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Project Name: Starkville and Columbus, Mississippi - Power System Improvement
Project Number: 2008-13

FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

STARKVILLE AND COLUMBUS, MISSISSIPPI - POWER SYSTEM IMPROVEMENT

LOWNDES AND OKTIBBEHA COUNTIES, MISSISSIPPI

Tennessee Valley Authority (TVA) proposes to construct and operate approximately 14 miles of new 161-kilovolt (kV) transmission line and a new 161-kV switching station. The proposed project would provide an electrical connection from TVA's SeverCorr 161-kV Switching Station to TVA's Starkville 161-kV Switching Station through a proposed Clayton Village 161-kV Switching Station. The proposed transmission line would begin near the Catalpa Creek 161-kV Substation, connect through the proposed Clayton Village Switching Station and end at a tap point in Starkville Electric System's (SES) Starkville Primary-Starkville Switching Station 161-kV Transmission Line. The proposed action would improve the existing power supply system in the Golden Triangle area of Lowndes and Oktibbeha counties, Mississippi as well as provide a second 161-kV feed to 4-County Electric Power Association's (EPA) Catalpa Creek Substation.

TVA also proposes to make modifications to the following existing facilities in connection with the above proposal:

- Install optical fiber composite overhead ground wire (OPGW) on 2 miles of the Starkville Primary-Starkville Switching Station 161-kV Transmission Line
- Add a spare breaker at the West Columbus 161-kV Switching Station
- Install two breakers at the SeverCorr Switching Station
- Install telecommunications equipment at the West Point 500-kV Substation and the Sturgis and Tupelo 161-kV substations
- Provide switches and relays at the Starkville Switching Station
- Retire wave traps at Lakeside Substation, relays at Starkville Switching Station, and various switch structures
- Modify the TVA system's mapboard at the System Operations Center and Regional Operations Center in Chattanooga to include the names and numbers of the new transmission lines and switching station

TVA has reviewed the proposed action and reasonable alternatives in an environmental assessment (EA) prepared in accordance with its procedures for implementing the *National Environmental Policy Act* (NEPA). This EA is incorporated by reference.

Two primary alternatives, i.e., the No Action Alternative and an Action Alternative, were analyzed in the EA. Other potential action alternatives were considered, but they were eliminated from further consideration for various reasons described in the EA. In addition, TVA examined a number of different line routing alternatives.

Under the No Action Alternative, TVA would not construct approximately 14 miles of new transmission line, a new switching station or make modifications to any existing facilities. The 260 MW load for the Golden Triangle Industrial Park area would continue to be served by a single transmission line source and would operate with decreasing reliability. Additionally, TVA could not optimally perform necessary maintenance including upgrades or repair to the existing transmission line without affecting the industries currently served. TVA would not be able to ensure overall system reliability and flexibility of the power system in the Golden Triangle service area.

Under the Action Alternative, TVA would construct, operate, and maintain approximately 14-miles of new 161-kV transmission line and the new Clayton Village Switching Station. The proposed switching station with four interconnections and new transmission line to serve the SeverCorr Switching Station would provide a second power source to support the 260 MW industrial load, as well as provide TVA power system improvements that would increase electrical reliability to the TVA power system in the Golden Triangle area. Additionally, the availability of a second power source to serve the industrial load would ensure that it would be possible to service the West Columbus-SeverCorr 161-kV Transmission Line as necessary without impacting the industries currently served by TVA. Additional modifications would be implemented at existing facilities in connection with the proposed Action Alternative. The preferred route of the new transmission line analyzed under the Action Alternative was selected from among 16 possible alternative routes to minimize potential impacts to various natural and cultural resources and to landowners.

Based on the analyses in the EA, TVA concludes that implementation of the Action Alternative would have minor and insignificant impacts on surface water, aquatic life, and aesthetics including visual, noise, and odor. Portions of the proposed right-of-way (ROW) are located within State Designated Source Water Protection Areas for public water supply. The proposed action would have insignificant impacts on groundwater since no herbicides with groundwater contamination warnings would be used in these areas. Approximately 86 acres of forestland would be cleared for the proposed transmission line ROW. This would increase the fragmentation of forests along the proposed transmission line route but impacts to plant or wildlife communities would be minor. Two infestations of the noxious weed cogangrass were observed along the proposed ROW. No work would occur in the area of one infestation. To prevent the spread of the second infestation the population would be eradicated prior to construction start which is consistent with Executive Order (EO) 13112. Other impacts on vegetation and wildlife would be insignificant. Effects to floodplain functions are anticipated to be insignificant. Modifications could be necessary to access road (AR01) which is located adjacent to the Catalpa Creek floodway. If the floodway area cannot be avoided, it would be returned to pre-construction conditions to prevent an obstruction of the floodway which is consistent with EO 11988 on floodplain management.

