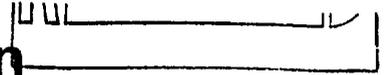


Department of Environmental Protection



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N00204.AR.001338
NAS PENSACOLA
5090.3a

April 9, 1997

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Bill Hill
Code 1851
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
P.O. Box 190010
North Charleston, South Carolina 29419-9010

RE: Final Remedial Investigation Report, Site 2, NAS Pensacola

Dear Mr. Hill:

I have completed the technical review of the above referenced document dated December 22, 1996 (received December 20, 1996) and the Response to Comments dated March 11, 1997 (received March 12, 1997). I cannot approve the document as final until the following comments are addressed related to the document and the response to comments. Those response to comments for which I do not have a remark are acceptable.

Response to John Mitchell's comments of 5/8/95:

1. The response to my General Comment does not address the main point (e.g., the assumptive conclusions made throughout portions of the document based on previous studies which used different analytical methods and data used from various bayous which flow into the bay). These comparisons are used in a presumptive manner. It was also agreed in previous partnering meetings that only the department's sediment results from Pensacola Bay proper would be used for a general comparison and that data from Bayous Chico, Grande and Texar would be removed. Also, if data points from Escambia Bay, East Bay and Santa Rosa Sound were included for comparison, they should also be excluded.
2. Response to Specific Comment No. 3.c.: The document does not mention the USEPA Draft Ecological Risk Assessment for Superfund: Process for Designing and Conducting Ecological Risk Assessments (Draft, September 26, 1994) in the text of Section 10.2.2.2 nor in Section 12 (References).

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3. Response to Specific Comment No. 4: Although I agree there is a qualitative relevance to comparison with similar bottom types/sediments, comparison should still not be made to data from the Bayous adjacent to Pensacola Bay, only those data points in the "open" bay should be used (see Comment No. 1).
4. Response to Specific Comment No. 5: I have no problem with your response. I found the section comparing metals-to-aluminum using a nitric acid analytical method vs. a hydrofluoric acid method very interesting. Tom Seal of the department's Office of Water Policy thought EnSafe should consider publishing these results. The department does not have such comparative studies, although I understand there are laboratories which have performed this comparison. However, the department does not have access to these results nor, to our knowledge, were they published.

I do have a question related to the analytical results. For example, Figure 23 appears to show detections for cadmium which are lower than the analytical results in Appendix A. Were different analytical results used for this comparative study? If so, this should be noted. If not, then the figures indicating detections at values lower than what is in Appendix A need to be revised.

5. Response to Specific Comment No. 6: As stated previously and by agreement in previous partnering meetings, comparison to the departments data is to be to only those samples in the "open" portion of the bay, not data from the bayous or other bays to the east. Text and Figures in the document need to modified accordingly.
6. Response to Specific Comment No. 7: Although the term "open bay" has been explained at previous partnering meetings as well in my preceding comments, I will clarify this again. "Open" bay means Pensacola Bay only, not bayous or other bays adjacent to Pensacola Bay.

Response to Jane Fugler's comments of April 7, 1995:

1. Comment No. 2: I agree that the latest Florida Sediment Quality Assessment Guidelines were used in the document. However, this should be noted in the text on pages 10-5 and 10-8.
2. Comment No. 3: Please refer to the preceding Comment No. 4.
3. Comment No. 5: The text should also specify which sample from the Ponar Dredge was for VOC analysis. It appears that the sample for VOC analysis was taken after sediment was removed from the dredge and placed in the stainless steel

bowl. If this is the case, the actual amount of VOCs possible in the sediment would be altered (release of VOCs) due to the disturbance of the sediment prior to sampling. Please clarify this in the text.

4. Comment No. 12: We are not confusing exposure rates and exposure frequency as stated in your comment. The last sentence on page 10-118 expresses an "exposure frequency" of 350 days per year while Table 10-12 and Figure 10-27 show and "exposure frequency" of 175 days per year. Also, footnote "b" of the Table reflects an "**exposure** frequency" of 365 days per year. This should be corrected in the text and tables, and, should this result in any changes in the calculated results, the correction should be made.

