



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
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30 JUL 1997

Mr. Alan Lee, BRAC Environmental Coordinator
Department of the Navy, Base Realignment and Closure Office
Southwest Division, Naval Facilities Engineering Command
1420 Kettner Boulevard, Suite 507
San Diego, California 92101-2404

Subject: Draft Final Remedial Investigation for Site 7

Dear Mr. Lee:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Final Remedial Investigation for Site 7 and offers the following comments for your consideration in producing the final document. In general the document is complete and appears to address the majority of issues raised in review of the original draft document. The following points require some clarification in order to improve the final document:

Section 4.1.2.1 Negative Control Performance Criteria, p. 4-4: Is it possible to quantify how the inclusion of replicates which did not meet the negative control criterion affected the comparison with sample bioassay results? It would be helpful to know if the significance of the statistical comparison would change if those replicates were dropped. If the statistical significance did not change, that would strengthen the argument for inclusion of replicates that did not meet the criterion.

Section 4.1.2.3 Water Quality, p. 4-5: Bioassay results that are inconclusive as a result of unionized ammonia and hydrogen sulfide should not be considered evidence for sediment toxicity, but these sediments cannot be considered to be free of toxicity by virtue of these inconclusive results. The document appears to indicate that these stations are not Areas of Ecological Concern (AOEC's), but inconclusive results do not allow for these areas to be dropped from the list of AOEC's. If the tests cannot be repeated, decisions must be based on the weight of other evidence for that site.

Section 4.4.1.1 Metals, p. 4-16: Arsenic was found at higher concentrations near the upper end of the subsurface core samples than in the deep end of the core. This suggests a more recent source. Has the Navy been able to identify the source for arsenic in the West Basin? Beryllium and chromium showed similar patterns. Mercury (p. 4-19) in those core samples is only found

beneath piers. Is there any indication why this would be the case? The discussion should reflect the information available at this time on these source issues.

Section 4.4.1.6 Semi-Volatile Compounds, p. 4-27: Is there any explanation for the high concentrations of chlorobenzene compounds in subsurface sediments at Station 51?

Section 4.4.2.3 Clam Bioaccumulation, p. 4-30: Do outfall patterns shed any light on the higher bioaccumulation of "4,4'-DDE" in clams in the West Basin than at the reference site where sediment concentrations of that compound were higher?

Section 4.5.2.5 Species Composition, p. 4-36: Is there any explanation from the physical or chemical data for the non-pier stations being different from the reference in terms of crustacean abundance, molluscan abundance and number of mollusc species? These differences should be evaluated as part of this process.

Section 4.5.2.6 Evaluation of Benthic Community, p. 4-38: The clustering of hits extending from the fuel pier would suggest that contamination from activities there have impacted the benthic community. These stations may form a functional unit in terms of the Feasibility Study.

Section 4.7 Summary of Site Characterization, p. 4-42: In summarizing the sediment toxicity on a basin-wide basis, important information is lost that should figure into remedial decisions. This summary should clarify the problems associated with bioassays of pier versus non-pier stations and the different sensitivities of the organisms used in the bioassays.

Section 6.1.3.1 Assessment Endpoints, p. 6-8: Higher productivity of the harbor seal is cited as a reason for choosing it as an endpoint over an avian receptor. Is the lower productivity of the marine birds in the Southern California Bight related to food availability, or could it be related to widespread contamination? If it is the latter, this difference in productivity could indicate greater sensitivity in marine birds, a factor which should be considered in choosing assessment endpoints.

Section 6.1.3.2 Measurement Endpoints, p. 6-10: Please clarify what is meant by the endpoint "demersal fish prey value".

Section 6.3.1.1 Bioassay, p. 6-14: Polychaete test results indicate that beneath pier conditions may not be as toxic to polychaetes as an examination of the chemistry and echinoderm bioassay might have suggested. Because the polychaete bioassay is the least sensitive of the tests used, caution should be used in drawing conclusions that extend to the entire benthic community based solely on those test results, especially in light of the fact that other bioassays were employed and indicate toxicity.

Section 6.3.1.2 Benthic Community, p. 6-18: While a functional benthic community does exist at stations with high sediment chemical concentrations, those communities are considered only semi-healthy. The correlation analysis (6-20) discussion appears to dismiss the negative correlation

between numbers of species for polychaetes, crustaceans and the overall benthic community and arsenic, beryllium, chromium and nickel in the concluding sentence of the section which states, "none of the other sediment chemical compounds were well correlated with the benthic community." Please clarify the role of normalizing the metals to percent fines in drawing this conclusion.

Section 6.3.1.3 Bioaccumulation - Clam, p. 6-23: No correlation was found between the concentrations of pyrene at beneath pier station sediments and the clams. Only three stations were evaluated, and this may not be adequate to see a statistical correlation. The lack of a statistical relationship in such a small sample size may not allow us to dismiss bioaccumulation as a concern at these beneath pier stations. Comparisons are also drawn between pyrene in the West Basin and regional and national figures for high molecular weight polynuclear aromatic hydrocarbons (HPAH's). This comparison may not be appropriate if these regional and national figures included cumulative totals for the HPAH's, versus the concentration of only pyrene at the West Basin.

Section 6.3.3 Hazard Quotient Approach, p. 6-28: Please specify what species was/were used in the literature values considered to determine harbor seal exposure.

Section 6.4.1.3 Determination of West Basin AOEC and COEC, p.6-33: The description given for Category 2 seems to imply that none are AOEC's, but several of these sites are subsequently identified as AOEC's. The description should be modified to better reflect the AOEC's carried over in this category.

Section 7.3 Recommendations, p. 7-4: The Service concurs with the recommendation to proceed with the CERCLA process for the AOEC's, focussing on the reduction of ecological risks associated with Contaminants of Ecological Concern (COEC's) in sediments.

The Service appreciates the opportunity to provide comments on this document. If you have any questions, please contact Carol Roberts of my staff at (760) 431-9440.

Sincerely,



Gail C. Kobetich
Field Supervisor

cc: Omer Kadaster, Kleinfelder/Bechtel National, Inc.