6-105.27

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

REPLY TO THE ATTENTION OF:

DEC 23 1998

Mr. Johnny W. Reising
United States Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

SRF-5J

RE: Conceptual Wetland Mitigation Plan A1,P1

Dear Mr. Reising:

The United States Environmental Protection Agency (U.S. EPA) has completed its review of the United States Department of Energy's (U.S. DOE) conceptual wetland mitigation plan for Area 1, Phase 1 (A1,P1).

The plan provides information regarding the design of a 6-acre wetland consisting of eight cascading basins, a form of wetland believed to have been present in the area prior to agricultural disturbances. Successful implementation of this wetland mitigation plan would satisfy a portion of U.S. DOE's regulatory commitment of 15 acres of wetland mitigation.

Generally, U.S. EPA found the plan to be technically sound. U.S. EPA has inclosed a few minor comments to be addressed and incorporated into the final plan.

Therefore, U.S. EPA approves the conceptual wetland mitigation plan pending incorporation of adequate responses to the attached comments into the final wetland mitigation plan.

1908

Please contact me at (312) 886-0992 if you have any questions regarding this matter.

Sincerely,

James A. Saric
Remedial Project Manager
Federal Facilities Section
SFD Remedial Response Branch #2

Enclosure

cc: Tom Schneider, OEPA-SWDO
Bill Murphie, U.S. DOE-HDQ
John Bradburne, FERMCO
Terry Hagen, FERMCO
Tom Walsh, FERMCO

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TECHNICAL REVIEW COMMENTS ON THE DRAFT "CONCEPTUAL WETLAND MITIGATION PLAN AREA 1, PHASE 1 MITIGATION SITE"

1908.

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

SPECIFIC COMMENTS

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 3.0 Page #: 1 Lines #: 36 and 37
Original Specific Comment #: 1
Comment: The text states that remnant water and sediment control features exist on the Phase I mitigation site; however, the text also states that the site was previously used as a grazing pasture. It is unclear if the water and sediment control features were part of the grazing operation or of the former uranium processing plant. The final wetland mitigation plan should describe the remnant water and sediment control features and its former uses (such as for storm water detention).

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.1 Page #: 2 Line #: 15
Original Specific Comment #: 2
Comment: The text states that the entire proposed basin system will drain into Basin #1, the lowest basin, and that water will discharge to adjacent land. The final wetland mitigation plan should provide additional information regarding the adjacent land, including any potential effects the proposed wetland construction may have on that land.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.2.5.1 Page #: 3 Lines #: 32 and 33
Original Specific Comment #: 3
Comment: The text states that two deep water areas (8 to 10 feet deep) are shown in Figures 8 through 10. The final mitigation plan should indicate that the deep water areas are shown in Figures 9 and 10.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.2.5.4 Page #: 4 Lines #: 21 to 24
Original Specific Comment #: 4
Comment: The text states that offsite pond muck material, native forest soil, and organic surface material will be introduced to the wetland mitigation site remediated soil in an effort to provide a a starting point for mycorrhizae, macroinvertebrates, fungus and mushroom spores, insect larvae, and terrestrial mollusks. The use of this material may also introduce aggressive, nonnative plants to the area. Because one of the restoration goals is propagation of native species and species communities, the final wetland mitigation plan should include a component for control of nonnative plant species.

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Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.2.7 Page #: 5 Lines #: 4 to 7
Original Specific Comment #: 5
Comment: The text states that mosquitoes in the proposed wetland basin system will be controlled by the high quality of the water. It is unclear how mosquito control relates to the wetland restoration goals and seems unnecessary for this project. The final wetland mitigation plan, if it chooses to address mosquito control, should include more specific data regarding site water quality and how it will be maintained (considering such issues as fertilizer use and nutrient runoff).

