



Lawton Chiles
Governor

Department of Environmental Protection

32501.032
09.01.32.0026

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

N00204.AR.000839

NAS PENSACOLA

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December 9, 1994

Mr. Bill Hill
Code 1851
Southern Division
Naval Facilities Engineering Command
P.O. Box 190010
North Charleston, South Carolina 29419-0068

RE: Draft Final Remedial Investigation Report, Operable
Unit 10 and Site 13, Naval Air Station Pensacola.

Dear Mr. Hill:

I have completed the technical review of the subject document, dated October 14, 1994 (received October 17, 1994). The following comments should be addressed before this document can be considered final:

Table of Contents through Section 7.0:

1. Figure 7-5 in the Table of Contents should be changed from Sites 32 and 35 to Sites 33 and 35.
2. The appendices should be referenced in the Table of Contents.
3. In Section 2, a figure illustrating the approximate area of all spills and releases (such as the 2,200 gallon spill of sulfuric acid northeast of the Former Surge Pond, and breaks in the waste line around the Former Surge Pond and Surge Tank) would be useful in order to relate the sample results to areas of known contamination.
4. Figure 3-3 illustrates shallow monitoring wells to be screened below the water table. FDEP strongly recommends that all shallow monitoring bracket the water table in order to detect LNAPLs.
5. All monitoring and recovery wells should be included on all relevant figures. The dramatic effect of recovery wells on groundwater flow is discussed in Section 6, but these wells are omitted from the figures in this section.

Section 7.0 (Nature and Extent of Contamination):

6. All known sources of contamination, such as the former underground waste oil tank **as well as** all potential sources of contamination, such as tanks, chemical **storage/mixing** areas, should be identified on all relevant figures.
7. The text, tables and preferably figures should include values for specific **PAHs** and phenols in addition to total PAHs and phenols, because the Florida Soil Cleanup Goals and Water Quality Standards (62-520 and 62-550, F.A.C.) are chemical specific.
8. The soil and groundwater at and in the vicinity of the sulfuric acid spill should be tested for residue of the acid spill, such as pH and sulfate.
9. The proposed additional assessment in order to delineate the horizontal and vertical extent of soil/sediment contamination in the potential wetland west and north of the Industrial Sludge Drying Beds (ISDBs) and the Swale Area (page 12-1) should include the Fill Area.
10. Additional soil samples should be collected at Site **32** around soil sample **33S20**, located north of the Swale Area. The soil sample from this location contained levels of PAHs comparable with the contaminated Swale Area.
11. Additional soil samples are needed to delineate the horizontal and vertical extent of contamination at Sites **33** and **35**. Specifically, soil samples should be collected around soil samples **33S46**, **33S50**, and **33S51**, due to the high **PAH** values; and around monitoring well GM-66, due to groundwater contamination and possible source(s) of contamination in this area.
12. Unless the Bilge Water Assessment (under the UST Program) proposes additional sediment and surface water samples to be collected from the drainage ditch, additional samples should be collected as part of this investigation in order to delineate the extent of contamination.
13. The metals results in sediment sample **13M66** (Figure 7-13) are missing.
14. The analytical results from the surface water samples should be illustrated on Figure 7-14.

15. Based on the omission of 1,3-dichlorobenzene in groundwater on Figures 7-17 and 7-21, because it does not have a drinking water standard (page 7-63), there appears to still be confusion concerning the groundwater minimum criteria. As discussed many times in meetings and referenced in agency comments as early as July 1994, the Florida Primary, Secondary and minimum criteria, or "free from" Water Quality Standards, (Chapters 17-520 and 17-550, Florida Administrative Code), are ARARs because they are promulgated rules. The updated 1994 Florida Ground Water Guidance Concentrations booklet contains the Maximum Concentration Levels (MCLs) and numerical interpretations by Departmental toxicologists of the promulgated narrative minimum criteria standard. The Primary and Secondary Drinking Water Standards are established in Chapter 17-550, F.A.C. and promulgated as groundwater standards in Chapter 17-520, F.A.C. For those constituents in the booklet that do not have Primary or Secondary Drinking Water Standards, the Department considers them exceedences of minimum criteria and trigger/screening values for assessment purposes. Furthermore, the Department would consider them cleanup levels unless alternate ones are approved by the Department.
16. In order to delineate the horizontal and vertical extent of contamination detected in intermediate monitoring well 33G15/recovery well RW3, one shallow monitoring well should be installed so as to be clustered with 33G15/RW3, and one intermediate depth monitoring well should be installed downgradient of 33G15/RW3. Additional monitoring wells may need to be installed based on the results of these requested wells.
17. With contamination in intermediate depth well GM-66, a deep monitoring well should be installed so as to be clustered with GM-66. Note, the five to fifteen foot Low Permeability Zone (if present throughout the IWTP area) may not be sufficient to prevent the downward migration of solvents.
18. There are omissions on the figures illustrating groundwater contamination, of analytical data above the Florida Water Quality Standards. For example, in monitoring well GM66, cis-1,2-dichloroethene was not listed; however, it is present at 780 ppb, substantially above the Water Quality Standard of 70 ppb.
19. Some wells have not been sampled for two years, and the wells were sampled at different times using different sampling techniques and were collected by different personnel; thus, following installation of the requested wells, a complete

