



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
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IN REPLY REFER TO:
FWS/EC-03-051

MAY -2 2003

Mr. Richard Weissenborn
Department of the Navy
Southwest Division
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5190

Dear Mr. Weissenborn:

Subject: Comments on the Draft Site Inspection Report, FED-1A Transfer Parcel,
Alameda Point, California

Thank you for providing the U.S. Fish and Wildlife Service (Service) with the opportunity to comment on the draft FED-1A Transfer Parcel Site Inspection Report for Alameda Point. We appreciate the Navy's efforts to address our concerns regarding the condition of the parcel prior to its transfer to the Service for inclusion in the San Francisco Bay National Wildlife Refuge Complex. We have the following comments, beginning with Appendix E due to the importance of that appendix to the main body of the report.

Appendix E. Derivation of Avian Soil Screening Levels for PAHs.

Page E-1. Derivation of Avian Soil Screening Levels for Polycyclic Aromatic Hydrocarbons (PAHs). The specific PAH identified in the appendix is acenaphthene, one of the non-carcinogenic PAHs. Because the mechanisms of action are different for non-carcinogenic and carcinogenic PAHs, we recommend that a similar process be used to develop soil screening levels for benzo(a)pyrene (Walker *et al.* 2001), which is considered the most toxic of the carcinogenic PAHs. A mammalian toxicity reference value (TRV) of 1 mg/kg-day provided by Opresko *et al.* (1994) should be used to derive soil screening levels for small mammals and predators such as the gray fox. Current literature should be reviewed to identify an appropriate avian TRV.

Page E-2. Exposure Assessment. For reasons that will be discussed below, the conversion of the American robin's dry weight ingestion rate to a wet weight ingestion rate is unnecessary.

Page E-2. Toxicity Assessment. The toxicity assessment is unclear about how the recommended avian TRV for acenaphthene was calculated. It is based on a Lethal Dose₅₀ for red-winged

blackbirds of 101 mg/kg in food (presumably dry weight, although this is not stated) reported by Schafer et al. (1983). Using a female red-winged blackbird body weight of 40 grams (Terres 1980) and formula 3-3 in U.S. EPA (1993) results in a food ingestion rate of 0.00716 kg/day. Using equation 4-23 in U.S. EPA (1993) for food ingestion only results in an acute dose of 18 mg/kg-day. Applying the acute-chronic uncertainty factor of 0.1 gives a chronic dose of 1.8 mg/kg-day. However, the Navy/Biological Technical Advisory Group methodology for developing TRVs (U.S. Navy 1997) requires two additional uncertainty factor adjustments to account for Lowest Observed Adverse Effect Level-to-No Observed Adverse Effect Level conversion (0.1) and the short duration of the acute study (0.1). Applying these two adjustments results in a TRV of 18 ug/kg-day, almost an order of magnitude lower than the 101 ug/kg-day recommended in the report. Since the value of the TRV enters into the next step of calculating an avian soil screening level, a more detailed explanation of the calculations used in the appendix would be helpful.

Page E-3. Calculation of Avian Soil Screening Level. The Avian Soil Screening Level recommended in the report was calculated using the TRV previously discussed and a wet weight ingestion rate calculated for the American robin. However, U.S. EPA (1993) specifies that when incidental soil ingestion is being included in the calculation of dose, the dry weight ingestion rate should be used. Recalculating the soil screening level using the dry weight ingestion rate and a TRV of 18 ug/kg-day results in a value of 714 ug/kg versus the 1,203 ug/kg in the report. Reducing the number of TRV adjustments by one (so the TRV=180 ug/kg-day) results in a screening value of 7,140 ug/kg in soil, which emphasizes the importance of the TRV and ingestion rate in the process of establishing soil screening levels. The assumptions used in the appendix should therefore be reviewed and revised in discussion with the Service and the regulatory agencies.

Data Evaluation

Page 4-6. Ecological Screening Criterion. This section should be revised depending on the outcome of a review of the information and methodology in Appendix E.

In addition, we have reviewed the comments submitted by Dr. Robert Risebrough on behalf of the Golden Gate Audubon Society. We agree with Dr. Risebrough that further characterization of the PAHs to determine their origin and bioavailability will be helpful in evaluating the Area of Concern identified in the report.

If you have any questions, please contact Mr. James Haas of my Environmental Contaminants Division at (916) 414-6604.

Sincerely,



David L. Harlow
Acting Field Supervisor

cc:

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