



Department of Environmental Protection

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Lawton Chiles
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Virginia B. Wetherell
Secretary

August 12, 1994

Mr. Bill Hill
Code 18211
Southern Division
Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, South Carolina 29419-9010

- Re: 1. Naval Air Station Pensacola, National Priority List Site,
Additional Sampling Technical Memorandum for Site 1
2. Potential Interference of Sediment Analysis

Dear Mr. Hill:

We have reviewed the above referenced memorandum and provide the following comments. We also would like to inform you and the Navy's contractor of a possible interference/masking problem which may occur during sediment analysis.

Additional Sampling Technical Memorandum for Site 1

Attempting to delineate the groundwater inflow to Wetlands 15 and 16 is a good idea. However, it appears that only if this can be defined will surface water and sediment samples be taken for analysis. This is apparently based upon the tidal influence within these wetlands. We believe SW/SD samples should be taken in these wetlands regardless. The tidal inflow into these particular wetlands is likely minimal due to the constricted openings from the bayou. Also, any impacts to these wetlands are more probable from Site 1 rather than ambient sources from Bayou Grande.

We also would like to see sampling extended into Bayou Grande, only in the vicinity of Site 1, should contamination be discovered in these adjacent wetlands. We agree that the bayou likely has impacts from other ambient sources, but groundwater from the deeper portions of the aquifer at Site 1 are likely migrating upward into the Bayou rather than the wetlands.

Also, the location of Wetland 17 is not shown on the map.

Potential Interference of Sediment Analysis

We have received some information from the department's Office of Water Policy. They, in conjunction with the National Oceanic and Atmospheric Administration's National Status and Trends Program, conducted a sediment survey in the Pensacola Bay system (including areas of Bayou Grande) from 1993-94. The Skidaway Institute of Oceanography (SIO) performed the analysis of the sediment samples.

During the laboratory analysis a masking effect of the PCB and pesticide analysis was occurring. SIO could not determine for certain the cause of the interference, but they suspected some form of nitroaromatic compounds. To attempt a confirmation they submitted some of the extracted samples to a laboratory at Clark University in Atlanta, GA. The PCB analysis was still inconclusive based upon the interference. However, SIO obtained a semi-quantitative estimate of the concentrations of the interfering compounds. The identified organic compounds are:

- a) HMX (1,3,5,7 Octahydrotetranitro-1,3,5,7 tetrazocine
- b) RDX (1,3,5 Hexhydrotrinitro-1,3,5 trinitrobenzene

Because of this interference, SIO was not able to obtain meaningful chemical concentrations for the PCB congeners, certain pesticides, nor some lightweight PAHs.

The highest concentration of HMX (5750 ppm dry-weight) was in a sample from Bayou Grande. These compounds were also determined to be the interfering cause in a few other samples in the Pensacola Bay system, particularly Bayou Chico which is downgradient from Correy Field. The source of these explosive compounds is unknown. It should also be noted that the particular sediment sample from Bayou Grande was significantly toxic to the normal morphological development of tested organisms, as were samples in Bayou Chico.

We thought you should be aware of this issue as the same problem could possibly occur in your sediment analysis performed in the wetlands, bayou and bay in the area of NAS Pensacola. The contracted laboratory should be made cognizant of these results. Should you wish more detailed information, you can contact Thomas Seal with our Office of Water Policy at (904)488-0784.

August 12, 1994
NAS Pensacola
Page 3

Thank you for the ability to comment, and we are glad to be able to provide you with this information. If you have any questions, please call me at my new phone number (904)487-2231.

Sincerely,



John Mitchell
Natural Resource Trustee
Project Manager, Office of
Intergovernmental Programs

cc: Pat Kingcade, FDEP
Erie Nuzie, FDEP
Thomas Seal, FDEP
Waynon Johnson, NOAA
Jim Lee, DOI
Ron Joyner, USN
Allison Drew, EPA
Henry Beiro, E/AH
Dr. Michael Lewis, EPA Gulf Breeze Lab