

## DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Region 4  
245 West Broadway, Suite 350  
Long Beach, CA 90802-4444



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NAVSTA LONG BEACH  
SSIC #5090.3

September 2, 1993

Mr. Allen Lee  
Remedial Project Manager  
Southwest Division  
Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, California 92132-5181

Dear Mr. Lee:

SEDIMENT BIOACCUMULATION PROPOSAL FOR SITE 7: LONG BEACH NAVAL  
COMPLEX

The Department of Toxic Substances Control (Department) is hereby responding to the proposed modifications to the bioaccumulation testing program for Site 7 harbor sediment samples. Enclosed is a memorandum from Dr. James Polisini, Staff Toxicologist from the Human and Ecological Risk Section of the Department's Office of Scientific Affairs. Dr. Polisini's comments on the limiting of samples analyzed, and his additional comments concerning specific details of the bioaccumulation program, should be incorporated into the RI/FS Workplan.

In the future, any recommendations or suggested modifications to previously agreed upon details of the RI/FS Workplan must be transmitted through the Department's project manager for the facility in question.

Sincerely,

Craig A. O'Rourke  
Hazardous Materials Specialist

Enclosure

cc: Mr. Albert Arellano, Jr., P.E.  
Unit Chief  
Base Closure Branch  
Department of Toxic Substances Control  
245 West Broadway, Suite 350  
Long Beach, California 90802



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Dr. James Polisini  
Office of Scientific Affairs  
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Permits Section  
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San Francisco, California 94105

**Memorandum**

Date: August 24, 1993

Craig O'Rourke  
Site Mitigation Branch  
Region 4  
245 West Broadway, Suite 350  
Long Beach, CA 90802

From : Office of Scientific Affairs  
400 P Street, 4th Floor  
P.O. Box 806  
Sacramento, CA 95812-0806

Subject: Long Beach Naval Complex Sediment Bioaccumulation Proposal  
[PCA 14615, Site 400289-43]

**Background**

I have reviewed the proposal for limiting the bioaccumulation testing in the first phase of study for Site 7 at the Naval Complex Long Beach. The outline of this proposal is contained in a memorandum from Kathy Brewer of CH2M Hill to Alan Lee of SOUTHWESTDIV, dated July 22, 1993. The major point of the proposal is to limit the bioaccumulation testing to nine or ten sediment samples instead of the 46 samples originally proposed. This change would result in a cost savings of approximately \$200,000 if no further bioaccumulation testing is required in Phase II.

**General Comments**

The July 22, 1993 memorandum notes an my objection to modeling bioaccumulation, which had been expressed at an earlier meeting. This was a disagreement with using modeling as the sole approach in evaluating the potential threat posed by bioaccumulation of contaminants. Bioaccumulation modeling can be a useful tool in cases where the model can be calibrated with field-collected data. In general, I would agree with a proposal for reduced bioaccumulation testing which includes calibration of the chosen model using site-specific physical and biological data.

**Specific Comments**

I disagree with the statement made in the first sentence on page 2 of the memorandum. Evaluation of bioaccumulation may still be required to determine the extent and scope of remediation, even if sediment toxicity testing indicates the necessity for remediation of sediments.

I agree with the proposal, stated in the second paragraph on page 2, to perform bioaccumulation testing on nine or ten samples instead of all 46 sediment samples. The exposure

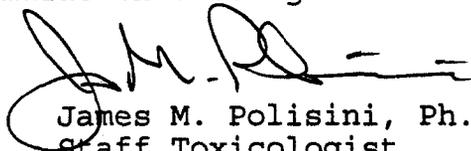
period, however, remains to be determined based on the chemicals of concern and the selection of the bioaccumulation protocol. The bioaccumulation test period cannot be specified as "short-term" (first line of second paragraph) until this information is available. The sediment samples used in the bioaccumulation testing should not be selected randomly, but selectively based on the physical or biological parameters of the model which need to be calibrated with site-specific data. The bioaccumulation samples should be selected to include a range of site locations which are expected to cover a significant amount of the contaminant concentration range.

The purpose of the bioaccumulation testing will be to calibrate the selected bioaccumulation model. In the event the model cannot be calibrated to be sufficiently accurate, the bioaccumulation testing will serve to directly evaluate the potential threat due to bioaccumulation. There should be no "conflicting information" which cannot be resolved.

#### Conclusions

In general I agree with the proposal to perform bioaccumulation testing on nine or ten sediment samples instead of all 46 samples.

A more detailed proposal should be prepared prior to proceeding along the line of investigation outlined in the CH2M Hill memorandum of July 22, 1993. This detailed proposal should specify the bioaccumulation model proposed and the reasoning used to select that model over any other alternative models, the sampling locations and the reasoning used to select these locations, the bioaccumulation protocol and the reasoning used to select the protocol, and the decision criteria to be used in comparing the results of the model output and the bioaccumulation testing.



James M. Polisini, Ph.D.  
Staff Toxicologist  
Human and Ecological Risk Section

Reviewed by : John P. Christopher, Ph.D., DABT  
Staff Toxicologist  
Human and Ecological Risk Section



cc: Michael J. Wade, Ph.D., DABT, HERS  
Judith A. Parker, Ph.D., DABT, HERS