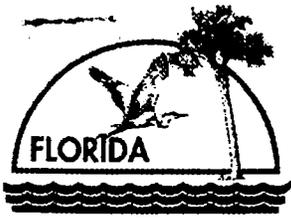


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FLORIDA DEPARTMENT OF ENVIRONMENTAL COMMENTS ON DRAFT FEASIBILITY
STUDY OPERABLE UNIT 2 (OU 2) NAS CECIL FIELD FL
2/6/1994
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Department of Environmental Protection

Lawton Chiles
Governor

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

Virginia B. Wetherell
Secretary

February 6, 1994

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commanding Officer
Mr. Alan Shoultz, Code 1875
SOUTHNAVFACENCOM
Post Office Box 190010
North Charleston, SC 29419-0068

RE: Draft Feasibility Study, Operable Unit 2, Naval Air Station
Cecil Field, Florida.

Dear Mr. Shoultz:

Department personnel have completed the technical review of the Draft Feasibility study, dated December 1994 (received December 13, 1994) submitted for the above-referenced facility. This document was reviewed by Mr. Greg Brown, of the Technical Review Section, and myself. I have included his specific review memorandum and comments. Our comments will need to be adequately addressed before this document is considered Final.

1. Page 1-6, 1st sentence, it appears from this sentence that free product is present at both Site 5 and 17.
2. Page 1-7, last paragraph, the Florida following Jacksonville is redundant. Please omit.
3. Page 1-9, 1st paragraph, the Florida following Jacksonville and Villages of Argyle is redundant. Please omit.
4. Page 1-10, 3rd paragraph, it is stated that remedial response activities are currently underway at Site 4. What are these activities?
5. Page 1-10, last paragraph, it is stated that several parcels have been identified as having insufficient information to determine their status. I question the use of the word "several" when the number of parcels exceed 200 in number.
6. Page 1-11, 1st sentence, change "...sites currently under consideration..." to "...sites currently under evaluation...".

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7. Page 1-12, Figure 1-13, there are too many layers on this CAD Figure and it is hard to interpret.
8. Page 1-13, 2nd paragraph, as stated in my Remedial Investigation (RI) comments for OU-2 dated December 21, 1994, the data gap in aerial photos from 1960 through 1969 should be further investigated. There probably are aerial photos available from the time period that was not investigated.
9. Page 2-9, Figure 2-4, why did the scale in this figure, 1"=120' change from Figure 2-2, which had a scale of 1"=100'? For comparison, scale on figures should remain constant throughout a given report, if logistically possible.
10. Page 2-12, Figure 2-6, see Comment 9.
11. Page 2-14, Figure 2-8, see Comment 8. In addition, a figure similar to this should have been included in the RI for OU-2.
12. Page 2-15, Figure 2-9, a figure similar to this should have been included in the RI for OU-2.
13. Page 2-17, Figure 2-10, the surface water and sediment sample collected south of Site 5 is not numbered. Please correct.
14. Page 2-17, 6th Bullet, was not the estimated volume of contaminated groundwater calculated during the RI for Site 17? If so, it should be included in this discussion, if not, it should be calculated.
15. Page 5-18, Table 5-5, the Florida Groundwater Concentrations issued in June 1994 should be included in this Table. The proposed Target Cleanup Levels vary significantly from those published values for Acetone, 4-Methyl phenol, Naphthalene, 2,4 Dimethylphenol, 2-Methylphenol, Phenol, and Vanadium. The Florida Primary, Secondary and minimum criteria or "free from" Water Quality Standards (Chapters 62-520 and 62-550, Florida Administrative Code, [F.A.C.]) are ARARs because they are promulgated rules. The updated 1994 Florida Ground Water Guidance Concentrations booklet contains the Maximum Concentration Limits (MCLs) which are numerical interpretations by Departmental toxicologists of the promulgated narrative minimum criteria standard. The Primary and Secondary Drinking Water Standards are established in Chapter 62-550, F.A.C., and promulgated as

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groundwater standards in Chapter 62-520, F.A.C. For those constituents in the booklet that do not have Primary or Secondary Drinking Water Standards, the Department considers them 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. Therefore, many of the proposed Target Cleanup Levels are unacceptable.

