



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

October 15, 1996

DRP-8J

Mr. Thomas Brent  
Environmental Protection Department  
5090 SER 095/6228  
Department of the Navy  
Naval Surface Warfare Center  
300 Highway 361  
Crane, Indiana 47522-5000

RE:

Bioremediation Facility  
Naval Surface Warfare Center  
Crane, Indiana  
IN5 170 023 498

Dear Mr. Brent:

The purpose of this letter is to follow-up on my verbal comments on the Operational Plan for the Bioremediation Facility, dated August 1, 1996. Attached are my specific comments. I will not repeat Allen Debus' previous comments we sent that are the same as mine. Please note that on the HMX treatment criteria, there should also be a general performance criteria established of at least 99% reduction, according to the National Contingency Plan requirements for innovative treatment technologies. Otherwise we are not really establishing a good clean-up goal.

If you have any questions regarding this matter, please contact me at (312) 886-6146.

Sincerely,

A handwritten signature in cursive script, appearing to read "Carol Witt-Smith".

Carol Witt-Smith  
Corrective Action Expert  
WMB, IL/IN/MI Section

cc: Jim Hunsicker, NSWC  
Steve Downey, MK at NSWC  
Adrienne Wilson, SOUTHDIV

Comments on the Operational Plan for the Bioremediation Facility  
Dated August 1, 1996  
Naval Surface Warfare Center  
Crane, Indiana

1. Cover Page

The Document is the First Revision to a previous version we commented on. The next revision should reflect "revision 2."

2. Page 3, Paragraph 1, Sentence 3

Delete "the" in front of "drainage."

3. Page 3, ABG Soils

We need to verify that the metals going into the compost treatment process and the metals coming out after treatment are documented for all Solid Waste Management Units (SWMUs). Total metals and TCLP metals should be performed on a before and after treatment basis. This will show if there is any binding of the metals. Also, if organics are expected at ABG in low amounts, then we should verify after treatment their existence or not for final disposal purposes.

4. Figures showing excavation

- a. We need to note that the boundaries shown are not hard fast delineations.
- b. The Mine Fill A and B figures do not identify well which areas are being excavated. Modify the diagrams with a legend.

5. Page 12, Table 1-2

The text should explain why 2A-DNT increased, due to degradation. We need to make sure the testing of the piles over the treatment will monitor the full degradation process.

6. Page 12, Section 1.3.3

Explain what will happen if HMX does not reduce. Since this project is also meant to eventually meet CERCLA requirements, the testing for the innovative technology should meet the National Contingency Plan requirement for treatment levels. Thus, HMX should also have a treatment performance criteria of 99% reduction. If this project is truly reflective of the Region 10 studies, this should be achievable.

7. Page 13, Section 2.1

Change sentences 4, 5, and 6 to: It is expected from in-situ soil analysis that once the soil is excavated and mixed within the truck, prior to treatment, that the soil will no longer be potentially reactive, thus it will be non-reactive and a non-hazardous waste. Upon treatment in the bioremediation facility, the hazardous constituents will be treated from the soil media, and the material handled will be a contaminated media. Upon treatment completion, it is anticipated that the material shall be considered a soil again. If at any point the generation of hazardous waste is anticipated, the project will stop for that area being excavated and permits will be sought for treatment of hazardous waste.

8. Page 14, U.S. EPA rules

Add 40 CFR Part 262, Generator standards, and note any other applicable rules.

9. Page 17, Section 3.6

Add that an NPDES permit will be required. Modify the paragraph per our phone conversation regarding reuse of water into the treatment system. See Al Debus' comments.

10. Page 21, Section 5.0

Proposed goals shall be established to determine whether the treatment system is effective or not.

11. Page 21, Section 5.1

- a. "recipes" is misspelled.
- b. The percentages of the mixes needs modification.
- c. Explain the logic behind the selection of the amendments for use in comparison of the results.

12. Page 21, Section 5.1.1

"Method 8330" should read: "U.S. EPA Method 8330, consistent with the latest version of the Cold Regions Lab method."

13. Page 22, Table 5-1

- a. The Percentages need fixing.

