



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
ECOLOGICAL SERVICES  
Carlsbad Field Office  
2730 Loker Avenue West  
Carlsbad, California 92008

June 1, 1994

Mr. Duane Rollefson  
Naval Station Long Beach  
Code N46, Building 1, Room 268  
Long Beach, CA 90822-5000

Dear Mr. Rollefson:

The U. S. Fish and Wildlife Service (Service) appreciates the opportunity to comment on the Technical Memorandum No. 4, Draft Final Implementation of Final RI/FS Sampling and Analysis Plan For Naval Station Long Beach, Long Beach, California, dated April 28, 1994. Unfortunately, due to staffing constraints, the Service was not able to provide these comments by the May 13 deadline. Your consideration of these comments is greatly appreciated.

Based on a review of the above-mentioned document, it would appear that most of the major issues raised after review of the previous document have been addressed. The Service strongly supports the use of a variety of sediment tests which include endpoints other than mortality. Particularly important is the inclusion of an interstitial water bioassay as this is a direct measure of contaminant bioavailability as well as toxicity. However, some specific issues remain and should be addressed in the final document.

Regarding the determination of a biologically significant response, the current plan calls for an approach which may be too conservative. While requiring a statistically significant response and a difference of 20% or greater between sample and reference sediments may be appropriate for amphipods, this may not be the appropriate approach for all species being tested. If species-specific determinations of biological significance cannot be made, the Service recommends (for other than the amphipod tests) the use of the criterion put forth by the California Department of Toxic Substances Control. That is, the mortality in the sample sediments needs to be statistically significant relative to the reference sediments and exceed reference mortality by 10% or exceed reference mortality by 20% to constitute a "hit".

While the bioassays include internal replicates, the bioaccumulation tests are not planned to include such replication. It is not clear from the document how statistical analysis of the collected data and interpretation will be carried out without such replication and only two reference samples. What will constitute a positive result? In the last complete paragraph on page 6 of the document it is stated that positive results will lead to subsequent analysis. What is the subsequent analysis in this case?

Mr. Duane Rollefson

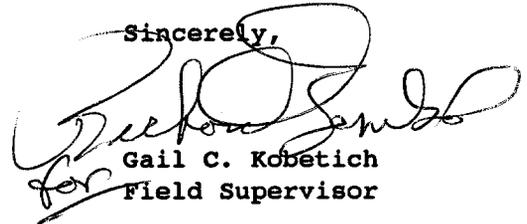
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While giving greater weight to biological performance criteria than bulk sediment chemistry is acceptable, it was not clear from the document exactly how results of the chemical analysis will be used in the decision making process. What will constitute a positive result in chemical analysis? Under what circumstances, if any, will "hits" found solely in chemical analysis lead to further testing?

Greater refinement of the decision tree, including more details regarding how results will be evaluated in the case of conflicting results would be very helpful in the Service's evaluation of the plan relative to trustee resources which use the area. Particularly important are the circumstances which trigger benthic community structure analysis, as this structure is the basis upon which use by and impacts to trustee resources in the area will occur.

Should you have any questions regarding these comments, please contact Carol Roberts of my staff at (619) 431-9440.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gail C. Kobetich".

for  
Gail C. Kobetich  
Field Supervisor