16. Page 6-19, Table 6-6, it is interesting to note that one of the disadvantages listed for the effectiveness of Onsite Biological Treatment for sediment is that the treatment may not bring all contamination levels down to action levels. However, biological treatment was the selected alternative for the surface and subsurface soil, which had much greater concentrations of contamination.
17. Page 6-27, Table 6-14, this treatment alternative may have been prematurely eliminated, especially since this was a proposed method that was seriously considered when we were planning to dewater the Site 17, in order to conduct the planned soil excavation.
18. Page 7-10, paragraph below TCLP Table, last sentence, add the letter p to "...1pm; however...".
19. Page 7-23, Alternative GW-3 Air Sparging, will this alternative work efficiently with a shallower groundwater table? It is stated that groundwater elevations fluctuate from approximately 8 feet below land surface (bls) to 2 feet bls, however as recently as a month ago, groundwater elevations at Site 17 were measured at 6 inches bls.

If you have any concerns regarding this letter, please contact me at (904) 921-9991.

Sincerely,



Michael J. Deliz, P.G.
Remedial Project Manager

CC: John Mitchell, FDEP Natural Resource Trustee
Satish Kastury, FDEP
Aswin Patel, FDEP Northeast District
Bart Reedy, USEPA - Atlanta
Jerry Young, City of Jacksonville

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Steve Wilson, SOUTHNAVFACENGCOM

TJB B JCC gg ESN ESN

Florida Department of
Environmental Protection

Memorandum

TO: Mike Deliz, P.G., Remedial Project Manager, Technical Review Section

THROUGH: Tim Bahr, P.G., Supervisor, Technical Review Section **T**

FROM: Greg Brown, Professional Engineer II, Technical Review Section **AB**

DATE: January 26, 1995

SUBJECT: Review Comments on Draft FS for OU2, Cecil Field NAS; December, 1994.

I have reviewed the subject document and my detailed comments are presented in the attached table. The following are significant concerns that need to be addressed.

- It has not been resolved if poor monitoring well installations, poor groundwater sampling techniques, or other systematic errors are responsible for the observed non filtered concentrations of inorganic contaminants.
- The FS provides insufficient analysis to support technology and alternatives selection relative to site and contaminant characteristics.

Please call me if you have any questions concerning my comments.

No	Page/Para	Comment
1	Executive Summary	<p>Summarize contaminants of concern and give volume estimates for the affected media.</p> <p>RAOs are too generic. Please request the Navy to specify the media, contaminants, exposure pathways, and specific cleanup goals.</p>
2	General/ Chapters 1, 2, & 3	<p>The FS attempts to summarize the RI and BRA in the first three chapters. Although the intent is commendable, the realization is lacking. Many unanswered questions were raised during my review of these chapters that required reviewing the RI and BRA directly.</p> <p>Since I had to refer back to the source documents to answer the questions raised in review of FS Chapters 1, 2, & 3, I recommend the following strategy to the Navy for future FS's:</p> <ul style="list-style-type: none"> • Follow the guidance FS outline, Table 6-5, in EPA's "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA". This outline puts background information from the RI into a single succinct chapter and reduces repetitive, reiterative, and repeating redundancies. • Summarize contaminant and site-specific information that supports the FS analysis and leave collateral information in the source documents. Too much information that does not directly support the FS's analysis and conclusions can create questions not relevant to remedial alternatives analysis. • Report RI and BRA facts, findings, and conclusions without repeating their analyses. <p>It is much more difficult to provide a good, complete summary than it is to cut and paste from source documents developed for slightly different purposes. A good RI/BRA summary would show a complete understanding of the relevant facts supporting the FS and present them in a coherent manner. The result would be a document that would weather regulatory review and the scrutiny of the public. This could be very important at BRAC bases where transfers of real property may occur.</p>
3	Chapter 1	<p>".... development, screening, and evaluation of potential remedial alternatives...." is repeated at least four times in this section adding no value to the narrative. This is just one example of unnecessary redundancy discussed above.</p>
4	1-3/i	<p>Report the status of the RI/BRA as of the draft FS writing. If they are not final and approved, then the FS reader should be aware of that.</p>
5	1-3/Section 1.2	<p>More boiler-plate redundancy. Paragraph ii on page 1-1 describes the FS standards ostensibly followed by the Navy and is sufficient. If a description of the FS process is believed to be needed for the general public, place it in an appendix or issue a community relations fact sheet.</p>
6	1-7v	<p>Suggest dropping narrative on adjacent land use and just show on site location map.</p>
7	1-10/iii	<p>What happened to Sites 6, 9, 12, 18, and 19? (These sites are probably not relevant to the FS for OU2, but begs the question).</p>
8	1-11/ii	<p>Why was Site 3 made OU8? (Again, it is probably not relevant to the FS for OU2, but begs the question).</p>
9	Section 2.0	<p>State briefly DQO levels achieved for data and any significant validation issues, if any, that may affect the credibility of the reported data.</p> <p>Table 2-1 for previous investigation findings is very good and illustrates the type of summary information recommended in item 2 above.</p>
10	2-5/Section 2.2.1	<p>Any vertical gradients, if they exist or not, were not reported. This would be a relevant site characteristic to consider during alternatives analysis.</p>

