

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 21, 1998

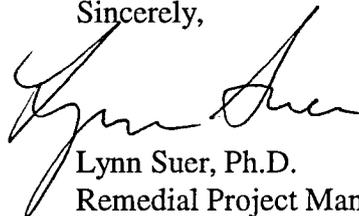
Ronald Yee,
Remedial Project Manager
EFA WEST 612
900 Commodore Dr. Bldg. B-208(U)
San Bruno, CA 94066-5006

RE: Comments on Draft Ecological Risk Assessment Work Plan and Field Sampling and Analysis Plan, West Beach Landfill, West Beach Landfill Wetland, and Runway Wetland, Alameda Point, Alameda, CA, dated May 13, 1998

Dear Mr. Yee:

Enclosed are comments on the subject document. If you have questions, please contact me at (415) 744-2396, or Ned Black at (415) 744-2354.

Sincerely,



Lynn Suer, Ph.D.
Remedial Project Manager

Enclosures (2)

Cc: Mary Rose Cassa, DTSC
Steve Edde, Alameda Point
John Spafford, RAB
James M. Polisini, DTSC
Laurie Sullivan, NOAA CRC
Susan Ellis, California Dept. Of Fish & Game
James E. Haas, U.S. Fish & Wildlife Service

**Comments on the
Draft Ecological Risk Assessment Work Plan and Field Sampling and Analysis Plan,
West Beach Landfill, West Beach Landfill Wetland, and Runway Wetland
Alameda Point, Alameda, CA, dated May 13, 1998**

1. See attached Technical Memorandum from Dr. Ned Black for additional comments.
2. **Section 1.4.1, p. 9.** The screening-level ERAs for surface and pore water, cited in the OU 4 ERA Revision 2 (PRC 1996a) and the Chemical DSR for Offshore Sediment and Wetland Areas at Alameda Point (TtEMI 1998b) are not up-to-date. The values for chronic and acute Ambient Water Quality Criteria presented in Table 6 are, similarly, incorrect. The appropriate standards are in the Proposed California Toxics Rule (40 CFR Part 131; August 5, 1997 Federal Register).
3. **Section 3.1.** This Conceptual Site Model does not address the direct exposure of bay organisms to potentially contaminated surface waters discharged through the drainpipe on the western shore of the West Beach Landfill wetland area. Surface water was observed discharging from the wetland to the bay this past winter. This exposure pathway should be addressed.
4. **Section 3.3.4, p. 23.** Ambient sediment concentrations are provided in a recent Regional Water Quality Control Board report entitled "Ambient Concentrations of Toxic Chemicals in Sediments" (April, 1998). The values in this report should be used for comparisons with background.
5. **Section 3.3.4, pp. 23-24.** It is important to note that while aquatic toxicity tests are useful for evaluating the toxicity of mixtures for which criteria do not exist, or to identify the causes of toxicity (by conducting toxicity identification evaluations), limited toxicity testing with standard test organisms provides little indication of potential impacts on the most sensitive, naturally occurring organisms. This should be discussed in the uncertainty section of the risk assessment.

In the context of making clean-up decisions, Ambient Water Quality Criteria are applicable regulations. Dischargers may choose to develop site-specific criteria by following U.S. EPA guidance, if there are concerns that these criteria are overly stringent. This guidance is very specific with respect to toxicity testing procedures, and the number and types of organisms that must be tested. This guidance will be provided on request.

6. **Tables 1-2.** The data for PAHs in surface soils and rhizosphere indicate the presence of hot spots (compare 95% UCL with maximum values). The risk assessment must evaluate the spatial distribution and risk associated with hot spots.
7. **Table 3.** Only one groundwater metal is listed as of potential ecological concern. Clarify

whether this is due to the application of a DAF of 10.

8. **Table 6.** For many metals, CTR standards are based on the dissolved concentration. It is not stated whether the metal concentrations listed in Table 6 are based on total recoverable or dissolved measurements. If these are dissolved measurements, what filter size was used?
9. **Table 6.** Surface and pore water measurements for chromium, and surface water measurements for lead and cadmium are missing from this Table. Since these are contaminants of potential ecological concern, these data gaps should be filled.
10. **Figure 5.** It is not appropriate to use an acute marine AWQC for screening purposes. An acute to chronic ratio must be applied. At a minimum, this value is ten.
11. **Figure 7.** It is not appropriate to use a frequency of detection > 5 percent without performing a spatial analysis to determine the presence of hot spots.



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MEMORANDUM

SUBJECT: Review of draft Ecological Risk Assessment i) Work Plan and Field Sampling and Analysis Plan; and ii) Quality Assurance Project Plan, West Beach Landfill, West Beach Landfill Wetland, and Runway Wetland, Alameda Point, 13 May 1998.

