



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

March 31, 1995

Mr. Stephen Chao  
Naval Facilities Engineering Command  
Engineering Field Activity, West  
900 Commodore Way, Bldg. 101  
San Bruno, CA. 94066-2402

Re: *Draft Phase II Site-Wide Ecological Assessment Work Plan*, dated February 17, 1995

Dear Mr. Chao,

The U.S. Environmental Protection Agency (EPA) has received the subject document and provides the following comments. As you will see, most of the comments are the same as those provided on Chapter 3 to your contractor, Montgomery Watson, by fax a couple of weeks ago. Conversations between the agencies and Montgomery Watson earlier this week provided a preview of additional concerns. These comments, as well as those of the State agencies, reflect the consensus opinion of EPA, RWQCB and DTSC. If you have any questions, please call me at 415-744-2383.

Sincerely,

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

Michael D. Gill  
Remedial Project Manager  
Federal Facilities Cleanup Office

cc: C. Joseph Chou (DTSC)  
Michael Bessette (RWQCB)  
Ken Eichstaedt (URS)  
Sandy Olliges (NASA)  
Peter Strauss (MHB)  
Mike Young (PRC) (Fax)

2194

## COMMENTS

*Draft Phase II Site Wide Ecological Assessment Work Plan, dated February 17, 1995*

1. Section 2.3.4, page 2-10, para 1. It should be clarified that historical storm-water flow as well as past practices have contributed to the chemical loads seen at the stormwater retention ponds, Patrol Road and Marriage Road ditches and the Northern Channel.
2. Section 2.3.4, page 2-10, para 2. Are the flux ponds to be closed by NASA or the Navy? Please clarify this and state that the Navy is responsible for their remediation.
3. Table 2-1. This table should have included manganese as a COPEC, as agreed to at the SWEA Phase I meeting of March 8, 1995. There are also other possible COPECs to be added to this table, including cobalt and azinphos-methyl. These will be decided prior to finalizing the Phase I SWEA document.
4. Section 3.2.1, page 3-2. There is no justification presented for the change in the receptors and food chain modifications as nothing is presented to estimate the contaminants in vascular plants. The mallard will feed on many plants in addition to vascular plants which would most likely be aquatic vegetation.
5. Section 3.3.2.1, page 3-6. The rationale for selecting the indicator PAHs should include characteristics of the compounds that are similar for uptake by organisms, mechanism of toxicity and ultimate toxicity. Frequency of detection should not be the sole criteria.
6. Section 3.3.4.1, page 3-12. The locations in the Northern Channel, the stormwater retention ponds, and the Eastern Diked Marsh seem to be the same that we agreed to in earlier discussions. The criteria for judging the adequacy of the reference locations must include a comparison of the contamination levels to ER-L levels. Reference sample concentrations must be lower than ER-L concentrations. Otherwise, the location is not really a reference. The fallback position can be based on the responses in the bioassays for these locations. The responses at the no observed effects level then would be the target concentration as "background" or ambient.
7. Section 3.4, page 3-21 and Figure 3-16. The figure and its rationale is not clearly obvious. What physicochemical characteristics of the reference areas will be compared to the sample areas? What will be close enough? If the contaminants are below the ER-L levels, then EPA thinks that is sufficient to define a reference area as we have not seen any data from this site or others to convince us that other characteristics will override chemical contaminants. The figure must be redrawn to reflect comparisons of reference site bioassay results that must have 90% survival as the first criteria. If the survival is less than 90%, then the tests must be rerun and/or another reference location must be selected. If the reference site survival is greater than 90% and the test site control survival is greater than 80%, the comparisons can continue. If the test site controls are less than 80%, then the test must be rerun. Assume that the reference area has "acceptable" results and the sampling data shows "acceptable" results when the comparison of the test samples with the reference is made to evaluate for a significant difference. That is, the null hypothesis is that there is no difference between the test site results and the reference site results (whatever the endpoint). In this case (no significant difference), the sample location is taken to the risk characterization phase. On the other hand, if there is a significant difference, the location

must be further characterized for remedial options.

8. Section 3.4, page 3-22, para 2. The "Ratio-to-Reference" (RTR) criterion is a questionable procedure involving only chemical concentrations. The proposed work includes bioassay results that should be factored into the decision. The scale for the RTR for 5.0, 5.0 to 50.0 and above 50.0 has no relationship to effects and therefore is groundless. It does not have a benchmark and is a "floating" scale. The material on page 3-23 has no relationship to either measurement endpoints nor assessment endpoints and therefore is not following the overall guidance for conducting and analyzing the data for the environmental risk assessment. Combining the test results does not offer any summarization or integration of the data with any advantages that are apparent.
9. Section 3.5, page 3-23 and 3-24. This phase in the process must include more than a summary of the impacts that occurred in the bioassays. This phase should be the integration of the results with respect to how extensive the impact across the site was when evaluating the impact to the assessment endpoints. The results of the various tests must be summarized by severity of impact and compared to the concentrations of the COCs throughout the site to determine how extensive the significant impacts are for the site and what the significance is of these impacts to the receptors and the assessment endpoints.
10. Section 3.5.1, page 3-24, para 2. If "The nature of the sediment bioassays does not make it possible to evaluate or attribute the results of the bioassays to a specific chemical" in a way that will lead to possible remedial options, then a toxicity identification evaluation (TIE) is warranted and should be performed.
11. Section 3.5.3, page 3-28. This seems to be a continually troubling area. Toxicity profiles, if the Navy insists on producing them, must provide information on: 1) the mechanism of toxicity; 2) the known toxic effects; 3) known relationships for uptake characteristics; 4) literature review for ecological effects, not just toxicological effects; and finally 5) the relationship of the particular chemical to the particular receptor/endpoints and site conditions. Anything less than this information is less than desirable.
12. Section 3.5.3, page 3-29. The calculation of the "EQ" has no value in the risk characterization phase, but may be useful in the phase that calculates a hazard quotient, at the predictive phase for potential impacts.

#### **Editorial Comments**

13. Section 2.3.2, page 2-7, para 1. This paragraph may change, depending on the final resolution of OU5 proposed plan.
14. Section 2.5.1.1, page 2-19. The designation of the OC pesticide p,p'-DDE appears for the first time in this document. Please clarify that this is interchangeable with 4,4'-DDE.
15. Section 2.5.1.4, page 2-21, para 1. Please include units for the entry of "65,000" of Arochlor 1254 at SSWL-18.
16. Please use doubled-sided copies wherever possible.