



Department of Toxic Substances Control



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ALAMEDA POINT
SSIC NO. 5090.3

Gray Davis
Governor

October 8, 2003

Mr. Andrew Dick
Department of Navy
Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, CA 92101

**DRAFT REMEDIAL INVESTIGATION REPORT, RESPONSE TO COMMENTS,
SEAPLANE LAGOON, OPERABLE UNIT 4B, SITE 17, ALAMEDA POINT,
ALAMEDA, CALIFORNIA**

Dear Mr. Dick:

The Department of Toxic Substances Control (DTSC) has reviewed the Draft Seaplane Lagoon Remedial Investigation Report, Response to Comments, dated September 8, 2003. Our review comments are attached. Should you have any questions, please call me at (510) 540-3767.

Sincerely,

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



Mr. Andrew Dick
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TO: Marcia Liao, DTSC Project Manager
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FROM: James M. Polisini, Ph.D.
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DATE: September 24, 2003

SUBJECT: NAVAL AIR STATION ALAMEDA DRAFT SEAPLANE
LAGOON REMEDIAL INVESTIGATION REPORT,
ALAMEDA POINT, CALIFORNIA
[SITE 201209-18 PCA 18040 H:24]



BACKGROUND

Subsequent to a discussion on a September 11, 2003 conference call regarding the Seaplane Lagoon at Naval Air Station (NAS) Alameda, HERD formally reviewed the document titled, *Draft Seaplane Lagoon Remedial Investigation Report, Alameda Point, California, Response to Comments*, dated September 8, 2003. These responses to regulatory agency and natural resource trustees were prepared for the Navy by Batelle, Inc. of Duxbury Massachusetts, BBL of Carpinteria, California and Neptune & Company of Los Alamos, New Mexico. The DTSC Project Manager requested this written documentation of HERD comments regarding the responses to comments on the Draft Seaplane Lagoon Remedial Investigation Report.

NAS Alameda was an active naval facility from 1940 to 1997. Operations included aircraft, engine, gun and avionics maintenance; fueling activities; and metal plating, stripping and painting. Linked stormwater and industrial wastewater lines discharged to the Seaplane Lagoon in the Northwest and Northeast corners, as well as the Oakland Inner Harbor Channel side of NAS Alameda.

GENERAL COMMENTS

HERD does not agree with many of the responses to comments. HERD, an U.S. EPA Region 9 risk assessor and a representative of the San Francisco Regional Water Quality Control Board identified the areas of Seaplane Lagoon that should go to Feasibility study in an on-location visit at least five years ago, again identified areas for inclusion in the Feasibility Study (FS) at a meeting with the Navy at ENTRIX, Inc. in Walnut Creek approximately three years ago, identified investigation techniques that had been used in the Seaplane Lagoon which would be useful for calculating the extent and the depth of any remediation in a HERD memorandum dated April 6, 1999 and communicated the HERD position that development of the FS should proceed immediately during a conference call on September 11, 2003. This comment is intended for the DTSC Project Manager and no response is required from the Navy or Navy contractors to the specific Navy communications mentioned.

The information collected by the Navy contractors, reported in the *Draft Berkeley Environmental Restoration Center's (BERC) Studies Report*, and the information collected by SPAWAR San Diego deployment of the Benthic Flux Sampling Device (BFSD) indicated potential adverse effects in the Northwest and Northeast corners of the Seaplane Lagoon due to releases from NAS Alameda. Sufficient time has passed, numerous studies have been performed, and the Navy needs to proceed directly to develop the FS for the Seaplane Lagoon.

Adverse effects in acute bioassays and short-term bioaccumulation into tissues of organisms exposed to sediments from the Seaplane Lagoon are not the sole determiner of inclusion or exclusion of those sediments into the footprint of a FS for the Seaplane Lagoon. Locations showing elevated sediment concentrations, obviously the result of Navy releases into the Seaplane Lagoon (e.g., spatially consistent with past discharges by the Navy), which could serve as the source for future acute or chronic adverse effects or "injury" (e.g. CERCLA natural resource damage assessment determination) are also candidates for inclusion in the area to be included in the FS Report. Demonstration of a lack of immediate, acute adverse effect is not alone sufficient given demonstration of concentrations in any media elevated above some reasonable ambient or reference area.

