



# Department of Toxic Substances Control

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Winston H. Hickox  
Agency Secretary  
California Environmental  
Protection Agency

May 7, 2002

Edwin F. Lowry, Director  
700 Heinz Avenue, Suite 200  
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Gray Davis  
Governor

N00236.000378  
ALAMEDA POINT  
SSIC NO. 5090.3

Richard Weissenborn  
Department of Navy  
Southwest Division  
Naval Facilities Engineering Command  
1230 Columbia Street, Suite 1100  
San Diego, CA 92101

## **DRAFT HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT, RUNWAY WETLAND, ALAMEDA POINT, ALAMEDA, CALIFORNIA**

Dear Mr. Weissenborn:

The Department of Toxic Substances Control (DTSC) has reviewed the above referenced document submitted by the Navy on February 25, 2002. Attached are our comments. If you have any questions, please contact me at 510-540-3767.

Sincerely,

Marcia Y. Liao, Ph.D., CHMM  
Hazardous Substances Engineer  
Office of Military Facilities

Enclosure

cc: see next page

Mr. Richard Weissenborn

May 7, 2002

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cc: Michael McClelland, SWDiv  
Andrew Dick, SWDiv  
Steve Edde, Alameda Point  
Anna-Marie Cook, EPA  
James Haas, USFWS  
Marge Kolar, USFWS  
Chris Bandy, USFWS  
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Elizabeth Johnson, City of Alameda  
Peter Russell, Northgate Environmental mgt  
Michael John Torrey, RAB Co-Chair  
Lea Loizos, Arc Ecology  
Karla Brasaemle, Tech Law

## MEMORANDUM

**TO:** Marcia Liao  
Office of Military Facilities - Berkeley  
700 Heinz, Building F, 2<sup>nd</sup> Floor  
Berkeley, CA 94710

**FROM:** James M. Polisini, Ph.D.  
Staff Toxicologist  
Human and Ecological Risk Division (HERD)

**DATE:** May 6, 2002

**SUBJECT:** DRAFT HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT  
FOR NAVAL AIR STATION (NAS) ALAMEDA) RUNWAY WETLAND  
[PCA 18040 SITE 201210-00 H:40}

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### **Background**

We have reviewed the document titled Runway Wetland Human Health and Ecological Risk Screening Report, Alameda Point, Alameda, CA, DRAFT, dated 22 February 2002. The authoring group for this report is uncertain as the title page indicates it was 'Prepared for Southwest Division Naval Facilities Engineering Command of San Diego, but no consultant firm is listed. This review is in response to your written work request.

NAS Alameda occupies the western third of Alameda Island and has been a military installation since 1930. NAS Alameda is a closed Navy base. NAS Alameda occupies 2842 acres of land, water and airspace easement. Of this 1734 acres are land. The majority of the land at NAS Alameda was created by filling existing tidelands with dredged material from San Francisco Bay and the Oakland Inner Harbor.

The runway wetland encompasses approximately 27 acres at the south central portion of NAS Alameda. Approximately 927 acres, including the Runway Wetland, are scheduled to be transferred to the U.S. Fish and Wildlife Service (USFWS) as part of the Alameda National Wildlife Refuge (NWR). The projected USFWS NWR will encompass approximately 578 acres of terrestrial habitat and 349 acres of open water.

### **General Comments**

As the USFWS is scheduled to obtain transfer of approximately 927 acres, including the Runway Wetland, HERD defers to the USFWS comments regarding the Ecological Risk Assessment (ERA). The comments furnished regarding the ERA concern the methodology and checked to be consistent with other Department of Defense (DoD) sites in California.

HERD does not agree with any 'Navy Policy' regarding bioavailability of potential contaminants in soil, sediment or water. Any decision regarding bioavailability is strictly a site-specific decision.