Response to Ligia Mora-Applegate's comments of April 17, 1995:

1. Comment 4: It has been discussed by the partnering team, as well as prior to partnering, that the acceptable risk level is $1.0E-6$ at NAS Pensacola. This has been the remedial action or management level at other sites at the facility, either through interim removal actions or institutional controls. Also, risk may be based cumulatively, or for a single constituent.

Response to Dr. Stephen Robert's comments of April 14, 1997:

1. Comment 2: Although the investigation did incorporate the SQAG values, this needs to be noted in the text on pages 10-5 and 10-8
2. Comment 6: The comment provided by Mr. Roberts was not imposing "their personal feelings rather than FDEP cancer risk goals" as stated in your comment. As stated previously, it has been discussed by the partnering team, **as** well as prior to partnering, that the acceptable risk level is $1.0E-6$ at NAS Pensacola.
3. Comment No. 10: Your response is adequate. However, the text needs to be corrected on page 10-116. The second sentence states the 95% UCL was calculated, but would not be used. However, this is contradicted in the next paragraph where it states the lowest value of either the maximum concentration or the UCL would be used for computing risk.
4. Comment No. 11: The last sentence on page 10-118 expresses an exposure frequency of 350 days per year while Table 10-12 and Figure 10-27 show an exposure frequency of 175 **days** per year. Also, footnote "b" of the Table reflects an exposure frequency of 365 days per year. This should be corrected in

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the text and, should this result in any changes in the calculated results, the correction should be made.

Specific Comments on the RI:

1. On page xi of the Executive Summary, the last two sentences need to be modified to reflect the following:

The document states that "Site 38 is not a likely continuous source of contaminants to Site 2 at concentrations above risk-based action levels," and that surface water analytical data did not indicate any contamination. The surface water analytical data was an overall water quality analysis which did not actually measure pore water from sediment, nor a groundwater point of discharge. These samples were not established related to points of discharge from Site 38. Contamination in Site 38 wells adjacent to Pensacola Bay and Site 2 exceed the Florida Surface Water Quality Standards (FSWQS) which must be met at the point of discharge. Although at high tide, groundwater flow reverses inland from the bay; at low tide contamination flows toward the bay. The current point of compliance for that contamination is the nearest monitoring well to the bay unless the actual point of discharge can be determined to be below FSWQS. This should be reflected in the text.

2. Section 4.3.1 (Facility Survey) mentions the NADEP facilities as currently active. The NADEP is now closed, although it was still operating at the time of the investigation. The document should reflect current, as well as past conditions and activities at these facilities.
3. Figure 4-1 does not have the outfalls identified as indicated in the legend and in the text of Section 4.3.2 (Drainage Systems).
4. Section 4.3.2 (Drainage Systems) mentions on page 4-13 sanitary sewer lines formerly discharged at Site 2. Please indicate whether these lines were plugged or removed when the Wastewater Treatment lines were installed or are they currently a conduit for contaminant migration?
5. On page 5-3, the last sentence indicates a shallow monitoring well was installed at the southwest corner of Building 76, but Figure 5-3 shows it at the southwest corner of building 75. Please correct accordingly.
6. Section 6.3 (Hydrologic Assessment), subsection Time Log, on page 6-22 indicates monitoring wells 38GS08 and 38GS21 as out of the zone of tidal influence. However, the locations

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of these wells is not shown on Figure 6-5. Please correct accordingly.

7. In Figure 6-7 (Tidal Cycle Potentiometric Surface High Tide) and Figure 6-8 (Tidal Cycle Potentiometric Surface Low Tide), the locations of the buildings and the monitoring wells are not legible, but the potentiometric contours are fine. Please include a more readable figure.
8. In Section 9.5 (Conclusions), I agree that Pensacola Bay is a dynamic system. I do not necessarily agree with the last sentence that this complexity creates an inability to truly correlate Site 38 to the Site 2 contamination. However, we are not trying to attempt to find an absolute correlation. The inorganics detected in sediment at Site 2 are the same as ones historically discharged from the site. Also, the outfalls discharging into this area likely carried PAH contaminants. Due to the apparent "eddy-like" hydrography at this site, contaminants likely have remained entrenched throughout time at this location. This can be shown because of the relative little change in types and amount of contamination still present after a hurricane went through this area prior to the last phase of sampling and analysis. If correlation is to be made to the overall complexity of the bay, the conclusions also need to indicate the correlation to Site 38.
9. On page 10-9, subsection 1993 NOAA-FDEP Pensacola Survey and subsection NOAA National Benthic Surveillance Project, comparison concentrations should be to only those stations within the bay. Bayou and non-Pensacola Bay sampling locations should be eliminated. This would also change the range and means shown in Table 10-2.
10. Table 10-3 should note that contaminant values are mg/kg for metals and $\mu\text{g}/\text{kg}$ for the organic compounds.
11. In Section 10.2.2.3 (Metals in Sediment) and Section 10.2.2.4 (Organics), the text and Figures 10-1 through 10-8 provide comparisons to 40 FDEP sampling locations which include point source and bayou data. The text and figures need to be modified as agreed in previous partnering meetings to only compare to those sampling location in Pensacola Bay; excluding sampling locations in the Bayous and Escambia Bay.

