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MARE ISLAND
SSIC NO. 5090.3.A

Department of Toxic Substances Control



Terry Tamminen
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700 Heinz Avenue, Suite 200
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Arnold Schwarzenegger
Governor

July 13, 2005

Mr. Jerry Dunaway
BRAC Program Management Office West
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San Diego, California 92101-8571

Dear Mr. Dunaway:

Mare Island Navy Draft Final Offshore Data Gaps Technical Memorandum, dated 7/2004

The Department of Toxic Substances Control has reviewed the subject document. The attached comments are forwarded to you for your consideration.

Should you have any questions regarding this letter, please call me at (510) 540-3773.

Sincerely,

Chip Gribble
Remedial Project Manager
Base Closure Unit
Office of Military Facilities

Attachments

cc: Mr. Gary Riley
Ms. Carolyn d'Almeida

**DTSC Comments on the Mare Island Navy Draft Final Offshore Data Gaps
Technical memorandum, dated 7/2004**

1. Page 2, para. 1: We can not conclude at this time that certain cells do not pose an unacceptable risk to ecological receptors and do not require additional ecological investigation. Such a conclusion discounts ongoing sediment flux, new sedimentation, possible new/additional contamination from more recent waterfront activity and continuing discharge from outfalls. Further, previous investigations appear to not have adequately characterized sediments at all depths possibly impacted by Navy history; sediment depths likely to be maintained in post-Navy reuse may lead to exposures that could pose unacceptable risks to human as well as ecological receptors.
2. Page 5, para. 2, 4th bullet: DTSC has recommended that the Navy initiate a Remedial Investigation for the Offshore Area K, and to develop a HHRA and ERA based on the resultant site characterization. We remain concerned that the ecological risk assessment developed thus far may be based on an incomplete site characterization.
3. Page 7, 1st bullet: There has been no agreement between the regulatory agencies and the Navy regarding which cells are Munitions Response Program cells and which cells are not.
4. Page 21, section 3.0: We recommend that the proposed approach be discussed further with the regulatory agencies, in particular in consideration of the May 24, 2005 offshore meeting, and agency comments on this technical memorandum.



Department of Toxic Substances Control



Alan C. Lloyd, Ph.D.
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MEMORANDUM

TO: Chip Gribble, DTSC Project Manager
Henry Chui, DTSC Project Manager
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FROM: James M. Polisini, Ph.D.
Staff Toxicologist, HERD
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DATE: June 15, 2005

SUBJECT: DRAFT FINAL OFFSHORE DATA GAPS TECHNICAL
MEMORANDUM
[PCA 18040 SITE 201208-18 H:36]



BACKGROUND

HERD reviewed the document titled *Draft Final Technical Memorandum Evaluation of Offshore Data Gaps, Mare Island, Vallejo, California*. This document is dated July, 2004 and prepared by Sullivan Consulting Group, Inc. of San Diego, California and Tetra Tech EM Francisco, California. HERD received this document by hand delivery at a Mare Island Naval Shipyard meeting on May 24, 2005 at the Tetra Tech, EM Inc. office in San Francisco.

Mare Island Naval Shipyard (MINSY) was the first naval station on the Pacific Coast, where shipbuilding began in 1854. The former MINSY is located on a peninsula approximately 30 miles northeast of San Francisco. The peninsula is bounded to the east, south, and west by the Napa River (Mare Island Strait), Carquinez Strait, and San Pablo Bay, respectively. Mare Island was originally an island of approximately 1,000 acres with surrounding wetlands of approximately 300 acres. Fill material was added to enlarge Mare Island and connect it to the mainland. MINSY has been in operation under Navy control from approximately 1853 until the recent transfer to the City of Vallejo through the State Lands Commission.

GENERAL COMMENTS

This Technical Memorandum accurately reflects the ecological assessment of all MINSY sediments as a unit based on the dredge cell-by-cell analysis previously employed. HERD comments focus on general statements and proposed tests for the further investigation suggested.