### **Specific Comments**

1. Potential future anthropogenic disturbances of the soil are termed '...likely negligible.' (Executive Summary, page ES-2). Other DoD sites in California have evaluated the potential exposure to USFWS supervisors and field volunteers performing habitat enhancement during the first years of USFWS management. Please explain why these potential future exposure scenarios were not evaluated.
2. The statement that there is no evidence that '...hazardous materials...' were not placed in the Runway Wetland (Section 2.1, page 2-2) cannot be made when four lines prior the statement is made that some of the material '...may have originated from Seaplane Lagoon.' The waste classification of the sediments in the Seaplane Lagoon has yet to be determined. In addition, the area of sediment removal appears to have been the northwest corner of the Seaplane Lagoon, which is one area with some of the highest sediment contaminant concentrations. Please amend the last sentence of the section to include the phrase that '...with the exception of material from the Seaplane Lagoon there is no evidence that hazardous materials...'. A similar amendment should be made to the ERA discussion (Section 6.2, page 6-1).
3. Please explain why it is 'likely' that diversity and abundance will increase once the USFWS begins management of the parcel (Section 3.1.5, page 3-4). This would indicate that active management will occur and that differing Human Health Risk Assessment (HHRA) scenarios should be investigated.
4. Please explain how the column listing 'Mean Number Survival' (Table 3-1, page 3-5) for station R4 can be 5.2, when the number of polychaetes per replicate test chamber are listed as '5 juvenile organisms' (Section 3.1.5, page 3-4).
5. The USFWS should consider that surface water concentrations (Table 3-7, page 3-13) for copper exceeded the Ambient Water Quality Criteria (AWQC) of 2.9 µg/l in 2 of five samples, while the detection limits on the remaining 3 samples appear to have been 25 µg/l. This comment is intended for the USFWS staff included in the distribution list and does not require a response from the Navy consultants.
6. Mouse hides were analyzed separately from carcasses (Section 3.4.3, page 3-27). Where are these concentrations reported? The summary of mammal tissues (Table 3-14) lists only a single concentration term. Please forward the carcass and hide concentrations for HERD review.
7. The USFWS should be consulted to verify that no habitat enhancement projects will be performed which might increase the inhalation exposure of particulates above those proposed for the occupational and recreational scenarios evaluated (Section 4.4, page 4-5). In the event habitat enhancement projects are considered by USFWS, a scenario incorporating USFWS supervisors and field workers should be included in the HHRA.
8. The San Francisco Regional Water Quality Control Board should be consulted for concurrence with the technical memorandum concluding that groundwater is not suitable as a source of drinking water (Section 4.4, page 4-6 and Section 5.2, page 5-2). Otherwise, this exposure pathway should be included in the intake calculation for the HHRA.
9. The entire HHRA is based on eight sediment samples (Table 5-2 and Section 5.4, page 5-10). However, given the limited size of the Runway Wetland in comparison

to the entire base, the projected transfer to USFWS and the concentrations detected HERD agrees with the results of the HHRA presented. The scenarios evaluated would not assure protection of human health for residents or long-term employees and is dependent on USFWS assurance that headquarters or residences for an on-site supervisor or staff will not occupy the area of the Runway Wetland.

10. The Navy Sediment Work Group referenced (Section 6.3, page 6-2) is not included in the citations. Please provide the complete reference.
11. Please provide the complete reference to the U.S. EPA guidance for a conversion factor of 0.1 when converting to a No Observable Adverse Effect Level (NOAEL) (Section 6.3, page 6-2). Two U.S. EPA publications in 1999 are listed in the reference section.
12. Please clarify the units for the maximum concentrations and screening thresholds reported for organic compounds (Table 6-2, page 6-5). It appears from the current copy that the detection limits are in units of mg/kg which would be unacceptable. If this is a typographic error and the units for organic compounds are  $\mu\text{g}/\text{kg}$ , please amend the text.
13. The exposure parameters proposed and used were checked against the cited literature at random and found to be correct (Tables 6-3 through 6-11).
14. HERD does not accept default bioavailability adjustments for ecological risk assessment (Section 6.6, page 6-68). The rationale is:

The absolute bioavailability of any element or compound cannot be utilized for comparison with the referenced toxicity experiment unless the absolute bioavailability of the element or compound utilized in the original toxicity experiment was measured. This information is rarely, if ever, presented in the original toxicity description. The assumption cannot be made that the absolute bioavailability of the element or compound in the original experiment was 100 percent.

For example, HERD would consider any element or compound concentration in plant or animal tissues as absolutely bioavailable as the element or compound used in the original toxicity experiment used to set the Toxicity Reference Value (TRV). Once the element or compound has passed a biological membrane, there is no basis to conclude it would not pass another biological membrane. These contaminants would therefore be bioavailable.

Any consideration of bioavailability is a site-specific decision to be made by the risk assessors. There are multiple in-vitro and chemical methods available for assessment of the absolute bioavailability of the contaminants considered in this ERA. Please see the HERD EcoNOTE number 4 at <http://www/dtsc.ca.gov>.

15. The U.S. EPA Region IV citation for a TRV for diethylphthalate (Section 6.6, page 6-75) is not included in the reference section. Please include it.

### **Conclusions**

If the U.S. Fish and Wildlife Service are willing to stipulate that a residence or headquarters will not be constructed on the Runway Wetland, and extensive habitat

management activities involving soil excavation will not be undertaken, the human health risk assessment appears protective.

Given the number of ecological receptors evaluated, the size of the Runway Wetland in relation to the entire NAS Alameda, and despite the disagreement regarding bioavailability HERD, agrees that the Runway Wetland appears to pose limited hazard to ecological receptors. HERD, of course, defers to the opinion of the U.S. Fish and Wildlife Service as the recipient of this property.

Reviewed by: Michael Anderson, Ph.D.  
Staff Toxicologist, HERD

cc: Michael J. Wade, Ph.D., DABT, Senior Toxicologist, OMF Liaison, HERD

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