Also, on page 10-42, total PAH (tPAH) was compared between Site 2 data and FDEP data. This comparison is suspect as the levels of detection were much lower in the FDEP report because of the use of a different analytical method. These

discrepancies should be explained in the text, and the comparisons considered qualitative.

12. Section 10.2.2.3 (Phase IIA/PRC Summary) should indicate that even though the bay system is dynamic due to tides and storms, the contamination levels in the hot spots stayed relatively the same after a hurricane passed through prior to the later round of sampling and analysis. Refer to Specific Comment No. 8.
13. Section 10.2.2.5 (Phase IIA/PRC Conclusions) discusses the water chemistry results. This section also needs to reflect what is stated in my Specific Comment No. 1. Also, remove or modify the next to last paragraph of this section. These comparisons are qualitative and may change based upon my Specific Comments No. 9 and No. 11.
14. Figure 10-12 (Phase IIB Contaminant Components for Proposed Hazard Indices) is not easily readable for comparison; particularly for metals and PAHs. I suggest the graphs be provided with some form of hatching marks or the figure done in color.
15. On page 10-61, under subsection Sediment Toxicity, the last sentence is incomplete.
16. In Section 10.3.3 (Phase IIB-Risk Characterization), subsection Benthic Community, on page 10-81, please indicate on a Figure or text the locations of the four FDEP sites used for comparison. Also, the first full paragraph presents theoretical assumptions. Theoretical assumptions should not be part of the report. Just report the facts and what the data specifically presents. If one assumption is included, then all other possible variable assumptions would need to be mentioned.
17. In Section 10.3.5 (Conclusion), delete the last sentence of the first paragraph as it is an assumption. The variables "may" or "may not" reduce actual effects. Also delete the last paragraph. The Hazard Indices (HIs) are reflective of only those sampling locations for which additional studies were performed. The amount of area needed to be addressed in the feasibility study will be based on contaminant levels as they relate to the HIs.
18. In Section 10.4.3.4 (Selection of Chemicals of Potential Concern), the first full paragraph should indicate that a COPC will be a COC if it is found to contribute a pathway that exceeds a risk of $1.0E-6$ or an HI greater than 1. Please refer to previous comments on $1.0E-6$ risk.

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19. In Section 11.0 (Conclusions and Recommendations), on page 11-2, the document states that surface water is not contaminated. This is a single point in time and was performed to determine general water quality (refer Specific Comment No. 1). Also, delete or modify the last sentence on this page (refer to Specific Comment No. 17).
20. Appendix D (Joint NOAA-FDEP 1993 Study Data) should have a Figure indicating the sampling locations in Pensacola Bay for the reviewer to adequately relate the comparisons. Also, any sampling locations within bayous or other bays should be removed (refer to Specific Comment No. 11).

If I can be of any further assistance with this matter, please contact me at (904) 921-9989.

Sincerely,



John W. Mitchell
Remedial Project Manager

cc: Ron Joyner, NAS Pensacola
Gena Townsend, USEPA Region IV
Henry Beiro, EnSafe, Pensacola
Brian Caldwell, EnSafe, Knoxville
Allison Dennen, EnSafe, Memphis
Karen Atchley, Bechtel, Knoxville
Tom Moody, FDEP Northwest District
Pat Kingcade, OGC/Trustee File

TJB  JJC  ESN 