FROM: Ned Black, Ph.D. *JNB*
Ecologist/Microbiologist
Technical Support Team (SFD-8-B)

TO: Lynn Suer and Anna-Marie Cook
Remedial Project Managers (SFD-8-2)

DATE: 19 June 1998

I have reviewed these documents and could only recommend their acceptance if significant changes are made. Modifications to individual parts of the work plan are described below. Most of the approach described in these documents continues the ecological risk assessment as a paper exercise, involving the refinement of hazard quotient calculations. This approach is contrary to the Superfund ecological risk assessment guidance (US EPA 1997) which the Navy cites. The Navy has completed a screening level assessment, as described in Steps 1 and 2 of the Superfund guidance. The results of this screen indicate the ecological risk assessment should proceed through Steps 3 to 8. At the beginning of Step 3, it is appropriate to reevaluate individual contaminants of concern by reviewing the assumptions used in the generation of hazard quotients during the screen. Theoretically, if all contaminants were eliminated at this step and this process was thoroughly and defensibly documented, the ecological risk assessment would be completed. However, the work plan should include an adequate set of studies for the likely scenario that some contaminants will remain of concern. These studies should be heavily oriented towards assessment of actual effects in the field or laboratory. Hazard quotients should play a minor role in the ultimate risk characterization. The field work discussed in this work plan consists of reevaluation of bioassay and community studies from 1993 and 1994, collection of tissue samples, and as yet unreported work performed by the Berkeley Environmental Restoration Center (BERC). Without a detailed description of the BERC studies, it is not possible to judge the adequacy of this Navy work plan. It will certainly be impossible to accept the conclusions of an ecological risk assessment without regulatory acceptance of the BERC methods and data.

Specific comments on the Work Plan and Field Sampling and Analysis Plan:

1. Sections 2.1 and 2.2, and Figures 4, 5, 7, & 8, Selection of Contaminants of Concern. The

initial decision point in the Navy's process is not valid. Regardless of whether any chemicals were actually screened out due to a frequency of detection < 5%, this protocol is unacceptable. In the first place, all analytical data of site media should first be examined spatially, to determine if low frequency hot spots exist. Furthermore, single point hits of some chemicals, particularly persistent, bioaccumulative, and toxic chemicals such as mercury or dioxins, could represent ecological risk. If chemicals such as these are present in site media, the compounds must be included in the risk assessment. Furthermore, it is not acceptable to exclude such hot spots based on an assumption that hot spots will ultimately be removed. Risk assessment in the Superfund process is not linked to remedial decisions.

2. Section 3.0, pg. 16. Comparisons to background risk are only pertinent in the risk management portion of the Superfund process, i.e., Step 8. Background is not valid as a means of eliminating sites in Step 3 of the process (US EPA 1997).
3. Section 3.1, pp. 19-20. Eggshell thinning is an excellent measurement endpoint for these sites. The obvious choice of data collection to satisfy this endpoint is measurement of eggshells in the field. Although this would seem to be a straightforward field activity, I can find no mention of this as a data collection activity in this work plan. Comparison of site media concentrations against toxicity benchmarks associated with eggshell thinning is a good secondary means of satisfying this endpoint, so long as actual field measurements are performed where feasible.
4. Section 3.2, pp. 20-21 (and Section 3.1.2, Identification of Decisions to be Supported, pg. 11 in the Quality Assurance Project Plan). These risk questions are all refinements of a hazard quotient approach. As stated above, such an approach should be only part of a full ecological risk assessment. Even if the field effects data are limited to laboratory bioassays and community analyses already performed and as yet undescribed studies by the BERC, the risk questions in this work plan must reflect an adequate description of a full risk assessment.
5. Section 3.4, pg. 25. The priority of analysis for COPECs, mentioned here in the event insufficient tissue samples are obtained, is not presented clearly in Section 4.5.2.2. It is included in a footnote to Table 15, which in turn is referenced in Section 4.5.2.2. So far as this priority is concerned, it is not clear why PAHs have a higher priority than metals and organochlorine pesticides. According to the screening assessment, the greatest risk drivers are metals and organochlorine pesticides; these compounds should have a higher priority than PAHs.
6. Table 16. I commend the Navy for choosing to analyze individual polychlorinated biphenyl congeners.

I am available to discuss these documents further at 415-744-2354.

Reference:

US EPA 1997. Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final. Office of Solid Waste and Emergency Response. EPA 540-R-97-006. June 5.

cc (fax only): James M. Polisini, Ph.D., DTSC HERD
Laurie Sullivan, NOAA CRC
Susan Ellis, California Dept. Of Fish and Game
James E. Haas, U.S. Fish & Wildlife Service