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NAS CECIL FIELD  
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LETTER AND COMMENTS FROM U S EPA REGION IV REGARDING DRAFT FEASIBILITY  
STUDY OPERABLE UNIT 5 (OU5) NAS CECIL FIELD FL  
1/6/1998  
U S EPA REGION IV

144

January 6, 1998

Commanding Officer  
Mr. Mark Davidson  
SOUTHNAVFACENGCOM  
Post Office Box 190010  
North Charleston, South Carolina 29419-9010

Subject: Draft Feasibility Study, Operable Unit 5, Naval Air Station Cecil Field,  
Jacksonville, Florida (FL5170022474)

Dear Mr. Davidson:

The U.S. Environmental Protection Agency, Region 4 has reviewed the subject document. Attached are our comments. If you have any questions please contact me at 404/562-8539.

Sincerely,

Deborah A. Vaughn-Wright  
Remedial Project Manager

Enclosure

cc: BCT via E-mail

**Operable Unit 5 (site 14 & 15), Draft Feasibility Comments**  
**January 6, 1998**

1. Table 2 in the Executive Summary presents an estimated remedial time frame of 5 years for phytoremediation. On pages 4-23 and 4-24, a remedial time frame of 3 to 5 years is envisioned. Tables 5-1 lists a projected remedial time frame of "5+" years for this alternative. There needs to be some uniformity to the assumed remedial time frame, and a justification for that assumed value needs to be presented in the report.

2. Near the bottom of page 1-5, the text states "majority of metal compounds generated would tend to sorb to the soil, due to the high octanol-water partitioning coefficients of most metals". If there is a reference which states that metals have a high octanol-water partitioning coefficient, or if metal-specific octanol water partitioning coefficient data are available to support this statement, that information needs to be presented here. The EPA reviewers are unaware of any research into the partitioning of metals between octanol and water. Additionally, it is unlikely that the partitioning of the metals between soil and water would be partially, if not predominately, influenced by processes other than sorption. Therefore, this discussion of metals mobility in soils probably either needs to be rewritten to be more general, or needs to be supported by chemical-specific reference data and a discussion of the soil chemistry that promotes sorption to the exclusion of other processes. This comment also applies to the discussion in the last paragraph on page 1-10.

3. Page 2-5, Section 2.2: Double check the closure date. Is it now 1999?

4. Page 2-6, Section 2.2: The text states that "the local water management district does not issue permits for potable water wells screened in the surficial aquifer." Is this local policy or technically based? If it is policy, the policy may change in the future. Therefore the statement of future usage being unlikely may be misleading.

5. Page 2-8, Section 2.3.1: The document states that "The nephelometric turbidity units value for the groundwater sample was 17, which is considered turbid. Thallium was not detected in the associated filtered sample from the well. Based on these findings, it is reasonable to use the filtered data from this well for RA purposes."

EPA, Region 4 does not agree with this statement and its conclusion. First, no matter how turbid a groundwater sample is, it is Region 4 policy to use the unfiltered data. The EPA reviewer is unaware of any exceptions to this long standing policy. Second, no criteria have been established for determining when a groundwater sample is turbid. A sample of 17 NTU would appear extremely clear to the naked eye, and therefore would easily be judged potable. For the purposes of groundwater purging/sampling EPA, Region 4's current practice is to achieve 10 NTU whenever possible, (based on drinking water standards), but this has never been used to limit the potential uses of the data.

EPA is not disagreeing with the decision to not consider thallium in the RA. There are, however, other (better) reasons for doing so.

6. Page 2-8: In the discussion of thallium contamination at Site 14, the text first states that thallium was detected in one sample and ...”was not detected in its associated duplicate sample.” A few sentences later, the text states “Thallium was not detected in the associated filtered samples from the well.” It is unclear if the filtered sample is the “duplicate” sample; if so, the use of the word “duplicate” must be avoided, as it implies a sample which is identical.

