United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In reply refer to:
FWS/EC-04-014

JAN 1 2 2004

Thomas Macchiarella
BRAC Environmental Coordinator
Department of the Navy, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, California 92101

Subject: Alameda Point Seaplane Lagoon – Draft Remedial Investigation Report

Dear Mr. Macchiarella:

Thank you for providing the U.S. Fish and Wildlife Service (Service) with the opportunity to review and comment on the Navy's Response to Comments on the Draft Remedial Investigation (RI) Report for the Seaplane Lagoon at Alameda Point. In general, we appreciate the Navy's responsiveness to the Service's comments on the Draft RI. However, there are several topics that the Service believes require further consideration. These are discussed below under the section headings used in the Navy's response letter.

Ecological Risk Assessment

1. Least Tern Use of the Seaplane Lagoon. Reevaluation of the site use factor (SUF) for terns will be appreciated. Because least terns are protected at the individual level, use of the mean foraging time (10 percent) is not a sufficiently protective assumption. The upper range of 18 percent, based on several years of monitoring, should be the minimum value used. Because the foraging observations are not based on marked birds, the Service recommends 25 percent to provide a margin of error in the event that individual birds forage in the Seaplane Lagoon in excess of 18 percent of the time. However, reevaluation of the foraging data might provide a rationale for a different SUF.

Development of the Feasibility Study (FS) Footprint

2. Use of 28-day *Macoma* Test to Represent Food Chain Exposure. The Service continues to disagree that the 28-day laboratory bioaccumulation test with a single species of bivalve adequately represents bioaccumulation in resident fish species, particularly for polychlorinated biphenyls (PCBs) and dichlorodiphenyltrichloroethane and its metabolites (DDXs) that biomagnify with trophic level. The data included in the RI report indicate that maximum concentrations of PCBs and DDXs in forage fish from the

Seaplane Lagoon exceed the maximum concentrations in *Macoma* tissue. It is not clear why the *Macoma* data are used to represent prey concentrations of these compounds for evaluating exposure of piscivorous birds.

3. Use of Ambient Exposure in Developing the FS Footprint. For both the Seaplane Lagoon and Hunters Point Naval Shipyard, the Service has recommended that ambient exposure of receptors with SUFs less than 1.0 should be factored into calculation of the preliminary remediation goals (PRGs). The Navy has suggested that the conservative assumptions used in the oral dose models to assess site-specific exposure of ecological receptors make an adjustment for ambient exposure unnecessary. The Service agrees that the assumptions used in the oral dose models tend to be conservative, and that including ambient exposure in the calculation of the PRGs is also a conservative measure. However, it cannot be further assumed, without evaluation of specific contaminants of potential ecological concern (COPECs) and receptor life histories, that the conservatism of the oral dose calculation is equivalent to the conservatism of adjusting for ambient exposure, and therefore negates the risk associated with ambient exposure of more widely ranging receptors.

Uncertainty Analysis

4. Use of a Hazard Index to Characterize the Potential for Cumulative Effects. The proposed text change for the section on the risk characterization uncertainty analysis does not adequately address the Service's recommendation to use an additive hazard index. The toxicity reference values (TRVs) used in the RI risk assessment were specifically selected to evaluate reproductive endpoints. In the case of COPECs identified at the Seaplane Lagoon, the cadmium TRV is based on observations of kidney degeneration in juvenile birds, the PCB TRV is based on observations of decreased egg production in adult birds, and the DDX TRV is based on observations of egg failure to hatch. This suggests that the above compounds could have cumulative effects on the reproductive success of avian receptors, even though they act through different biochemical mechanisms, because they all potentially affect key parameters associated with the number of young fledged per nest: number of eggs produced, number of eggs that hatch successfully, and number of young hatched that survive to fledge. An additive hazard index is therefore justified.

If you have any questions regarding this letter, please contact Dr. Beckye Stanton at (916) 414-6733.

Sincerely,

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Acting Field Supervisor

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