



Department of Energy  
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JAN 27 2004

Mr. James A. Saric, Remedial Project Manager  
United States Environmental Protection Agency  
Region V, SR-6J  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

DOE-0072-04

Mr. Tom Schneider, Project Manager  
Ohio Environmental Protection Agency  
401 East 5<sup>th</sup> Street  
Dayton, Ohio 45402-2911

Mr. Bill Kurey  
United States Fish & Wildlife Service, Suite H  
6950 American Parkway  
Reynoldsburg, OH 43068

Dear Mr. Saric, Mr. Schneider, and Mr. Kurey:

**TRANSMITTAL OF THE FINAL AREA 8, PHASE III NATURAL RESOURCE DESIGN PLAN,  
AND RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY TECHNICAL  
REVIEW COMMENTS ON THE DRAFT AREA 8, PHASE III NATURAL RESOURCE DESIGN  
PLAN**

- References:
- 1) Letter DOE-0459-03 from G. Griffiths to J. Saric, T. Schneider and B. Kurey, "Draft Area 8, Phase III Natural Resource Restoration Design Plan," dated August 25, 2003
  - 2) Letter from J. Saric to J. Reising, "A8, P3 Restoration Design Plan," dated September 18, 2003
  - 3) Letter from T. Schneider to G. Griffiths, "Disapproval - Area 8, Phase III Natural Resource Restoration Design Plan," dated October 27, 2003

Enclosed is the Final Natural Resource Restoration Design Plan (NRRDP) for the Area 8, Phase III Restoration Project covering the portion of the Fernald Closure Project west of Paddys Run Stream. The NRRDP was approved by the United States Environmental

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DOE-0072-04

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Mr. James A. Saric  
Mr. Tom Schneider  
Mr. Bill Kurey

Protection Agency (USEPA) (Reference 2). A Response to Comment document addressing Ohio Environmental Protection Agency (OEPA) comments is also enclosed (Reference 3). The NRRDP has been revised based upon incorporation of OEPA comments.

Please contact Johnny Reising at (513) 648-3139 with any questions regarding this matter.

Sincerely,



*for* William J. Taylor  
Director

FCP:Reising

Enclosures: As Stated

cc w/enclosures:

D. Pfister, OH/FCP  
J. Reising, OH/FCP  
G. Stegner, OH/FCP  
T. Schneider, OEPA-Dayton (three copies of enclosures)  
G. Jablonowski, USEPA-V, SR-6J  
D. Bidwell, FCAB  
D. Sarno, FCAB  
M. Cullerton, Tetra Tech  
F. Bell, ATSDR  
M. Shupe, HSI GeoTrans  
R. Vandegrift, ODH  
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosures:

K. Johnson, OH/FCP  
J. Chiou, Fluor Fernald, Inc./MS64  
T. Hagen, Fluor Fernald, Inc./MS1  
J. Homer, Fluor Fernald, Inc./MS65-2  
D. Powell, Fluor Fernald, Inc./MS64  
E. Woods, Fluor Fernald, Inc./MS65-2  
ECDC, Fluor Fernald, Inc./MS52-7

**RESPONSES TO  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
COMMENTS ON THE DRAFT AREA 8, PHASE III  
NATURAL RESOURCE RESTORATION DESIGN PLAN**

**FERNALD CLOSURE PROJECT  
FERNALD, OHIO**

**JANUARY 2004**

**U.S. DEPARTMENT OF ENERGY**

RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON  
THE DRAFT AREA 8, PHASE III NATURAL RESOURCE RESTORATION DESIGN PLAN

GENERAL COMMENTS

1. Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: General                      Pg #: N/A                      Line #: N/A                      Code: C  
Original Comment #: 1  
Comment: Although the plan specifies at least two applications of glyphosate prior to planting prairie areas, an additional requirement should be that the restoration ecologist should determine if the kill has been sufficient (e.g. >90%) to warrant planting. We have had issues before where, even after multiple applications of glyphosate, the kill was not sufficient to suppress unwanted vegetation.  
Response: Agree. Prairie areas within A8P3 will not be seeded until greater than 90% existing vegetation is removed.  
Action: Revise Table 2.1 accordingly.
  
2. Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: General                      Pg #: N/A                      Line #: N/A                      Code: C  
Original Comment #: 2  
Comment: The construction of access and parking areas, the placement of gravel, etc. should be consistent with the long term objectives of the site in all possible instances. Are they being located in areas that are consistent with the final plan?  
Response: There is no other vehicle access or parking for the Southern portion of the Paddys Run West Project Area. The gravel pad and access point will be maintained to allow for inspections and maintenance to occur during Legacy Management (LM). A8P3-South has also been designated as a potential location for reburial of Native American remains. The improved access and gravel pad off of Willey Road may be also used as the access point for a Native American reburial site throughout LM.  
Action: None required.
  
