

FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

SEVERCORR 2 - CATALPA CREEK - LOWNDES COUNTY POWER SUPPLY IMPROVEMENT PROJECT, LOWNDES COUNTY, MISSISSIPPI

The Tennessee Valley Authority (TVA) proposes to construct and operate about 4.8 miles of new 161-kV transmission lines and two new switching stations and modify existing transmission lines and other transmission system facilities in Lowndes County, Mississippi. The specific proposed actions are:

- Construct and operate a new 1.2-acre SeverCorr Switching Station and a 2-mile 161-kilovolt (kV) transmission line connecting it to TVA's West Point-Columbus No. 2 Tap to Columbus Modified Fiber Transmission Line.
- Construct and operate a new 2.7 mile 161-kV SeverCorr-Catalpa Creek Transmission Line that would connect to 4-County Electric Power Association's (EPA) planned Catalpa Creek Substation.
- Construct and operate a 0.23-mile new transmission line tap to 4-County EPA's Stinson Creek Substation between TVA's Columbus Air Force Base (AFB)-West Columbus Transmission Line and TVA's Columbus AFB Substation.
- Upgrade 6 miles of the 46-kV Columbus AFB-West Columbus Transmission Line to 161-kV and replace approximately 20 structures.
- Rebuild 4.3 miles of existing 161-kV transmission lines near the proposed West Columbus Switching Station.
- Construct and operate a new 5-acre 161-kV West Columbus Switching Station.
- Retire switches in the West Point-Columbus 46-kV Transmission Line.
- Modify existing substations:
 - Expand and install additional equipment at TVA's Columbus AFB 161-kV Substation. De-energize and/or retire 46-kV facilities at this substation.
 - Retire or abandon metering facilities at the distributor's Bent Tree 46-kV Substation and provide metering at the new Stinson Creek 161-kV Substation.
 - Replace 161-kV relays at TVA's West Point and Lowndes 500-kV Substations and Columbus 161-kV Substation.
- Install digital communication equipment at various locations.

The new transmission lines would be built on right-of-ways 100-feet wide and occupy about 59 acres. The new and rebuilt transmission lines would use a combination of single-pole and H-frame double-pole transmission line structures. The SeverCorr Switching Station would be on a previously graded site owned by SeverCorr, Inc. About 5 acres of the greenfield 20-acre West Columbus Switching Station site would be disturbed by construction activities.

The proposed actions are intended to address the power supply needs of an expansion of the existing SeverCorr steel mill and a new PACCAR, Inc., plant. They also address anticipated reliability problems resulting from other industrial load growth in the Lowndes County area and provide a connection to a new substation being built by a 4-County EPA.

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

Two primary alternatives, i.e., the No Action Alternative and an Action Alternative, were developed. Under the No Action Alternative, TVA would not undertake the proposed actions. The power supply needs of SeverCorr and PACCAR would not be met and the reliability of the area electrical system would decrease unless 4-County EPA or the potentially affected industries undertook these actions. Should this occur, potential impacts could be similar to or greater than the impacts if TVA undertook the actions, depending on how they were conducted.

Under the Action Alternative, TVA would undertake the actions listed above, which include the construction and operation of two new switching stations and 4.8 miles of new 161-kV transmission lines, improvements to about 10.3 miles of existing transmission lines, expansion of a substation, and other modifications to existing substations. The preferred routes of the new transmission lines and locations of the new switching stations analyzed as part of the Action Alternative were selected from among several potential routes and sites in order to minimize impacts to natural and cultural resources, impacts to property owners, and other factors.

Based on the analysis in the EA, TVA concludes that the Action Alternative would have minor and insignificant impacts on groundwater, surface water, and aquatic ecology. The proposed action would result in the clearing of about 23 acres of forest and one of the transmission line segments would cross an identified rare plant community. The loss of the forested area and associated changes in wildlife populations would not result in significant local or regional impacts. Impacts to the rare plant community would be minimized by the implementation of mitigation measures listed below. With implementation of these measures, as well as mitigation measures to minimize the potential spread of invasive plants, impacts to vegetation would be insignificant.