11	Figure 2-1	The cross-section is not identified on any Site 17 site map in the FS. In addition, no deep wells are shown on figure 2-3 so that it is impossible to see where the cross section was made. Is this cross section typical of Site 5, too? If not, where is Site 5's typical cross-section. Soil structure and stratigraphy are relevant site characteristics that should be summarized in an FS to support the alternatives analysis.
12	Figure 2-2	The stream is identified as a groundwater discharge point, so that one could assume that the stream surface reflected groundwater elevation at that point, assuming dry weather flow. Were the contours passing the stream gauged from surface water elevations or are guesses? It would be easy to shoot a few water surface elevations at the same time monitoring wells are gauged to provide additional evidence of groundwater discharge to surface water, at least at the time of measurement. Seasonal variations should also be discussed to the extent possible. These are relevant site characteristics that should be summarized in an FS to support the alternatives analysis.
13	2-11/Section 2.2.2	What are the volumes of affected surface soil? What are the characteristics of the soil that may affect remedial alternatives selection?
14	2-11/Section 2.2.3	What are the volumes of affected subsurface soil? What are the characteristics of the soil that may affect remedial alternatives selection?
15	2-11/Section 2.2.4	What are the volumes of affected groundwater? What are the characteristics of the groundwater that may affect remedial alternatives selection?
16	Figure 2-8/ Site 5	No monitoring wells are shown in figure so it is impossible to assess the postulated plume horizontal extent relative to the monitoring well network. The scales between Figures 2-2 and 2-8 are different making manual transposition of monitoring well locations difficult.
17	Figure 2-9/ Site 17	See comment 16. Scales are OK.
18	2-19/Section 2.2.8	An Achilles heel of this document is the "inorganic contamination in groundwater" question. The remedial alternatives for groundwater assumed that inorganic chemicals were not contaminants of concern. If the measured inorganic chemicals in groundwater are due to poor monitoring well construction or sampling techniques and are not representative of groundwater quality, the Navy should address this data gap soon and resolve it. Otherwise, the RI is incomplete and the FS will not be "approveable".
19	2-20/2nd bullet	Is there a new site at site 17? "Because contaminant transport migration speeds are demonstrated to be too slow for these contaminants to have reached the wetland, the contaminants are interpreted to be from sources other than the disposal pit." Is OU2 FS addressing this new source? Its not explicit from the narrative. Again, this may be a "cut and paste" disconnect between the RI and the FS. If the Navy focused on the germane data needed to support the FS, irrelevant questions could be minimized.
20	Section 3.0	This section, in general, is a good example of a succinct summary suggested in comment 2. Something similar for the RI would be nice, at least in future FS's. One question, however: were the groundwater risks for inorganic chemicals calculated on filtered and/or unfiltered samples?
21	Section 5.1	More boiler-plate redundancy. Do without or put in Appendices. Keep the tables, though. Add State Groundwater Guidance Concentrations and Soil Cleanup Goals.
22	Section 5.0	RAOs too generic. See comment 1. What are the volumes of contaminated media? See comments 13, 14, and 15. Need to explicitly state that inorganic chemicals in groundwater are not considered in RAOs (at this time).