3. Commenting Organization: Ohio EPA                      Commentor: OFFO  
Section #: General                      Pg #: N/A                      Line #: N/A                      Code: C  
Original Comment #: 3  
Comment: Ohio EPA was under the impression the prairies in this project were going to be savannas. Ohio EPA recommends the addition of several 3-4 burr/white oak patches within the large prairie areas. Associated shrubs (new jersey tea) planted with the trees and subsequent deer exclusion fencing around these areas.  
Response: Agree. A sufficient number of bur oak and white oak saplings have already been ordered as part of the original project design, so a sufficient number may be moved into prairie areas. In addition to New Jersey tea, DOE suggests the addition of hazelnut (*Corylus americana*), fragrant sumac (*Rhus aromatica*) and prairie rose (*Rosa setigera*) to the shrub template. Several other species included in the savanna patch will be planted along the wooded slope to the east of the savanna area. A small vernal pool patch has also been incorporated into the NRRDP. DOE contends that fencing is not required for protection of saplings. Shrubs will be "clumped" and fenced within the project area.  
Action: Revise text, Figure 3-1 and Tables 3-5 and 3-6 accordingly.
  
4. Commenting Organization: Ohio EPA                      Commentor: DSW  
Section #: Prairie areas                      Pg #: N/A                      Line #: N/A                      Code: C  
Original Comment #: 4

Comment: In areas where tall ironweed is found, an effort should be made to save some of these prior to glyphosate application for replanting and re-establishment in seeded areas.

Response: DOE has had limited success in salvaging and transplanting this species. Because of this, and because tall ironweed is widespread across the site and easily volunteers via seed, salvage is not an effective option at this time.

Action: None required.

5. Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: Figure 1-1                      Pg #:                      Line #:                      Code: C  
 Original Comment #: 5  
 Comment: What do the small dark circles represent in the NE corner of the figure?  
 Response: The small circles are trees, an artifact of a vegetation layer within the CAD software dataset.  
 Action: None required.
6. Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: Table 2-1                      Pg #: 2-1                      Line #:                      Code: C  
 Original Comment #: 6  
 Comment: Has the sequence of restoration activities been followed this summer, 2003, and if not how has the schedule changed? If it has changed, the schedule needs updating in the revised document. Obviously successful implementation of the Summer 2003 activities is paramount to the future success of the project as a whole. Additional detail on herbicide success and tile location/destruction success should be added.  
 Response: The sequence of activities has changed, primarily due to weather, the certification process in A8PIII-North and fiscal-year funding constraints. As stated in the response to Comment No. 1, seeding will not be conducted until existing vegetation is sufficiently removed. Drain tile location is planned to be undertaken this winter.  
 Action: Revise Table 2-1 accordingly.
7. Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: Section 2.0                      Pg #: 2-1                      Line #: 10-13                      Code: C  
 Original Comment #: 7  
 Comment: This sampling should have been completed prior to development of this NRRDP. The document should be revised to include sampling data and resultant soil amendment needs.  
 Response: Field surveys for pH were completed prior to the completion of the NRRDP. Results of this sampling effort indicate the need for addition of lime in a portion of the Willey Road and Substation Prairie areas. Since no remedial activities were required in A8PIII, all planting activities will be undertaken within areas with intact topsoil, and it has since been determined that additional sampling for soil nutrient analysis is not required.  
 Action: Revise text accordingly.
8. Commenting Organization: Ohio EPA                      Commentor: DSW  
 Section #: 3.1                      Pg #: 3-1                      Line #: 11-27                      Code: C  
 Original Comment #: 8  
 Comment: This area should be planted as prairie with a minimum 100 foot riparian buffer along Paddys Run (similar to the north prairie). With the difficulty experienced with tree survival, the grassland makes most sense, with enhancing the riparian area with suitable forest.  
 Response: Agree. The location of planting patches will be modified to emphasize expansion of the riparian corridor. The wooded slope within A8PIII-South is an impressive oak-maple stand, with many mature sugar maple and chinquapin, red, shingle, and white oaks. These trees will provide an excellent seed source for volunteer recruitment of woody vegetation. Therefore, the portion of the two bottom fields (i.e. the forest restoration areas) will be allowed to revert

to old fields via secondary succession. Several patches of savanna vegetation will be installed to augment this approach.

Action: Revise text and Figures 3-1 and 3-2 accordingly.

9. Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: 3.1                      Pg #: 3-1                      Line #: 24-27                      Code: C  
 Original Comment #: 9  
 Comment: The plan needs to include a description of how the staging area will be restored following completion of the project. Its proximity to Willey Road adds emphasis to the need to restore the staging area.  
 Response: See Response to Comment No. 2. It should also be noted that the Hamilton County Engineer required the addition of an asphalt apron within the county right-of-way.  
 Action: None required.
10. Commenting Organization: Ohio EPA                      Commentor: DSW  
 Section #: 3.3                      Pg #: 3-2                      Line #: 7-21                      Code: C  
 Original Comment #: 10  
 Comment: See comment regarding prairie planting with 100-foot riparian buffer above.  
 Response: See Response to Comment No. 8.  
 Action: See Action for Comment No. 8.
11. Commenting Organization: Ohio EPA                      Commentor: OFFO  
 Section #: Table 3-3                      Pg #: N/A                      Line #: N/A                      Code: C  
 Original Comment #: 11  
 Comment: Yellow coneflower tends to prefer dry areas. Please check the CoW for this plant and reconsider its inclusion in the wetland seed mix. Boneset should be added to the wetland seed mix as it has been very successful in other on-site wetland projects.  
 Response: Agree.  
 Action: Revise Table 3-3 accordingly.
12. Commenting Organization: Ohio EPA                      Commentor: DSW  
 Section #: 3.5                      Pg #: 3-2                      Line #: 27-31                      Code: C  
 Original Comment #: 12  
 Comment: See comment regarding prairie planting with 100-foot riparian buffer above.  
 Response: See Response to Comment No. 8.  
 Action: See Action for Comment No. 8.
13. Commenting Organization: Ohio EPA                      Commentor: DSW  
 Section #: Table 3-4                      Pg #: N/A                      Line #: N/A                      Code: C  
 Original Comment #: 13  
 Comment: Remove Timothy from the interim seed mix, this plant is listed as an invasive and exotic species of North America.  
 Response: Agree. Timothy was added after informally discussing seeding approaches for forest restoration areas with several restoration consultants. Upon further reflection, it is not a necessary component of the interim seed mix. This is especially true in A8PIII-South, where slope stabilization is not an issue within the former Paddys Run floodplain.  
 Action: Revise Table 3-4 accordingly.

14. Commenting Organization: Ohio EPA      Commentor: DSW  
 Section #: 3.1      Pg #: 3-1      Line #: 11-27      Code: C  
 Original Comment #: 14  
 Comment: This area should be planted as prairie with a minimum 100-foot riparian buffer along Paddys Run (similar to the north prairie). With the difficulty experienced with tree survival, the grassland makes most sense, with enhancing the riparian area with suitable forest.  
 Response: See Response to Comment No. 8.  
 Action: See Action for Comment No. 8.
15. Commenting Organization: Ohio EPA      Commentor: OFFO  
 Section #: Section 4.3      Pg #: 4-2      Line #: N/A      Code: C  
 Original Comment #: 15  
 Comment: Permanent seed mix should be used in all planted areas. Use of the interim seed mix does not provide sufficient ecological value. Additionally, the success of permanent vegetation in planted areas on prior projects has been taken into account when considering tree replacement requirements. Permanent seed mix is needed across the entirety of the project.  
 Response: Disagree. Permanent seed mix cannot be properly managed within forest restoration areas. Burning and/or mowing is not possible given the density of woody vegetation to be installed. In addition, the goal of native herbaceous cover (in the form of tallgrass prairie grasses) conflicts with the goal of native woody vegetation establishment, since seedlings and desirable volunteer recruits are shaded out by tall-growing grass species.  
 Action: None required.
16. Commenting Organization: Ohio EPA      Commentor: OFFO  
 Section #: 4.4.1      Pg #: N/A      Line #: N/A      Code: C  
 Original Comment #: 16  
 Comment: The watering proposed in this section is inadequate and inconsistent with the attached specification for planting. Revise the section to be more specific and require watering. Watering is essential to survival of woody plants.  
 Response: Agree.  
 Action: Revise text accordingly.
17. Commenting Organization: Ohio EPA      Commentor: OFFO  
 Section #: 4.4.2      Pg #: 4-3      Line #:      Code: C  
 Original Comment #: 17  
 Comment: It is highly unlikely the deer control measures presented here will adequately protect plants. The lack of success of these measures has been demonstrated on numerous projects to date. The only truly effective control to date has been exclusion. Considering this, DOE should revise the plan to utilize fencing similar to that used in the SWU and NPP restorations along with clumped planting of shrubs.  
 Response: As stated in the response to Comment No. 3, DOE contends that the current approach for protection of sapling trees is adequate. Shrub species will be "clumped" and fenced, as in the SWU and NPP.  
 Action: None required.
18. Commenting Organization: Ohio EPA      Commentor: OFFO  
 Section #: 5.0      Pg #: 5-1      Line #: 3-4      Code: C  
 Original Comment #: 18  
 Comment: The proposed monitoring is very inadequate and inconsistent with prior projects and Trustee agreements. The exclusion of implementation monitoring based upon an arbitrary closure date selected by DOE is unacceptable. Implementation monitoring should occur for

three years at a minimum following completion of the project. Other compliance aspects of implementation will also need to be verified, such as planting in locations as specified in the plan, improvements and habitat additions such as may be specified in the plan, etc. Additional Ohio EPA comments on Implementation monitoring will be provided on the 2002 Consolidated Monitoring Report.

**Response:** The monitoring program is consistent with the 2002 Final NRRP and the 2002 Consolidated Monitoring Report. Fluor Fernald is required to implement the 2002 NRRP per their Closure Contract with DOE.

**Action:** None required.