No plants or animals listed as endangered or threatened under the Endangered Species Act or designated critical habitat for these species would be affected. State-listed fish occur in affected water bodies; however, with the implementation of routine best management practices, no effects on these species are anticipated. No adverse impacts to state-listed plants or animals are anticipated.

The proposed action would convert 0.92 acres of forested wetlands to scrub-shrub or emergent wetlands and result in short-term impacts to existing scrub-shrub and emergent wetlands. The forested wetland area is part of a much larger wetlands complex and overall wetlands impacts would be insignificant. Neither the new switching stations nor the existing substations proposed to be modified are located in floodplains. Portions of the proposed new transmission lines and the transmission lines to be upgraded are located in floodplains. The transmission line construction and upgrade activities would not adversely affect flooding or floodplain values and are considered repetitive actions in the 100-year floodplain. The proposed action is consistent with Executive Order 11988 on floodplain management.

The proposed action would not adversely affect any historic properties eligible for or listed on the National Register of Historic Places. The Mississippi State Historic Preservation Officer concurred with this determination in letters dated September 6, 2007, and November 20, 2007.

Part of a transmission line to be rebuilt crosses land in the custody of the U.S. Army Corps of Engineers and used for recreation and an environmental education center. Although there would be some short-term impacts to this area during construction, no adverse long-term impacts are anticipated. Other components of the project would not affect parks, natural areas,

or recreation activities. No prime farmland would be affected and the impacts to visual resources would be insignificant. No adverse impacts from the electric and magnetic fields resulting from operation of the facilities are anticipated.

Mitigation

The following routine measures will be applied during construction and operation of the proposed transmission line and switching station:

General Best Management Practices for Clearing, Construction, and Maintenance

TVA practices detailed in appendices of the EA, including the use of best management practices and establishment of streamside management zones, will be used during clearing, construction, upgrading, and maintenance of the transmission lines, switching stations, and substations. TVA will use reseeding mixes that are certified free of invasive, exotic plant seeds when replanting disturbed areas.

The following additional mitigation measures will be undertaken to reduce potential adverse environmental effects on terrestrial ecology:

- Grading activities within the Black Belt Prairie portion of the West Columbus Switching Station site would be limited to a small area (approximately 500 square feet) along the northwest side. Vegetation management would be accomplished through mechanical clearing; no herbicides would be used. Clearing of woody vegetation would be accomplished by using a feller-buncher or other low ground-pressure equipment. No future construction that would permanently alter the plant community would take place within the Black Belt Prairie; these activities include excavating large areas, road building, placing fill material on the site, storing building or other materials on site, grading the site, or otherwise damaging the community by disturbing the soil profile. If small areas within the prairie boundary need to be revegetated, only annual rye and brown top millet would be used.
- Chinese tallow trees, which have been flagged between existing structures 11 and 12 and on the edge of the ROW near structures 31 and 32, would be removed from the proposed project area using a one-time herbicide application approximately 2 weeks prior to any clearing activities in these areas. Effective control would be accomplished by using herbicides such as trilogy, imazapyr, or hexazinone. In addition to foliar application, herbicides would be applied to cut stems or injected into the bark.

Conclusion and Findings

Based on the findings listed above and the analyses in the associated EA, we conclude that the proposed activities involving the construction of new transmission lines and switching stations, upgrades of existing transmission lines, and expansion and other modifications of existing substations would not be a major federal action significantly affecting the quality of the environment. Accordingly, an Environmental Impact Statement is not required. This Finding of No Significant Impact is contingent upon adherence to the identified mitigation measures.



John W. Myers, Senior Manager
Environmental Strategy and Management
Environmental Stewardship and Policy

January 30, 2008

Date Signed

Tennessee Valley Authority