The proposed action would not affect federally endangered or threatened species or federally designated critical habitat, prime farmland, recreation, parks, or natural areas. State-listed endangered or threatened aquatic or terrestrial animal species would not be affected; however, four occurrences of state-listed plant species would be affected. The proposed action would have insignificant impacts on these species at the state level with the implementation of mitigation measures to minimize the impacts.

The proposed action would not adversely affect any historic properties eligible for or listed in the National Register of Historic Places. The Mississippi State Historic Preservation Officer has concurred with this determination.

Clearing for the ROW would convert 12.99 acres of forested wetlands to emergent/scrub-shrub wetlands. Compensatory mitigation was not required by the U.S. Army Corps of Engineers for this wetland type conversion. However, to mitigate the loss and conversion of forested wetland in the context of cumulative impacts, TVA would compensate for the impacts by purchasing 12.99 wetland mitigation credits (a ratio of 1:1) from the Black Swamp Mitigation Bank in Monroe County, Mississippi. Because best management practices (BMP) would be implemented during transmission line construction and ROW maintenance, potential effects to wetlands and to water quality would be minor and insignificant. Use of BMPs and the purchase of wetland credits would mitigate impacts to wetlands consistent with the requirements under EO 11990.

Impacts to air quality during construction would be temporary and insignificant. The emission of criteria pollutants or their precursors would not exceed de minimis levels specified in 40 CFR § 93.153(b). Thus, consistent with Section 176(c) of the Clean Air Act, project activities would be in conformity with the requirements under the State Implementation Plan for attaining air quality standards.

Mitigation

TVA will implement best management practices and other routine measures listed in the appendices of the EA during construction and operation of the proposed transmission line, access roads, and switching station. In addition, the following nonroutine measures would be applied during construction, operation, and maintenance of the proposed transmission line, access roads, and switching station to reduce the potential for adverse environmental effects.

To ensure that there would be adequate protection to State Designated Source Water Protection Areas, the following measure would be taken:

- No herbicide that has groundwater contamination warnings would be used within the project area due to the protected use of the area for source water.

To prevent impacts to rare plants and the spreading of cogongrass, the following measures would be taken:

- To reduce impacts to the root systems of the rare plants, a feller-buncher would be used to clear the sections of ROW currently occupied by the rare plants. Heavy equipment would not be used to re-contour, remove tree stumps, or otherwise intentionally disturb the soil profile in areas containing state-listed plant species.

- To prevent effects on rare plants growing off or on the edge of the ROW, herbicides would not be applied aerially to those sections occupied by the rare plants during transmission line vegetation maintenance.

- To ensure that congongrass does not spread to new locations, TVA would coordinate with the Mississippi Forestry Commission (MFC) and the Mississippi Cooperative Weed Management Area the eradication of the cogongrass from the specified section of ROW prior to start of construction.

- TVA would add this new transmission line ROW to its 10-year maintenance program which focuses on specific areas along the ROW that have special requirements. Selective areas would receive herbicide spraying by backpack during this 10-year period to ensure that cogongrass is not spread to new locations.

In the event that MFC is unable to eradicate the cogongrass within the proposed ROW prior to TVA's initiation of construction, TVA would undertake the following measures:

- TVA would not mow the cogongrass populations between March and June when flowers/seeds are present.
- TVA would clean all equipment before moving to new sites by removing any soil, seeds, or vegetation adhering to tires, digging implements, or any other surface of vehicles or machinery that enter the infested site.
- TVA would apply a tank mix of glyphosphate (3 to 4 pounds active ingredient per acre) plus imazapyr (Arsenal 1 to 4 pints per acre) to cogongrass in the infested portion of the proposed ROW during the growing season.
- TVA would plant switch grass or other fast growing native or nonnative, noninvasive species to rehabilitate the infestation after the residual soil activity of imazapyr has dissipated.

To mitigate the loss and conversion of forested wetland in the context of cumulative impacts, TVA would compensate for the impacts with the following:

- TVA would purchase 12.99 wetland mitigation credits (a ratio of 1:1) from the Black Swamp Mitigation Bank in Monroe County, Mississippi.

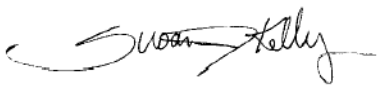
To ensure that any necessary modifications to the access road (AR01) would not adversely affect floodplains and flood control, TVA would include the following condition(s) in the appropriate construction contract for work undertaken on the proposed project:

- Any road construction in the 100-year floodplain must be done in a manner that does not increase upstream flood elevations. The floodway area must be avoided. However, if avoidance is not practicable, the area within the floodway will be returned to pre-construction conditions to prevent an obstruction in the floodway by removing any fill, gravel or other modifications following the construction of the project.

TVA has not identified the need for any other nonroutine mitigation measures to further reduce potential environmental impacts.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action involving the construction and operation of a new transmission line and switching station, as well as modifications to existing facilities, would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding is contingent upon adherence to the mitigation measure described above.



July 9, 2010

Susan J. Kelly, Senior Manager
Federal Determinations
Environmental Permits and Compliance
Environment and Technology
Tennessee Valley Authority

Date Signed