- b. As we discussed last week, we would agree that more 25% mixtures may be used and then the final selection of approved mixes would be pilot tested for an increase in the soil percentage during the remediation of soils at the full scale with the approved 25% rates.
14. Page 22, Section 5.1.2
- a. Define what "significant" means whenever it is used. Is it a percent or a specific number?
  - b. What contingency plan would go in place if the temperature levels were not met? Example, would air circulators be installed to promote heating?
  - c. Again, modify the reuse of water language.
15. Page 23, Section 5.2
- a. Change all references to "alfalfa and manure" to "approved amendments."
  - b. Add a step between 6 and 7, to check to make sure that the mix meets the treatment standards.
  - c. Add to the end of Step 7, transportation to where, and based on what criteria.
16. Pages 24 and 25, Section 5.2.1
- a. Change "Rockeye" references to "Mine Fill A."
  - b. Weren't the windrows requiring removal of everything 1 inch or larger?
  - c. U.S. EPA will need a copy of the eventual trenching permits for their files.
  - d. All excavated soil at the SWMUs should be placed on a plastic liner, not bare ground.
  - e. Add the colorimetric tests here.
  - f. Change the water handling based on previous conversation.
  - g. Open excavations should be covered if there are rain events and have safety barriers around them. Refer to Safety Plan here.
  - h. The transportation route for the new pilot location needs to be added.

1. What happens if verification samples don't come up clean? State that only x quantity will be removed for pilot scale, and on full scale, there will be further screening and excavation.
17. Page 25, Section 5.2.2
  - a. Change "manure and alfalfa" to "manure, alfalfa, and other."
  - b. Add wood chip and straw estimates also.
18. Page 25, Section 5.2.3  
Add the other amendments (straw and wood chips) to this section.
19. Page 26, Section 5.2.5  
Change "alfalfa manure blend" to "approved pilot scale blend."
20. Page 27, Section 5.2.7  
Add to the beginning of sentence 2, "If treatment goals are met,"
21. Page 27, Section 5.2.7 and 5.3  
If pilot scale treatment goals are not met, then the pilot scale pile will be retreated using another blend that has been shown to reach the goals. Pilot scale treatment goals are established through comparison to Umitila's and Bangor's performance goals, and treatability performance requirements of x%. Make a table of the goals.
22. Page 29, Section 6.1.1  
Add colorimetrics here?
23. Page 30, Section 6.1.2  
The Quality Assurance Plan must be approved by U.S. EPA.
24. Page 30, Section 6.2.1
  - a. Modify the water handling description here.
  - b. What is the "overs pile"?
  - c. Once the rinse water is determined to be clean then the rocks may be reused.
25. Page 31, Section 6.2.2  
Modify the water handling here.

26. Page 32, Section 6.3.1  
"sediments" is misspelled.
27. Page 32, Section 6.3.3  
Modify the water handling here.
28. Page 35, Section 7.2.5  
Change the last sentence it doesn't make sense. It implies that a variety of methods will be used.
29. Page 35, Section 7.2.7
  - a. What will the values of explosives be compared to? We need a goals discussion in this area.
  - b. Why aren't we watching the full explosives parameters throughout the treatment to see how degradation performs?
30. Page 36  
Add metals monitoring for all SWMUs, and PCBs for Mine Fill B.
31. Page 39, Section 8.2  
Modify water handling here.
32. Page 39, Section 8.3  
Need to reference goal charts here.
33. Page 39, Section 8.3.1
  - a. Need to add that sampling at depth locations will also have the sidewalls of the excavation sampled.
  - b. Add the justification for the grid sizes.
34. Page 41, Table 8-1
  - a. For excavation soil delineation, change "as required" to "grid interval based on size." Also, shouldn't 8330 be included in the methods section?
  - b. Add total metals for the windrow compost confirmatory, and also add it prior to treatment.
  - c. Change "TO" to "TOC."

35. Page 43

Also add that photography shall be included throughout the process. And, U.S. EPA would appreciate a simple video documenting each of the stages in order to inform management of the progress of the remediation, is possible.

36. Page 45, Section 11.3

Rewrite sentence 1. It implies that if there is a statistically significant increase that you will downgrade instead of upgrade safety.

37. Page 47, Section 12.1

- a. Why do all of the remaining amendments not in contact with the contaminated soil have to be landfilled?
- b. Add that the treated soil will only be used as daily cover once it meets the treatment standards.

38. Figure 4324-0009-01-A

- a. Modify the water handling flow.
- b. Add in the other amendment types.

39. Figure 4324-0009-01-B

Modify the water handling.

40. Figure 43224-0009-01-C

Modify the water handling.

41. Figure T-100

Add in the other amendments.

42. Figure T-101

- \*\*\*
- a. I don't like the traffic flow. I thought it was supposed to be enter one end and come out the other, according to our previous comments. The diagram shows that the trucks will have to turn around. Please clarify this.
  - b. Add in the other amendments.

43. Figure T-103

Add in the other amendments.