

October 6, 1972

Mr. Paul De Falco, Jr.
Regional Administrator
Environmental Protection Agency
Region IX
100 California Street
San Francisco, California 94111

Dear Mr. De Falco:

Proposed Guidelines for Determining
the Acceptability of Dredged Spoils
to Marine Waters

We were very pleased to be given the opportunity to review the draft of the proposed guidelines referred to above submitted with your letter of 22 September. Unfortunately, an inexplicable delay in the receipt of copies of the guidelines by our potential reviewers in the UH has delayed and limited our response. The Water Resources Research Center is scheduling two workshops next week that bear heavily on the substance of the document. We will transmit any pertinent results to you as soon as they are available. In the meantime we provide the following comments.

The rationale for the proposed guidelines appears appropriate and the document includes a useful review and analysis of pertinent background information. The document recognizes that appropriate standards for various pollutants in sediments subjected to dredging may vary considerably from place to place. If no data pertinent to the setting of standards were available for a particular locale, the best that can be done is to use general criteria. However, the wisdom of adopting general specifications depends critically upon the rigor with which adherence to such specifications is required. If they are considered as guidelines, subject to modification in accordance with local conditions, they will be most useful. If they are regarded as inflexible standards, there will surely be localities in which seriously erroneous decisions will be made.

We note that the backgrounds on the basis of which the guidelines have been developed are San Diego and San Francisco Bays. We have not been able to assemble data from our on-going Coastal Water Quality Study pertinent to the evaluation of the guidelines, but some data from soil analyses of the Hawaii Agricultural Experiment Station suggests immediately that some of the

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proposed guidelines are ill adapted to our volcanic environment. The following are examples:

| Element | Suggested guidelines for sediments to be dredged mg/kg | Hawaiian soil concentrations, mg/kg | Factor |
|---------|--|---|-------------|
| Ni | 50 | 98 to 661 | 2 to 3 |
| Cr | 100 | 130 to 9290 | 1 1/2 to 93 |
| Cu | 50 | to 350 | to 7 |

We think it should be noted that the increase in chlorophyll *a* in the algal bioassay method suggested would depend critically on the algal species used and on the temperature.

We think it should be noted that the effects of the concentration of sediment specified for the fish bioassay would depend critically upon the size range of the sediment particles. With a predominantly sand-sized material resedimentation of most of the material will be very rapid and the concentration of suspended material in the test will be very small whereas in an actual dredging operation, the concentration of fine-silt and clay-sized particles might be quite high.

We will forward to you any additional pertinent comments as soon as we can.

Yours very truly,

Doak C. Cox
Director

DCC/wto

cc: L. S. Lau
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