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APR - 9 1996

April 3, 1996

Mr. Keith Forman
Interim BRAC Environmental Coordinator
Naval Training Center-Environmental Office
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REVIEW OF FINAL EXTENDED SITE INSPECTION (ESI) REPORT FOR INACTIVE LANDFILL, NAVAL TRAINING CENTER, SAN DIEGO, CALIFORNIA, FEBRUARY 1996

Dear Mr. Forman:

The Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) have completed its review of the subject document for the Naval Training Center (NTC) San Diego. The document was received by this office on February 20, 1996. DTSC has the following comments on the review of this final document.

As stated in our February 2, 1996 letter to you, the issue of proper background methodology for the inactive landfill at NTC is an area of disagreement between the Navy and the regulatory agencies. DTSC and United States Environmental Protection Agency (United States Environmental Protection Agency (USEPA)) do not concur with the Navy's method of evaluating background metal concentrations in the Extended Site Inspection (ESI) report due to the small data set for the inactive landfill. The regulators were disappointed with the ensuing meetings and responses to our comments to the draft ESI report regarding this issue.

Review of the final ESI report has found that risk assessment comments that the Navy agreed to address in the response to comments sheet were not addressed. Please see attached April 1, 1996 memo on risk assessment comments and discussion on the background metals evaluation.

Other areas of concern regarding the final ESI report are changes in the document that were not brought to our attention earlier by the Navy. For example, PCB data numbers on Figure 6-2; Distribution of Organic Compounds in Surface Soils, were at half their values from the previous draft ESI. A phone conversation with Navy remedial project manager Content Arnold on March 18, 1996 clarified the problem with the PCBs. Other changes involve the ESI figures and tables where changes were made and errors found. All changes to a final document must be clearly stated when resubmitted for regulatory review. Even slight changes to the document should be clearly stated in writing if they have not been discussed previously.



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We would like our comments addressed as previously agreed to in your response to comments sheet, or explanation as to why the comments were not incorporated as agreed. Please review the figures and tables for correctness and provide written explanation for any changes in the text, tables, or figures which were not previously discussed. Please call me at (310)590-5563 if you have any questions regarding this matter. We hope to continue with progress at NTC.

Sincerely,



Alice Gimeno
Base Closure Team
Office of Military Facilities
Southern California Operations

Enclosure

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STATE OF CALIFORNIA - ENVIRONMENTAL PROTECTION AGENCY
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MEMORANDUM

TO: Alice Gimeno
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FROM: Brian K. Davis, Ph.D. *Brian K. Davis*
Staff Toxicologist
Office of Scientific Affairs (OSA)
Human and Ecological Risk Section (HERS)

DATE: April 1, 1996

SUBJECT: San Diego Naval Training Center, Final Extended Site
Inspection, Inactive Landfill, dated September 1995
PCA: 14740 Site: 400273 Work Phase: 45

BACKGROUND INFORMATION

In response to your Headquarters Technical Consultation Request Form dated 3/12/96, we have reviewed sections of the Final Extended Site Inspection for the Inactive Landfill of the San Diego Naval Training Center, San Diego, California. We reviewed the Draft Extended Site Inspection in a memorandum dated 10/27/95. We took part in a meeting at the Naval Training Center on 11/30/96 to discuss the responses to comments on the Draft Extended Site Inspection. We participated in a telephone conference call on 1/29/96 to discuss remaining issues regarding the Draft Extended Site Inspection.

The Naval Training Center is scheduled for closure by September, 1999.

Comment 5: page 25 states that all changes need to be specified! This was not done.

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To <i>Kathryn Parker</i>	From <i>Content P Area</i>	
Co. <i>RNF</i>	Co.	
Dept.	Phone #	
Fax # <i>6078787</i>	Fax #	

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GENERAL COMMENTS

1. BACKGROUND METALS EVALUATION

In our memorandum of 10/27/95 we stated our objections to the Navy's methods of evaluating background metal concentrations. We noted the inappropriateness of the statistics being applied to a very limited sample size (16 background samples) and we offered alternative methods in Appendix A of our memorandum.

In the 11/30/95 meeting it was agreed that the Navy would consider our proposed methods and discuss a resolution (e.g., Responses 5 and 9 on pages 27 and 28 of the Navy Responses [dated 12/21/95] to our comments). No discussions to achieve resolution occurred. Instead, in the telephone conference call of 1/29/96 the Navy suggested that the background sample size be increased by adding samples from Naval Air Station North Island. Participants in the conference call expressed reservations about the appropriateness of doing so. The Navy also stated that the statistical methods were not negotiable. This was based on Navy policy rather than scientific and mathematic arguments.

Appendix M of the Final Extended Site Inspection uses the same statistical methods as did the draft document. We do not accept these methods for the inactive landfill or for other Naval Training Center sites. Therefore, we do not accept that an adequate basis has been established for the elimination of barium, chromium, cobalt, mercury, manganese, nickel, or vanadium as chemicals of concern.

Since the evaluation of background metals has not been resolved, we suggest that two alternative evaluations be done. One evaluation would be that presented in this document. The other would include all detected metals as potential contaminants. This does not imply that remediation would be recommended for all detected metals, but it will provide adequate information for the risk managers.

2. OTHER STATISTICAL EVALUATIONS

Comment 5 in our memorandum of 10/27/95 noted the need to address homogeneity of samples. For example, the plots of metal concentrations against aluminum concentration (Figure 6-3) show

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heterogeneity of the sample sets. This was not addressed in the responses or the revised document.

