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November 16, 2004

Mr. William Taylor
U.S. DOE
Ohio Field Office
Fernald Closure Project
175 Tri-County Parkway
Springdale, OH 45246

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Pg. F-0132

RE: DISAPPROVAL - FORMER PRODUCTION AREA NRRDP REV A

Dear Mr. Taylor:

Ohio EPA has reviewed DOE's October 6, 2004 submittal, "Transmittal of the Former Production Area Natural Resource Restoration Design Plan (Rev A 20810 & 20800-PL-0005). Ohio EPA disapproves the document based upon the attached comment.

If there are any questions, please contact me at (937) 285-6466 .

Sincerely,

Thomas A. Schneider
Fernald Project Manager
Office of Federal Facilities Oversight

- cc: Jim Saric U.S. EPA
- Ken Alkema, Fluor Fernald
- Michelle Cullerton, Tetrattech
- Ruth Vandegrift, ODH
- Mark Schupe, HSI Geotrans
- Bill Kurey, USFWS
- Tim Kern, Ohio AGO

**Former Production Area
Natural Resource Restoration Design Plan
Rev A**

Comments:

1. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: General Pg. #: Line #: NA Code: C
Comment: Significant discussions occurred previously regarding preferred slopes in the production area and particularly in open water areas. Though the scope of this plan doesn't appear to include any deep open water areas it is unclear the actual scope of the NRRDP. Discussion regarding the design goals for slopes in open water areas should be included. Slopes within the open water areas are not only important from a restoration stand point but also from a safety aspect going forward into site stewardship. Maintaining a shallow sloping littoral zone is ecologically beneficial as well as providing a mechanism for escape from accidental water entry. Revise the document to include a discussion of design goals for slopes.

2. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: General Pg. #: Line #: NA Code: C
Comment: Additional detail is needed on the integration of the various subunits within the production area. From the information provided it is not clear how the area does not end up being a bunch of moated subunits rather than a restoration area.

3. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 1.0 Pg. #: 1-1 Line #: NA Code: C
Comment: The first paragraph states that this NRRDP is for conducting restoration activities within a portion of the FPA. The last paragraph then describes the FPA project boundary. Nowhere does this section define the boundary and scope of this NRRDP. The boundary needs to be further defined beyond "a portion of the FPA." Is this NRRDP limited to the Area 3B CFC design package and if so, this should be stated in the document as well as the title, and will there be four separate NRRDPs for each of the CFC design packages?

4. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 3.2 Pg. #: 3-2 Line #: NA Code: C
Comment: Incorporation of the amendment into the soil is critical, for soil integration, most soils will require at least 2-passes with a rototiller to adequately integrate and prepare the subsoil for amendment uptake. (source: http://www.lid-stormwater.net/soilamend/soilamend_construct.htm)

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5. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 02940 Pg. #: Appendix A Line #: NA Code: C
Comment: The Ohio DOT has produced a construction inspector's handbook for landscape planting which includes diagrams for planting on level ground, wet or compacted soils, and slopes. They also include various checklists. Some of this pertinent information should be added to the 02940 specifications. The handbook is available online at <http://www.dot.state.oh.us/construction/OCA/Manuals/Docs/Landscape.pdf>

6. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 3.3 Pg. #: 3-2 Line #: NA Code: C
Comment: Note that Paw paw (*Asimina triloba*) is sensitive to low humidity and drying winds. It should be planted so that it is protected by other plants, such as larger shrubs (e.g., blackhaw viburnum).

7. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 3.4 Pg. #: 3-3 Line #: NA Code: C
Comment: This section should include matting type, i.e., the name and type that will be used for erosion control.

8. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 3.4 Pg. #: 3-3 Line #: NA Code: C
Comment: Please add to this section that straw mulch will be placed at 2-3 tons per acre. This should be done following the specification in 3.3 D.2.h of 02930, Seeding/Erosion Control. Because of the drying nature of the wind on the site, application of mulch should occur regardless of seeding method. This should increase seed germination and seedling survival.

9. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 3.5 Pg. #: 3-3 Line #: NA Code: C
Comment: The statement is made that "Monitoring of other restoration projects has demonstrated that amenities increase wildlife use" and references the 2003 Consolidated Monitoring Report. I have been checking the monitoring report for these types of information and have not seen any data or narrative describing uses of wildlife amenities in the 2003 Consolidated Monitoring Report. I am confident that the statement is true, but data should be available to verify that and either include the different types that are planned for Area 3B or make reference to the specifications.

10. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 02930 Pg. #: 7 of 9 Line #: 3.3 D.2.h Code: C

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Comment: The placement of straw mulch at 2-3 tons per acre as specified here should apply regardless of seeding method because of the drying winds on the site. This should increase seed germination and seedling survival.

11. Commenting Organization: Ohio EPA Commentor: DSW
Section #: Table 3-2 Pg. #: 3-4 to 3-6 Line #: Bottom Code: C
Comment: The plug for giant burreed is listed here. The plants that we have brought on site from the reference wetland have been *Sparganium americanum* the American Burreed, rather than *Sparganium eurycarpum*. In addition to being found locally, the American Burreed has a coefficient of conservatism of 6 versus a 4 for the giant burreed (Andreas B. K., John J. Mack, and James S. McCormac, Foristic Quality Assessment Index (FQAI) for Vascular Plants and Mosses for the State of Ohio, 2004). *Sparganium americanum* the American Burreed, is preferred over *Sparganium eurycarpum*.

12. Commenting Organization: Ohio EPA Commentor: DSW
Section #: Table 3-1 Pg. #: 3-4 to 3-6 Line #: Bottom Code: C & E
Comment: The prickly ash (note that the genus is *Zanthoxylum* rather than *Zanthozylum*) I have seen have been growing as an under story shrub. Placement of these should consider this growth habit and be somewhat protected.

13. Commenting Organization: Ohio EPA Commentor: DSW
Section #: Figure 3-2 Pg. #: NA Line #: Matting Detail Code: C
Comment: The matting is specified as TRM C350 or approved equal. The text (Section 3.4) states that jute, coir, or equivalent will be used. We have not seen any justification, either in the field or in writing, for the continued use of the C350. There has not been a demonstrated need for this material, and we have only seen negative attributes associated with it. The drawing should be changed to reflect what is stated in the text in section 3.4.

14. Commenting Organization: Ohio EPA Commentor: DSW
Section #: Figure 3-2 Pg. #: NA Line #: NA Code: C
Comment: There is no indication of surface water flow direction in this (or any other) drawing. Please include arrows' indicating the flow path of surface water.

15. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 4.2 Pg. #: 4-2 Line #: NA Code: C
Comment: This states that the 4" of compost will be incorporated 1' deep into existing soil. Is there some justification for incorporating at this depth? It would seem advantageous to incorporate the compost into 4"-6" of the existing soil to bring up the organic content in the germination and early growth zone of the plants. A 1' incorporation depth should probably

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have 8"-12" of compost to start with. A shallower incorporation depth (with rototiller rather than disc) is recommended.

16. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 4.3.2 Pg. #: 4-3 Line #: NA Code: E
Comment: There is a discrepancy between the Interim seed mix in Table 3-3 and Table 02930-2 on page 9 of Specification 02930. The former calls for 40lbs/acre ReGreen and the latter 50lbs/acre.

17. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 4.3.2 Pg. #: 4-3 Line #: NA Code: C
Comment: See comment regarding use of TRM C350.

18. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 4.3.3 Pg. #: 4-3 Line #: NA Code: C
Comment: See comment regarding *Sparganium eurycarpum* above.

19. Commenting Organization: Ohio EPA Commentor: DSW
Section #: 4.3.1 Pg. #: 4-2 Line #: NA Code: C
Comment: Due to the low organic content of these soils, recommend putting a shovel load of compost in the bottom of woody vegetation planting holes, and mixing it in with the native soils.

20. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 4.4.2 Pg. #: 4-4 Line #: NA Code: C
Comment: The decision to not use enclosure fencing in the area does not appear well thought out. Though the area maybe highly disturbed during the first growing season which may reduce deer damage, DOE expects the site to be completed in early 2006 meaning disturbance in the area will be very short lived and deer will likely be accessing the area early in the second growing season or possibly in the first depending on planting times. Enclosure fencing should be implemented in the project area.

21. Commenting Organization: Ohio EPA Commentor: OFFO
Section #: 5.0 Pg. #: 5-1 Line #: NA Code: C
Comment: As commented on in previous NRRDPs, the proposed monitoring is unacceptable. Implementation monitoring should continues for two years after final planting. Functional monitoring must also be specified in this document.