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

September 10, 1993

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

Re: Draft Final OU5 Remedial Investigation Report, dated August, 1993

Dear Mr. Chao,

The U.S. Environmental Protection Agency (EPA) has received and reviewed the subject document and its associated response to comments. Various problems still remain with the draft final document. According to the Federal Facilities Agreement (FFA) §9.9 (Finalization of Reports), the draft final primary document shall serve as the final document if no party invokes dispute resolution regarding the document. All of EPA's comments have not been resolved in the response to comments received. As discussed at the RPM meeting of September 9th, EPA agrees with the FFA parties that it would be more productive to resolve these issues outside of the formal dispute resolution process. The parties have agreed to enter into a 45 day informal dispute period and the Navy will submit the Final OU5 RI document by October 28, 1993. This delay is not intended to delay delivery of the Draft OU5 Feasibility Study (due October 1, 1993). EPA's comments follow. Please call me at 415-744-2383 if you have any questions.

Sincerely,

Michael D. Gill

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

cc: Elizabeth Adams (RWQCB)
Chip Gribble (DTSC)
Fred Molloy (SAIC)
Jeff Pile (IT)

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Comments on Draft Final OU5 RI Report, dated August 1993

General Comments

1. EPA feels that this document does not make any conclusive statements about possible OU1 and OU5 interactions (landfills leaching into groundwater). It is evident from the Navy's intention to perform additional investigations in this area this month (Sept. 93) that an attempt is being made to better characterize the area. EPA is still not quite sure why the two OUs were separately investigated, but this additional investigation is a step in the right direction. If EPA is to assume that the RI will continue to address Sites 1 and 2 (landfills) effects on the groundwater at OU5, then the migration of metals from the leachate in the landfills to the groundwater still remain a possible problem.

   It is necessary to fully discuss the occurrence of metals detected in groundwater above background levels. In the Navy's General Comments Response 2, they state that "it is the intent of Chapter 4.0 to make a presentation of the nature and extent of any contamination, not to make interpretations or conclusions. The baseline risk assessment follows with an interpretation of potential risk due to concentrations of detected metals." The Chemical Fate and Transport section is an appropriate place to fully identify and interpret metals contamination observed in groundwater. An interpretation of the migration of metals in groundwater should also be included.

   A number of times the Navy states that metals detected in groundwater do not exceed the background level by more than two orders of magnitude; and so, by implication, it appears that metals are not of concern in the groundwater beneath Operable Unit 5 (OU5). The Navy should expand on this argument in the required metals contamination discussion in the Chemical Fate and Transport section and explain the premise for this determination of "two orders of magnitude" as a cutoff level of contamination.

   The Navy chose to perform an analysis of variance (ANOVA) to determine a relationship between leachate and groundwater at Site 1 (new Section 5.3.3). In the initial set of comments, EPA was concerned about the detections of antimony, manganese, vanadium, arsenic, and lead in both leachate and groundwater. The Navy chose to compare sodium, calcium, potassium, iron, magnesium, and manganese in their ANOVA analysis. In the metals contamination discussion in the Chemical Fate and Transport section, the Navy should qualify why they did not address EPA's metals of concern in performing the ANOVA. The results of the Navy's analysis should be compared to background concentrations and a defensible conclusion presented as to whether EPA's metals of concern have migrated from leachate to groundwater. EPA can only assume from the RI that the Navy's interpretation is that no migration of metals from the leachate into groundwater has occurred. Yet additional investigation is to start this month. A discrepancy exists here.

2. The Navy contends that there is no relationship between leachate and groundwater and further contends that there is no inorganic contamination present in the OU5 area. However, under General Comments Response 2, the Navy did address the potential for migration of metals from leachate and groundwater to the salt evaporation ponds and adjacent wetland areas with the following comment:

> *Based on the A1-aquifer zone potentiometric surface map (Figure 3.6.2) groundwater flows from the Bay (Salt Water Evaporation Pond) toward the lift station (Building 191). Therefore, the possibility of groundwater from beneath Sites 1, 2, and 11 discharging into the Bay are remote; meaning that the groundwater would have to migrate against the existing flow direction.*

The potentiometric surface around Building 191 would need to be analyzed over time in order to defend this argument. As long as pumping continues at Building 191, the gradient in the A1-aquifer zone will likely be influenced. However, it appears that some contaminants, albeit organics, have been able to migrate into the wetlands unimpeded by the pumping at Building 191. As an example, trichloroethene, dichloroethane, dichloroethene, and tetrachloroethene were detected in recently obtained groundwater samples from the wetlands area from both the A1- and A2-aquifer zones.

Since it has been shown that organic constituents have already migrated into the wetlands, the Navy should present conclusions regarding the potential for inorganic constituents, e.g. metals, to migrate to the wetlands in the Chemical Fate and Transport section of the RI report.

Specific Comments

3. The following responses to comments were not incorporated into the Draft Final RI. EPA cannot approve a response to a comment without seeing the change.

Baseline Risk Assessment Response to Comments:

- General Comment 10 (no conceptual model)
- Specific Comment 1 (no text change found)
- Specific Comment 9 (no conceptual model)
- Specific Comment 12 (no text change found)
- Specific Comment 17 (no text change found)
- Specific Comment 22 (no text change found)
- Specific Comment 25 (no change in toxicity values)

4. One correction should be made to Table 6.2-1 to 6.2-10. The units as referenced should be ppm and not ppb. The correct units appear to have been used in the risk assessment analysis. In the draft comments, it was pointed out that incorrect values for lead were carried from these tables to the lead model tables (specific comment no. 26). This is still a problem. The value listed on the table is 3.36; in the lead

model, it appears as 3.36 ug/l. If the units are mg/l as they are for all other values reported in Table 6.2, then the values used in the lead model are incorrect. No sampling values for lead are provided for Aquifer C in the RI, so it is not possible to confirm what the sampled levels were or what the approporiate units should be.

Editorial Comments

5. The use of **bold** and ~~strike-out~~ characters for illustration of changes is very helpful for review of draft final documents. Their use would be appreciated in the future, if possible.