Another statistical issue is the evaluation of linearity. How were the Appendix M (page M-7) determinations made? What is the basis for the qualitative descriptions of "distinct linear correlations", "relatively weak linear trends", and "two linear trends"? If statistical analysis was done, this should be described. If no statistical analysis was done, this should be justified.

3. CHROMIUM

The Extended Site Inspection doesn't discuss the issue of chromium speciation. Table 6-4 (page 6-17) lists chromium VI and doesn't mention chromium III or total chromium. The text (e.g., page 6-13) refers only to "chromium", without addressing the important issue of speciation into chromium III and chromium VI.

The document should clearly state what was done. If speciation was not done, this must be justified.

4. SAMPLE DATA PRESENTATION

Tables 8-1 and 8-2 summarize the soil and ground water sample data. Although the titles of the two tables are "Ranges, Means, 95-Percent Upper Confidence Limits,..." , these statistics have been omitted. Tables 8-1 and 8-2 in the draft document did include these values and were therefore more informative.

An explanation is needed for the changes in the detection frequency and 95% UCL for Aroclor 1254 (Table 8-1) between this version of the document and the draft version.

5. GROUND WATER CONTAMINANTS

A. Some ground water contaminants (aluminum, cobalt, vanadium, and cis-1,2-DCE) were not evaluated because there were no associated criteria in the California Bays and Estuaries Plan or the Federal Ambient Water Quality Criteria (Table 8-5). In our 10/27/95 memorandum (Comment 17), we requested that if regulatory criteria could not be found, the scientific literature should be consulted. Since this was not done, we compared the

This is correct.
Lab error

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maximum values listed in Table 8-5 to the U.S. EPA Region IX tap water PRG values. These values are based only on human health considerations and exclude ecological receptors.

All four of the excluded contaminants (aluminum, cobalt, vanadium, and cis-1,2-DCE) had maximum values lower than the corresponding tap water PRG values. We note that although the maximum value for trichloroethene (38 ug/L) was less than the listed water quality value (81 ug/L), it does exceed the tap water PRG (1.6 ug/L).

B. The document argues that the level of risk associated with arsenic contamination is acceptable (page 8-15). The fourth "bullet" states that the maximum value of arsenic is less than the UTL(99,95). This may or may not be true, since the document presents UTL(95,95) values and not UTL(99,95) values. The maximum value of arsenic exceeds the UTL(95,95). It is no doubt true that if a high enough UTL value is used, it will exceed the maximum value for arsenic or any other metal. The kindest thing to be said about this argument is that it is irrelevant.

is there any back-up data for doc. for his -

6. ECOLOGICAL RISK ASSESSMENT

The ecological risk assessment has been greatly improved from the draft document by: a) extrapolation from the belted kingfisher rather than rodents to estimate toxicity criteria for the least tern, and b) evaluation of the desert cottontail and the red-tailed hawk. However, deficiencies which were identified in the draft still remain (see Comment 7 below).

We agree with the assessment that the least terns are of greatest concern among ecological receptors. Although the reproduction of the least terns is encouraging, the document overstates the observations. For example, it discusses "the increase in the number of nests over the past 3 years" (page 8-39). The actual numbers (page 8-36) are one nest in 1993, 10 successful nests in 1994 and 5 successful nests in 1995. This is encouraging but suggests a fragile breeding colony with a decrease from 1994 to 1995.

believe the decline is a response to the predators the area

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7. FAILURE TO MAKE CHANGES

In several instances, the Responses to Comments agreed to changes which were not made in preparing this document.

A. Comment 10 in our 10/27/95 memorandum pointed out that a screening risk assessment does not always overestimate risk. The response agreed to change paragraph 3 of page 8-6, but no changes were made.

B. Comment 13 in our 10/27/95 memorandum pointed out that risks and hazards must be summed over all pathways. The response agreed, but pathways are not summed for the ecological assessment. For least terns, air exposure and soil exposure were evaluated separately and the hazards were not summed. Nor was there any recognition that the hazards are underestimated because not all pathways were evaluated.

C. Comment 15 in our 10/27/95 memorandum pointed out the need for more detail on the biological surveys. The response agreed, but the information is still lacking.

D. Comment 19 in our 10/27/95 memorandum requested that "the least tern researchers" who are cited (page 8-36) be identified. The response agreed, but the information is still lacking.

CONCLUSIONS

Since this site is a location of a former landfill, the major concern is the contaminants in the landfill itself and their potential movement into air and ground water. This was expressed in comments on the draft document (e.g., Comment 1 of the 11/2/95 memorandum from Alice Gimeno; General Comments 1 and 2 and Specific Comments 4 and 6 of the 10/27/95 memorandum from Michael J. Wade and Brian K. Davis). In this regard, we consider the evaluations of other agencies about the possibility of air contamination and of ground water contamination to be of great importance.

We also recognize that the issues of background concentrations of metals and the evaluation of soil contaminants relate to chemicals found in the landfill cover and not the

*Two?
Nothing was
changed!*

*Still NO
info on
the
researchers
p. 8-36*

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landfill material itself. It is important to establish acceptable methods of evaluation not only for this site, but also for other sites at the Naval Training Center.

The site provides poor habitat for most animals and plants because of the constant physical disturbance. Unless this changes, the major ecological concern appears to be to maintain the nesting area for the least terns.

Reviewed by 
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