23	Section 6.0/ general	<p>Although the FS is primarily a document designed to comply with the NCP, important engineering decisions are made in it that have potential long-term impacts. These engineering decisions should be supported by an analysis of available site and contaminant specific characteristics relative to technology requirements to the extent needed to assess feasibility.</p> <p>This FS, in general, has little engineering analysis of this type and this is an important weakness of the document. Decision makers are essentially left to accept the engineering decisions in the FS without any quantitative support.</p> <p>How can technologies be screened or alternatives be developed without considering volumes of contaminated media? (Post script: volumes are reported, but are scattered throughout the report, principally in Section 7.0. Volume estimates should be presented earlier in report. Few calculations to support the volume estimates were given.)</p> <p>More In-situ groundwater treatment technologies should have been considered. Pump and treat technologies are proving to be of limited effectiveness beyond hydraulic control. Possible combinations of in-situ treatment with hydraulic controls should have been considered.</p>
24	Table 6-1	<p>Biological Treatment: Please Explain: "Microorganisms are subject to toxic shock from high concentrations of heavy metals of certain organic."</p> <p>A number of esoteric technologies with limited applicability are taking up space in the table (e.g., wet air oxidation, supercritical oxidation, cross flow pervaporation, etc). These could be edited out without detracting from the FS.</p>
25	Section 6.2.1.2; Section 7.2.1	What is the final disposition of the treated soil?
26		[RESERVED]
27	Section 6.2.2	Explicitly state that inorganic contaminants are not considered in the technology and alternatives screening.
28	Section 6.2.2.6	How far is the nearest sanitary sewer connection. Considering the relatively low levels of organic contaminants likely to be in the influent and the low flows (30 gpm; again, no calculations to support this number), direct discharge to the FOTW may be possible.
29	Table 6-3	It would be helpful to have the sites identified where the proposed alternatives may apply.
30	7-1/Section 7.0	<p>The criteria are repeated in Table 7-1. Redundant.</p> <p>Cost estimates for FSs are for comparative purposes and should achieve an accuracy of minus 30-percent to plus 50-percent. The cost estimates in this FS appear excessively "conservative", that is, high.</p>
31	7-2/Section 7.1.1	Sampling and analysis proposed for no action includes wide spectrum methods. Is there a rationale for not limiting the target analytes to the known contaminants of concern particularly for Site 17? How would that affect the cost estimate?
32	7-17/ Table 7-4	Why is \$50,000 needed for engineering and construction services for dig and haul?
33	7-22/Section 7.5.2	Need to estimate "time frame to reduce groundwater contamination to acceptable levels" for GW-2. If time to cleanup is not estimated, how can comparisons with other alternatives be made?
34	7-26/ Section 7.6.1	Soil vapor extraction may be difficult at Sites 5 or 17 due to the high groundwater table. Depth to groundwater is an important site characteristic that should be considered during technology and alternatives analysis.
35	Table 7-7	<p>FYI: A design for an SVE/AS system at a site with similar conditions, but a larger plume with higher concentrations of VOAs and SOAs, was recently submitted to the Bureau for review. It had an estimated life cycle cost of less than \$200,000.</p> <p>Does this cost estimate include Site 5 as well as Site 17?</p>

36	7-30/Section 7.7	<p>Experience is showing pump and treat to be very limited as a groundwater remediation strategy. I believe it is best applied when containment is needed to prevent plume migration in combination with other source control technologies. I would like to see alternatives along those lines if applicable.</p> <p>May wish to consider strategically located upgradient injection wells or infiltration galleries to enhance hydrologic controls for pump & treat.</p> <p>The cost estimates should be reconsidered. They seem excessively high.</p>
37	Section 8.0	Boiler plate in the front. Redundant.