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.6.2 Page #: 7 Line #: 28
Original Specific Comment #: 6
Comment: The text states that gravel roads are or will be constructed for access to air monitoring stations. These roads appear to be present in the figures but are not labeled. The final wetland mitigation plan should include figures that clearly indicate the location of gravel roads.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.6.3 Page #: 8 Line #: 1
Original Specific Comment #: 7
Comment: The text states that overhead utility lines are present along the adjacent paved road. These overhead lines appear to be present in the figures but are not labeled. The final wetland mitigation plan should include figures that clearly indicate the location of overhead utility lines.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.6.5 Page #: 8 Lines #: 13 to 15
Original Specific Comment #: 8
Comment: The text states that the site presently has several storm water and/or sedimentation basins. As mentioned in Original Specific Comment # 1, the final wetland mitigation plan should include additional information about the function of these control features. The text also indicates that the proposed wetlands will have a storm water function and value. The discussion of project objectives in the final wetland mitigation plan should include a brief description of the wetlands' storm water function and value, including specific functions performed by each basin.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.7 Page #: 8 Line #: 26
Original Specific Comment #: 9
Comment: The text states that recharge of any lens-perched or general area aquifer from surface water at the mitigation site cannot occur at the site because of the required discharge of all surface water to the neighboring farm. The final wetland mitigation plan should clearly explain why all surface water is required to be discharged the

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neighboring farm and how the discharge will impact the wetlands design. As mentioned in Original Comment # 2, the final wetland mitigation plan should also assess the potential impact the proposed project will have on adjacent property.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.7 Page #: 8 Line #: 31
Original Specific Comment #: 10
Comment: The text states that the open water depths will typically be 1 to 2 feet. Section 4.2.5.1 indicates water depths will be 8 to 10 feet in the two deep water areas. The final wetland mitigation plan should clarify the expected water depth.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.7 Page #: 9 Lines #: 4 and 5
Original Specific Comment #: 11
Comment: The text states that water flowing off site to the east is required to be "maintained" as requested by the adjacent landowner. The final wetland mitigation plan should clarify the meaning of "maintained." In addition, the text states in Section 4.7, Page 8, Lines 23 and 24, that "all possible runoff and precipitation must be captured and directed to the basins and the water be held tightly and be absorbed by the soils, rather than being shed quickly from the land." The final wetland mitigation plan should explain how both these requirements will be met.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.7.1 Page #: 9 Lines #: 7 and 8
Original Specific Comment #: 12
Comment: The text states that 1-foot-thick compacted clay liners will underlie the entire wetland area of each basin and 2-foot-thick compacted clay liners will underlie the larger or deeper basins. Figures 8 through 10 show trees present in the basins. The final wetland mitigation plan should clearly explain how the planting and presence of trees will affect the integrity of the clay liners and the expected hydrology.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 4.7.3 Page #: 9 Lines #: 22 to 25
Original Specific Comment #: 13
Comment: The text states that wetland mitigation site topsoil in wetland and upland areas will be amended with natural materials such as lime, sand, sawdust, wood chips, composted manure, composted yard waste, and mushroom soil. Sawdust and wood chips will be the primary soil amendment. As mentioned in Original Comment #12, clay liners are to be installed under the entire wetland area of each basin. It is unclear if any soil will be placed over the compacted clay liners or if the natural materials listed will be mixed with the compacted clay. The final wetland mitigation plan

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should clarify this issue. In addition, because the natural materials listed above, particularly composted manure and yard waste, are likely to contain many alien, aggressive plant species, the final wetland mitigation plan should also address how the propagation of undesirable species will be minimized and controlled.

Commenting Organization: U.S. EPA Commentor: Saric
Section #: 5.0 Page #: 11 Lines #: 9 and 10
Original Specific Comment #: 14
Comment: The text states that the goal of the monitoring plan is to produce self-evident proof of success and to collect data and evidence in various forms to indicate that mitigation efforts are exhibiting a positive change. The overall goal of the monitoring plan should be to provide data that prove that wetland restoration efforts have successfully compensated wetland impacts from FEMP operations at a 1.5 to 1 ratio and have resulted in no net loss of wetlands. The final wetland mitigation plan should provide a detailed monitoring plan component that provides for the quantitative evaluation of wetland hydrologic and vegetative indicators necessary to confirm that the mitigation goals have been met. In addition, the proposed monitoring approach appears more qualitative than quantitative. Although this approach may be generally acceptable in terms of ecological restoration, the final wetland mitigation plan should clearly state that this monitoring approach is acceptable to the stakeholders involved, particularly local U.S. Army Corps of Engineer representatives.

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