SPECIFIC COMMENTS

1. HERD's understanding of the issue regarding the use of the Bioaccumulation Factors (BAFs) (Section 1.1, page 1) is that BAFs should not be used in screening Contaminants of Potential Ecological Concern (COPECs). The ecological hazard to upper trophic level receptors posed by transfer of contaminants through the food web can be presented in the final evaluation of MINSY sites. However, HERD defers to the natural resource trustees who originally raised this issue.
2. The Baseline Ecological Risk Assessment (BERA) is first mentioned as the Navy proposal for a course forward (Section 1.1, page 2) without a definition of what investigations would be undertaken in preparation for a BERA. A Preliminary Assessment/Site Investigation (PA/SI) is also proposed (Table 2) for some sites without differentiating the two products and/or the initial investigations required for each. A short description of the differences among the BERA and the PA/SI and associate studies should be included in the text.
3. As discussed at the May 24, 2005 meeting, HERD agrees that comparison to the San Francisco Regional Water Quality Control Board (SFRWQCB) 'reference envelope' for *Eohaustorius estuarius*, is sufficient without sampling and testing for reference areas.
4. Please provide a listing of the suite of testing which is incorporated into the group described as having 'only data from the evaluation of dredge disposal alternatives' (Section 1.1.5, page 6 and Section 2.0, page 7, second bulleted item).
5. Additional storm water outfall sampling is proposed solely for those storm water outfalls not previously sampled (Section 2.0, page 8, first bulleted item). A severe winter storm season occurred in 2004/2005 since the last storm water outfall sampling was conducted. As a BERA is the proposed product, some demonstration must be made that the storm water results from previous investigations remain valid. This may require sampling and analysis of all storm water outfalls, or a subset of those outfalls deemed appropriate by the regulatory agencies and natural resource trustees. This point can be discussed during development of the Data Quality Objectives (DQOs) for the BERA of MINSY offshore sediments.
6. The range of cell designators should be included at the beginning of each section presenting the results of previous investigations of designated areas (e.g., Fleet

Reserve Piers). Cell designators are presented in the initial description of some areas (e.g., Berths 1 and 2), but not others (e.g., Fleet Reserve Piers).

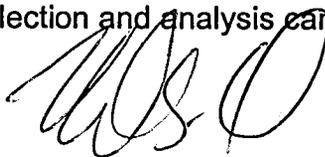
7. Given the recent severe winter storm season in 2004/2005, and the probable redistribution of sediments in some areas offshore of MINSY, HERD does not agree that that 'further action is warranted only for chemicals that are detected at concentrations above background levels' (e.g., Section 2.3.3, page 16). The suite of chemicals to be included in the investigation of each area (e.g., North Mare Island Strait) can be determined during development of the DQOs.
8. The sediment concentration of zinc in cell 44 exceeds the National Oceanic and Atmospheric Administration (NOAA) Effects Range-Median (ER-M) (Section 2.4.2, page 18). Perhaps this is associated with the Mare Island Strait disposal of sand blast grit from IR04 which is immediately up stream. The IR04-specific intertidal and subtidal sample results do not appear to be included in this evaluation. This comment is directed to the DTSC Project Manager and no response is required from the Navy or Navy contractors.
9. The results of the composite samples collected and analyzed at Dike 12 and Dike 14 should be included in the presentation of data from previous investigations (Section 2.5 and Section 2.6, pages 18 through 21). For example, survival in the *Eohaustorius estuarius* bioassays was less than the SFRWQCB reference envelope in all Dike 14 composite samples except B-4 (Figure B-10) and for all Dike 12 composite samples except B-11 (Figure B-11).
10. The Offshore Habitat Designations (Figure 3) need to be re-evaluated during the DQO process. The designations do not appear to agree with habitat descriptions applied in other sources. For example, at least a subset of the cells designated as 'Habitat 3: Sand or Riprap Shore, Strong Currents' are designated as protected mudflats or protected intertidal shoreline in the MARPLOT© San Francisco Bay summary available from NOAA (<http://response.restoration.noaa.gov/cpr/watershed/watershedtools.html>).
11. Several issues potentially affecting sample collection and testing, and the BERA, were discussed briefly at the May 24, 2005 meeting and need to be addressed in the DQO process. They are:
 - a. Potential field collection of fish tissue for the BERA of upper trophic levels;
 - b. Potential *Neanthes sp.* sediment bioassays for comparison of soft-bodied invertebrate tissue concentrations to tissue concentrations from the *Macoma nasuta* bioassays; and,
 - c. Sediment sampling on the western side of MINSY.

CONCLUSIONS

The summarized results of previous testing of offshore sediments accurately reflects the individual reports of the overall studies previously performed and submitted for HERD review. Several informal (i.e., western Industrial Waste Water Treatment Plant (IWWP) outfall sediments) or focused investigations (i.e., IR04 Green sandblast grit area) do not appear to be included. Whether to include these two areas and the level of investigation can be determined during development of the offshore sediment work plan. The Technical Memorandum, therefore, presents a summarization of the general patterns of potential sediment impacts at MINSY.

The technical issues which will guide the sample collection and analysis can be addressed during the DQO process.

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Page 5

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