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NAVSTA LONG BEACH  
SSIC #5090.3  
**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL OCEAN SERVICE  
OFFICE OF OCEAN RESOURCES CONSERVATION AND ASSESSMENT  
HAZARDOUS MATERIALS RESPONSE AND ASSESSMENT DIVISION  
COASTAL RESOURCES COORDINATION BRANCH  
c/o U.S. Environmental Protection Agency (H-1-2)  
75 Hawthorne Street  
San Francisco, CA 94105-3901

April 11, 1994

Mr. Allen Lee  
Southwest Division  
Naval Facilities Engineering Command  
1220 Pacific Highway  
San Diego, CA 92132-5181

Dear Allen:

The U.S. Department of Commerce/National Oceanic and Atmospheric Administration (NOAA) appreciates the opportunity to review and comment on Technical Memorandum No. 4, Draft Implementation of Final RI/FS Sampling and Analysis for Naval Station Long Beach, Long Beach, California, March 1994.

As a co-trustee with the Navy under Subpart G of the National Contingency Plan § 300.615(a), and CERCLA 104(b)(2), NOAA is seeking to coordinate with the Navy in their assessment of ecological risk from releases of hazardous substances into the aquatic environment, and to assist the Navy in their evaluation of the potential injury to the natural resources at Naval Station Long Beach. NOAA, through the Coastal Resources Coordination program, provides technical support during the remedial process to assist in investigations and remedial decisions as they relate to NOAA trust resources.

#### COMMENTS

##### Section 2.1 Rational for Sediment Evaluation Decision Tree

In establishing "performance criteria" for the bioassays (p. 4, para. 5), the document suggests an exceedance of **both** a 20% difference between test and reference organisms and a statistically significant difference in survival based on a Student's t-test. Either a 20% difference or a statistically significant difference in survival should trigger the next step in the proposed decision tree.

As indicated in the text (p.5, para. 4), physicochemical factors can effect the results of bioassays. Therefore, it is important to collect data on ammonia and sulfide levels at the beginning and end of the bioassays. A review of the attached protocols did not indicate that ammonia or sulfide would be part of the data collected during the bioassays. There are procedures that have been developed to identify which components in the sediment are causing toxicity. It is inappropriate to assume that toxicity is not related to contaminants without collecting the appropriate information during bioassays and chemical analysis of sediments.



## Section 2.2 Defining Potential Water Column Toxicity

At the bottom of page 29 in the Final Risk Assessment Work Plan, RI/FS, Sites 1, 2, 3, 4, 5, 6A and 7, Naval Station Long Beach, CA, January 30, 1994, the authors state four questions stated "that the risk assessment seeks to answer".

Question 3, "Are chemicals in the sediment released to the water column at toxic levels when the sediment is disturbed by ship trafficking the harbor?", and question 4, "Are the chemical concentrations in groundwater high enough to adversely affect aquatic marine life?" These two questions do not appear to be addressed in this Implementation document.

How will questions 3 & 4 be answered? The proposal to take composited water column samples, perform sea water bioassays, and *in situ* bioaccumulation testing will not answer these questions. Will groundwater data be available to determine if there is an impact to the marine biota?

These are important questions and the procedures proposed to determine the answers should be included in the Implementation document.

It is unclear what useful information will be collected from the proposed compositing of water column samples from the five depositional areas (p.9, para. 1)? Will the Navy assume that if there are contaminants in the water column from a composited sample that the entire depositional area is a problem and should be considered for further evaluation or remediation?

Discrete sampling and chemical analysis of the water column, along with suspended particulate data and salinity measurements will provide information that can be used in determining the necessity of source control. In addition, data collected in this manner provides information on potential spatial and vertical gradients and the variability in the harbor.

On page 7, para. 2, there is a statement concerning the "key disadvantage" for the proposed Tier 3 bioaccumulation study. If the proposed testing is "not diagnostic of the water pollution caused by sediment contamination in Harbor sediments", why is this test being proposed? Since the objective of this study should be to distinguish problems associated with the harbor sediments, perhaps another, more definitive test should be proposed.

## Section 2.3 Benthic Community Analysis

In the event that benthic community analysis is triggered, what criteria will be used to assess a "healthy benthic community" (p. 7, last para.)? The criteria for "not significantly affected" should be clearly stated in this document.

## Section 2.7 Toxicity Endpoints

Mortality alone is not an appropriate endpoint for the proposed bioassays.

Based on data available from NOAA National Status and Trends program, the polychaete worm, *Nephtys sp.* is an inappropriate organism to use for this investigation. East coast investigation have shown these polychaetes to be quite insensitive to particular contaminants in sediment. The Army Corps Green Book protocols are appropriate for evaluating dredged material for possible ocean disposal, they are not appropriate protocols for use in an ecological risk assessment.

NOAA suggests that the Navy consider other bioassays that use growth and development as endpoints. The selection of organisms, endpoints, and bioassays is an important aspect of assessing the impact of contaminants to biota. In the interest of time, quality of data, and the best use of taxpayers money, it is suggested that the Navy reevaluate the proposed bioassays and endpoints.

## Section 2.9 Selection of Project Reference Locations

It is unclear from the document how the reference stations selected will be used in this investigation. NOAA disagrees with the statement that it is appropriate to select "more contaminated and perhaps slightly toxic locations" as "area reference" locations.

Based on the statement on page 13, the type of benthic habitat and grain size in the harbor is unknown. What criteria were used to select reference sites with sediments "most similar to study sediments"? As stated in the Implementation document on page 14, it is critical to the interpretation of the bioassay results that the grain size and TOC are similar for the reference and the study areas.

It is suggested that a preliminary scoping be conducted to determine the grain size and TOC of the harbor and potential reference areas before proposing final reference areas. This information should be made available to the reviewers of this document to aid in the selecting appropriate reference areas. Since some of the areas proposed as references have been evaluated in recent studies by NOAA and the state of California, it is likely that some of this information may be available without additional field scoping of the proposed reference areas.

The exact location of the two suggested reference stations on figure 2 is unclear. What data are available to support the selection of these two sites as reference areas? They appear to be very close to the Mole and could be impacted by releases from the site. Evidence should be presented that shows these are a both unimpacted by operations and releases from NS Long Beach, and that they are similar in grain size, habitat, and TOC.

I will be attending the meeting on April 13 at the Bechtel building in Norwalk. Accompanying me will be Dr. Robert Dexter, of EVS Consulting in Seattle, and Dr. Herb Curl with the NOAA Hazmat program. We will be happy to discuss these comments and recommendations with you at that time. If you have any questions about these comments before the meeting, please feel free to contact me at (415) 744-3126.

Sincerely,



Denise M. Klimas  
Coastal Resources Coordinator

cc: Ms. Sheryl Lauth, EPA RPM  
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