round of groundwater samples is requested to confirm the results of the previous sampling events and to determine if the contaminant concentrations are either increasing, decreasing, or remaining relatively unchanged.

Section 10.0 (Baseline Risk Assessment):

20. The levels of aluminum, antimony, beryllium, chromium, lead, manganese, mercury, thallium and vanadium in reference (background) wells 01GS67 and 01GS69 (Table 10-6) are above the Florida Water Quality Standards (62-550 and 62-520, Florida Administrative Code). These wells should be resampled using the Quiescent Sampling Technique. However, if these values were obtained utilizing the Quiescent Sampling Technique, then different locations (without groundwater contamination) should be determined for the installation of representative background wells.
21. The Florida soil cleanup goal (July 7, 1994) for worker exposure of trichloroethene is 12.0 ppm, based on an aggregate worker, or 1.46 ppb based on leachability, not 39.5 ppm as denoted on Table 10.7, page 10-23.
22. The Florida Water Quality Standards for 1,3-Dichlorobenzene and Chromium of 10 ppb and 100 ppb are lower than the RBCs of 54 ppb and 180 ppb (respectively) denoted on Table 10.9, page 10-28.
23. Chemicals of Potential Concern (COPC) in surface water should be compared with Florida Surface Water Quality Criteria (62-302, F.A.C.) instead of the Florida Drinking Water Standards (62-550, F.A.C.), as documented on Table 10-11, page 10-32.
24. The screening values for sediments (Table 10.12, page 10-34) should be based on the Sediment Screening Values (SSVs), as agreed upon by the Tier 1 team. Specifically, the values for cadmium, chromium, copper, lead, nickel, 4,4-DDT, dieldrin, chlordane, and fluoanthene should be adjusted to be consistent with the SSVs.
25. Ranges of Remedial Goal Options (RGOs) (Section 10.8, page 10-162) for carcinogenic chemicals of concern (COCs) ($1E-4$ to $1E-6$) and hazard quotients (10, 1 and 0.1) for non-carcinogenic COCs are not acceptable. With the inclusion of the inhalation pathway in the calculation of RGOs/Cleanup Levels, FDEP only considers $1E-6$ for carcinogenic COCs and 1.0 hazard quotient for non-carcinogenic COCs acceptable.

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Therefore, the cancer risks and hazard quotients of the COPCs above these levels should be renamed COCs, and the soil, sediment and groundwater pathways included in the Feasibility Study as areas of possible remediation.

26. Since levels of contaminants in sediment samples **13M61**, **13M62**, **13M65**, and **13M66** (Figures 7-12 and 7-13) were above the SSVs, an ecological risk evaluation (Section 10.9) should be performed for Site 13.

Section 11 (Summary: Contamination and Risk Assessment):

27. Section 11.1 mentions that a source of contamination could be a break in the waste line around the surge tank; whereas, Section 9.1 mentions a break in the waste line around the former surge pond. Was there more than one break in the waste line?

Appendices:

28. In Appendix L, the analytical results of **PAHs** detected do not correspond with the total **PAHs** illustrated on the figures. For example, the total **PAHs** for soil sample **33S01002** is **105,000 ppb** (without "J" flag) and **122,900 ppb** (with "J" flag); however, on Figure 7-2, the total **PAHs** listed is **99,800 ppb**.
29. The appendix with the sediment analytical results was omitted.

If I can be of any further assistance with this matter, please contact me at (904) 488-3935.

Sincerely,



David M. Clowes
Remedial Project Manager

Mr. Bill Hill
December 8, 1994
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/dmc

cc: Ron Joyner, NAS Pensacola
Allison Humphris, EPA Region IV
Henry Beiro/Brian Caldwell, Ensafe, Pensacola
Tom Moody, FDEP Northwest District
John Mitchell, FDEP Natural Resource Trustee

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