7. Page 2-18, Groundwater: The FS report dismisses bis 2 ethylhexyl phthalate as a contaminant of concern in ground water because it is within acceptable risk range and a common laboratory artifact. This compound has a Federal MCL of 6 ug/L; This value represents an ARAR for groundwater regardless of specific risk associated with a concentration above 6 ug/L. The argument that the observed bis 2 ethylhexyl phthalate in ground-water samples is a laboratory artifact is considered invalid, unless there are laboratory data which demonstrate the appearance of this compound in quality control samples, in concentrations which indicate the laboratory artifact explanation for observed ground-water concentrations is likely valid.

8. Page 2-19, Groundwater: The report indicates that thallium in the ground water is not being considered in the development of the RAOs because it is only slightly above the 2ug/L MCL and is not expected to be associated with the site-related contamination. These are not adequate reasons for the elimination of thallium as a contaminant of concern. The BCT has discussed the use of ‘hi-cut’ values for inorganics in groundwater as screening values. A discussion of thallium as it relates to hi-cut numbers and the possibility of it being naturally occurring should be included in the discussion. Alternatively, if there are no detections of this metal in any site 15 soil samples, and there are no detections of thallium in any filtered ground-water samples from site 15, it would be a valid basis for eliminating this metal from consideration as a site-related contaminant on the basis of the soil data, and additionally does not appear to be mobile in groundwater in this hydrogeologic setting.

9. Page 4-30, Sampling and Analysis of Excavated Soil: The report state that TCLP analysis of soils would be used to determine whether or not a soil stockpile would require treatment. This TCLP criterion does not match the requirement that soils meet action levels (as specified in report Table 2-3). The presence of soil contamination above action levels is the reason for performing soil remedial action at site 15.

10. Page 4-54, Section 4.8.2, Overall Protection of Human Health and the Environment: The last sentence mentions “radiation dose”. Since no radioactive contaminants of concern have been identified, “ radiation dose” should be omitted from he sentence.

11. Table 5-1 indicates that the in-situ stabilization alternative results in the destruction of inorganic contaminants. The description of the stabilization process indicates that the inorganic contaminants (principally lead) would be converted to a low mobility compound, but would not be destroyed.

As noted on page 5-1, a reduction of the contaminant mobility and volume of contaminants are remedial goals preferred by SARA. Therefore, it is recommended that Table 5-1 incorporate some evaluation of how these factors would be met by the various soil remedial

actions. The same comment generally applies to Table 5-2.

12. Page 5-7, Section 5.3.2, Short Term Effectiveness: The FS states that the Remedial Alternative (RA) SD-2, if implemented, may cause short term disruption to the existing ecosystem. RA SD-2 consists of the removal of contaminated sediment. Since surface water is currently not identified as a medium of concern, excavation of lead-contaminated sediment will certainly result in increased contamination of the surface water, and could possibly result in increased mobility of lead. The potential “negative” effects of RA SD-2 need to be addressed in more detail, either in the detailed discussion of RA SD-2, or in the comparative analysis in Section 5.0. In addition, any effects to minimize and/or rectify disruptive effects to the ecosystem should be addressed in the cost analysis.

13. Regarding the lead-contaminated surface water, the FS showed detections of lead and iron in the surface water and exceedances of their respective Florida Surface Water Standards (FSWS). However, no human health or ecological risks due to lead in surface water were identified. The FS does conclude, though, that most of the lead present in the surface soil at OU 5 is oxidized, soluble and bioavailable. According to Page 2-21,, the FS states that “drainage pathways from the surface soil to surface water are not clear.” The FS also states on page 2-36 that “lead is relatively immobile in the environment and would most likely migrate off site (e.g., to an aqueous environment).” Finally, the FS states on page 2-21 that “an RAO has already been established for lead in surface soil at the site; therefore, an RAO specific to lead in surface water is not necessary.” The logic behind not developing an RAO for lead in surface water is unclear and should be further justified. More detail is needed regarding the lead-contaminated surface water and how it is influenced by lead-contaminated surface soil.