HERD provides the General Comment above to the Response to Comments only to complete the administrative records for the Seaplane Lagoon. The Specific Comments below must be addressed by the Navy, but reflect the verbal comments previously made by HERD.

SPECIFIC COMMENTS

1. Response to Specific Comment 2: Only a portion of the drain lines leading from Building 5 and building 400 to the Seaplane Lagoon (SPL) have been removed. Please indicate when the remainder of the lines leading from Building 5 and Building 400 to Outfall F (Figure 2-2, page 87) will be removed. Radium dials were painted in these buildings and releases of radium to SPL occurred through these lines. The distribution of ^{226}Ra and ^{226}Ra daughter products deposited in the SPL, as well as the discovery of the ^{226}Ra and ^{226}Ra daughter products in the sump in Building 5, indicate that these releases are the result of Navy activities.
2. Response to Specific Comment 4 and Specific Comment 22: HERD has already indicated the minimum depth of sediment which HERD considers as a default for remediation (i.e., bioavailable) as approximately 4 feet based on the depth of shrimp burrows. The supporting documentation was given to the Navy at a recent meeting at NAS Alameda. This document is located on the internet at <http://www.museum.vic.gov.au/crust/thalbiol.html>. Species related to the Thalassinidea, ghost shrimp, observation transmitted to the Navy, such as *Axius serratus* have been reported to burrow to depths greater than 10 feet (>3 meters) (Pemberton, et al., 1976). The results of the acoustic measurement of the depth of recent sediments in the Seaplane Lagoon (BERC, Figures 8a, 8b, 9a and 9b) is also available to allow assessment of the volume and cost for remedial alternatives addressing all the recent sediments without any investigation of site-specific bioturbation depths. This study indicates that the thickness of recent deposits ranges from 0 to 7 feet in thickness with a trend toward increasing thickness from east to west.
3. Response to Specific Comment 7 and Specific Comment 8: Simply removing a portion of the draft RI Report is not responsive to the HERD recommendation that the footprint of the FS investigation should be enlarged based on presentations provided by the Navy. HERD reiterates the comment that the proposed FS footprint does not include a sufficient area (e.g., PCBs Figure 4, page 16 and cadmium Figure 5, page 20) nor depth (e.g., cadmium Figures 6, 7, and 8, pages 21 through 23) to be protective
4. Response to Specific Comment 9: Please advise HERD regarding input from the California Department of Health Services and the U.S. EPA Region 9 staff regarding ^{226}Ra and ^{226}Ra daughter products deposited in the SPL as candidates for remedial action.

There was a marked increase of ²²⁶Ra in the SPL core segments from 40 centimeters to 80 centimeters in the BERC report (Figure E-4) attributed to radium luminescent dial painting (BERC, Section 4.4, page 6). This comment is intended for the DTSC Project Manager and no response is required from the Navy or Navy contractors.

5. Response to Specific Comment 11: The Navy is free to 'maintain that only those compounds that are present in the SPL due to site releases and pose a potential risk to human health and the environment should be considered for remediation'. HERD maintains that the obvious elevation of silver in *Macoma nasuta* tissues and fish is information that could lead to outlining the footprint of the FS more clearly, especially as the potential silver toxicity to avian receptors could not be evaluated due to a lack of a Toxicity Reference Value (TRV) as outlined in the response. Please include the *Macoma nasuta* tissue concentration data in the revision of the FS footprint.
6. Response to Specific Comment 16: The explanation of the mathematics used to derive the juvenile ingestion rate for the least tern should be included in the text, not solely in Appendix E.5.2. While arithmetically correct, the response still does not answer the biological question regarding the uncertainty of a juvenile intake rate which is lower than the adult intake rate, while the juvenile least tern is increasing in body weight by a factor of 8 (i.e., 5 grams to 40 grams) over 20 days. The uncertainty of this estimate of intake must be addressed in the document.
7. Response to Specific Comment 24: As a regulatory agency and a designated California co-trustee for natural resources, HERD's responsibility is to be protective of all natural resources, not an 'average' receptor. HERD was not suggesting in this comment that the lowest No Observable Effect Concentration (NOEC) should necessarily be the toxicity benchmark, but that an average is not protective of all receptors, particularly those of interest to natural resource trustees. The decision regarding which toxicity value to use must be determined on the agreed-upon Conceptual Site Model and the list of Representative Species. The response to this comment is not acceptable.
8. Response to Specific Comment 27: The comment made by HERD at the Walnut Creek ENTRIX meeting and in this written comment did not indicate that any remedial footprint be based solely on an Exposure Range-Median Hazard Quotient (ERM-Q) of 0.62. The

