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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105

SEP 05 11 01 14

September 5, 1995

Joseph Joyce  
BRAC Environmental Coordinator  
Environment and Safety (Code 1AU)  
MCAS El Toro  
P.O. Box 95001  
Santa Ana, CA 92709-5001

Dear Mr. Joyce:

EPA has reviewed the "Interim Operable Unit 1, Remedial Investigation Report, Draft Addendum," received on August 11, 1995. EPA forwarded draft comments on June 23, 1995 to facilitate the review process. Overall, the Navy selected the correct approach to evaluate the regional groundwater quality. EPA agrees with the observation that the regional groundwater quality in the Irvine sub-basin is poor based on our review of the data presented in this report. A meeting was held on 8/16/95 to discuss the draft regulatory comments. EPA comments and our understanding of the meeting conclusions are listed below.

First, it is our understanding that the BCT reached consensus on the statistical approach and the use of the geochemical model. The statistical approach is acceptable with the following modifications: the analysis will be presented with non-detects, from the two sampling rounds presented in this report, and a proposal to exclude non-detects in future evaluations. The discussion will stress the importance of determining the threshold and prove that the non-detects are not significant. It is agreed that the statistics will be recalculated after at least two more rounds of groundwater quality data is collected.

Second, the team agreed to include the geochemical model in the RI. The geochemical model will be presented as one possible conceptual model with other possible alternatives discussed. The Navy should consider and discuss the possibility that the lowering of redox levels as a result of anaerobic degradation of organics in the groundwater can result in the release of inorganics to the dissolved phase. As presented in the draft OU-1 RI, the Navy has proposed that reductive dehalogenation of chlorinated VOCs has likely occurred in groundwater under reducing conditions within the aquifer. The Navy should also add an enhanced discussion on gypsum as one of the sources for

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sulfate in groundwater. The discussion of the pyrite oxidation hypothesis should evaluate the probable difference in reaction rates in the unsaturated and saturated zones (due to available dissolved oxygen). The discussion of the conceptual model should present all relevant data; i.e., summary of borehole logs and stiff diagrams instead of referring to other documents. The model should not be presented as supportable when data are not available, such as Eh, pH, DO. The conceptual model should also address chemicals of concern at the site and a pathway analysis.

Third, the Navy agreed to remove the claim that the landfill(s) does not contribute inorganics to ground water. This will be addressed as part of the OU 2B RI/FS. Fourth, EPA does not agree with each of the recommendations to collect additional data to further support the model. The Navy should measure Eh, pH, and DO as field parameters, but the soil/rock analysis and geochemical modeling are not necessary at this point. The Navy may want to pursue the soil/rock analysis and geochemical modeling in the future depending on the data obtained pertaining to landfill leachate and the resolution of background.

If you have any questions, I can be reached at 415/744-2468.

Sincerely,



Bonnie Arthur  
Remedial Project Manager  
Federal Facilities Cleanup Office

cc: Mr. Juan Jimenez, DTSC  
Mr. Larry Vitale, RWQCB  
Mr. Andy Piszkin, SW DIV  
Mr. Dante Tedaldi, Bechtel