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

May 22, 1997

Ernesto M. Galang
EFA West - Code 1832.5EG
Naval Facilities Engineering Command
900 Commodore Drive
San Bruno, California 94066-2402

Re: Draft Remedial Investigation Report, Addendum 1 - Contaminant Fate and Transport Modeling for Naval Station Treasure Island dated April 10, 1997

Dear Mr. Galang,

The U. S. Environmental Protection Agency (EPA) has received and reviewed the subject document. EPA's comments are enclosed.

If you have any questions, please call me at (415) 744-2383 or Mark Filippini, Site Hydrogeologist, at (415) 744-2395.

Sincerely,

Rachel D. Simons
Remedial Project Manager
Federal Facilities Cleanup Office

Enclosures

cc: Jim Sullivan, NAVSTA TI
Mary Rose Cassa, DTSC
Gina Kathuria, CRWQCB
Martha Walters, SFRDA
Sharon Tobias, PRC
File
Pat Nelson
Paul Hehn
ARC Ecology
Usha Vedagiri
John Allman
Admin Record File (3 copies)

Draft Remedial Investigation Report,
Addendum 1 - Contaminant Fate and Transport Modeling
for Naval Station Treasure Island
dated April 10, 1997

General Comments:

1. The overall assumptions applied to the models appear to be reasonably conservative to ensure that concentrations of contaminants would not be underestimated at the point of discharge at the Bay. However, specific input parameters for the physical characteristics of the aquifers for each of the IR sites could not be confirmed and are conflicting with data presented in the draft RI report dated October 22, 1996. Until the source of the input parameters can be confirmed, EPA cannot concur with the conclusions of this addendum (see Specific Comment #7).

2. a) In EPA's comments on the draft RI report dated January 15, 1997, General Comment #5(2) requested that the modeling report contain information for metals regarding redox potential for the groundwater, cation exchange capacity of the soils, and concentrations of humic and fulvic acids in the soils. None of this information was provided in Addendum 1. Please provide this information or explain why it is not available.

   b) In EPA's General Comment #4 on the draft RI report, plume maps were requested for each of the IR sites. These maps were not presented in Addendum 1. When will they be available?

3. A more thorough explanation of the calibration and sensitivity analyses needs to be provided (see Specific Comment #3).

Specific Comments:

1. Section 1.0 Introduction, page 1

EPA understands that groundwater cleanup levels will be calculated using the groundwater modeling. When will the clean up levels be presented?

2. Section 5.0 Selection of Constituents for Modeling, page 8

The first paragraph on this page describes the screening process for selecting chemicals for modeling. Metals were selected for modeling at each site only if their concentrations in site soils exceeded the ambient concentrations and their concentrations in site groundwater exceeded the AWQC.

EPA is concerned about the metals in groundwater that exceeded AWQC but were not modeled because their concentrations in soil did not exceed ambient concentrations. These metals are listed in Table 2 - Constituents Selected for Fate and Transport Modeling, Metals above AWQC, but Below Ambient.

The metals above AWQC but below ambient concentrations should not eliminated as ecological COPCs. These metals should be modeled. If the metals are ecological COCs based on the modeling, their source and ubiquitousness should be evaluated.

3. Section 6.2.2 Model Application, page 13

The first two paragraphs on this page describe the calibration and sensitivity analyses that were performed. Please provide a quantitative summary for each site of the calibration and sensitivity analyses performed. In addition, data gaps should be evaluated to determine if additional sampling points are required to confirm the conceptual model. Groundwater plume maps would be helpful for data gap analyses.

4. Section 7.1 CERCLA Sites, page 15

Site 07/10 - Pesticide Storage Area/Bus Painting Shop

In this section, chlordane was identified as a ecological COPC for Site 07/10. But in the draft RI report, chlordane was not identified as a groundwater COPC (see Section 8.9.3 Nature and Extent of Chemicals of Potential Concern in Groundwater, page 8-23). Please explain this discrepancy.

5. Section 7.1 CERCLA Sites, page 17

Site 12 - Old Bunker Area

In this section, fluoranthene, phenanthrene, endrin, heptachlor epoxide, arochlor-1254 and cadmium were identified as a ecological COPC for Site 12. But in the draft RI report, these compounds were not identified as groundwater COPCs (see Section 12.9.3 Nature and Extent of Chemicals of Potential Concern in Groundwater, page 12-34). Please explain this discrepancy.

6. Section 7.2 Petroleum-Only Sites, page 19

EPA cannot comment on these sites until the investigation results are presented in the Corrective Action Plan (CAP). The groundwater modeling should be incorporated into the CAP.

7. Table 3 Physical Characteristics of Aquifers, page 113

Input parameters based on the groundwater flow conditions were stated as being determined from the Phase II remedial

investigation, the results of which were presented in the draft RI report. These input parameters are presented in Table 3. In comparing the parameters presented in Table 3 with the results in the draft RI report, dramatic discrepancies were noted. For example:

a) Hydraulic conductivity for the aquifer beneath IR Site 05 is reported in Table 3 as 3.08 meters/day. However, the draft RI report states that no site-specific data were available and nearby Site 24 parameters were used instead. Site 24 hydraulic conductivity is reported to be 2.43 meters/day (7.97 ft/day) in the draft RI report Section 7.5.2 (page 7-6). Discrepancies also exist for effective porosity, hydraulic gradient, and groundwater velocity.

b) The parameters presented for Site 24 in Table 3 also did not agree with the values presented in the draft RI report.

c) Almost identical aquifer characteristics were presented in Table 3 for Sites 05, 07/10, and 09. A review of the draft RI report finds different characteristics for each of the three sites; none of which compare to the values given in Addendum 1. These sites are not near each other; therefore, similar aquifer characteristics would not be expected. No explanation for the source of these aquifer parameters is presented.

d) The hydraulic conductivity value for Site 11 presented in Table 3 is 0.85 meters/day, however the value presented in the draft RI report (page 11-8) is 1.58 meters/day. Similar discrepancy is found for groundwater velocity; 0.031 meters/day in Table 3 verses 0.067 meters/day (0.22 ft/day) in the draft RI report (page 11-10).

The effect of these differences in parameters may be significant and could trigger failures of the ambient water quality criteria at several sites. Please check the consistency of all the parameters in Table 3 with the draft RI report, cite the sources of the parameters and rerun the models with the corrected parameters.