCE, Building 88 can be considered a source of TCE contamination detected north of Building 88. The Navy should be responsible for remediating TCE contaminated groundwater in the vicinity of Building 88.

Buildings 123, 127, 144 (Expanded Site 8 Area). NASA recently installed and sampled six well clusters in this area and TCE concentrations ranging from 1.9 to 250 ug/L were detected. Based on this recent data, it does not appear that the regional plume is truncated to the north of the Expanded Site 9 Area. However, no data has been presented to confirm whether preferred sand channels exist between the Expanded Site 9 Area and the Expanded Site 8 Area. Channel maps and geologic cross-sections extending from the Expanded Site 9 Area up through and north of the Expanded Site 8 Area (around the Building 144 Area) should be prepared and examined to investigate the possible existence of permeable migration pathways. (Does NASA have any stratigraphy maps available from their investigation?) Also, it appears that a source of TCE contamination may exist in the vicinity of Well 11M04A. But insufficient soil and groundwater data exists near the drum storage area; additional sampling should be done.

Buildings 146, 544. It is unclear whether the TCE concentrations detected in the South Gate Area are attributed to a Navy source or are the result of migration from the MEW site. Based on available data, the presence of a permeable migration pathway could not be verified. Channel maps presented in Navy documents do not extend south of Highway 101.