point HERD made at the ENTRIX meeting was that the ERM-Q value of 0.62, the elevated cadmium sediment concentration and cadmium flux data, the elevated PCB sediment concentrations and elevated *Macoma nasuta* tissue concentrations for some constituents all appeared to overlap. HERD recommended, at the ENTRIX meeting and still recommends that the FS footprint incorporate all the available information in a best-scientific-judgment development of the FS footprint. The Navy cannot argue for a Weight of Evidence (WOE) approach yet ignore obviously overlapping elevations of sediment concentration, sediment flux, bioaccumulation and mortality in bioaccumulation studies by dismissing each HERD comment individually.

9. Response to Specific Comment 37: In order for the risk managers to make an informed decision, a table which sums the incremental risk from chemicals as well as the incremental cancer risk from radioisotopes is required. Without this table HERD cannot approve the Human Health Risk Assessment for the Seaplane Lagoon. This is essential for the risk managers to perform an informed decision. Separate tables for incremental cancer risk and or hazard and radiological incremental cancer risk can remain at the Navy's discretion.
10. Response to Specific Comment 39: Please provide a figure presenting isopleths of the arithmetic value of cadmium efflux demonstrated in the SPAWAR San Diego investigation for consideration by the risk managers regardless of any estimation of the sediment concentration required to allow water to exceed the National Ambient Water Quality Criteria.
11. Response to EPA General Comment 5: The Navy argues that a weak correlation ($r^2=0.28$) exists for sediment copper concentration and copper efflux from sediments. The Navy argued that a correlation existed between lead and antimony sediment concentrations with an r of approximately 0.4 for Naval Weapons Station (NWS) Seal Beach Site 74, the old skeet range when developing the sampling plan for NWS Seal Beach. This produces a correlation coefficient (r^2) of 0.16 for the NWS Seal Beach Draft Revised Sampling and Analysis Plan for Site 74 which was used as the basis for the sampling definition. Both sides of the argument cannot logically be carried. Efflux of copper from sediments must also be considered when developing the FS footprint.

12. Response to EPA General Comment 9: Future land use of the SPL has always included a marina in discussions with the city of Alameda. Marina operations involve prop wash remobilization of sediments, even if dredging is not required to develop the marina. Surface sediments are, therefore, not the sole media to be considered when evaluating potential remedial actions.

CONCLUSIONS

HERD considers the surface sediments and sediments at depth in portions of the Seaplane Lagoon to present a clear hazard to current and future ecological receptors and possibly current and future human receptors. HERD believes that sufficient overlapping lines of evidence are available to outline a FS footprint which could quite simply give some estimate of the potential volume and cost of several remedial alternatives.

In HERD's opinion no further funds should be expended to produce further studies, but a FS should be produced addressing potential volumes and potential remedial alternatives for the Seaplane Lagoon. This has been the message HERD has conveyed for approximately five years. Other regulatory agencies and trustee agencies, with whom HERD has discussed these response to comments, support immediate development of the FS Report for the Seaplane Lagoon.

REFERENCES

Pemberton, G. S., M.J. Risk and D. E. Buckley. 1976. Supershrimp: Deep bioturbation in the Strait of Canso, Nova Scotia. Science 192:790-791.

Draft Tier II Ecological Risk Assessment Sampling and Analysis Plan, Site 74 Old Skeet Range, Naval Weapons Station Seal Beach, dated 28 August 2003.

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September 24, 2003
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