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Introduction

This report describes the transmission lines that were constructed to connect the Sequoyah Nuclear Plant switchyard into the TVA transmission system due to the Sequoyah Nuclear Plant having been built at its present location. TVA utilized common or existing rights of way whenever practical to reduce overall land requirements. In order to complete the switchyard tie-ins to the system, approximately 147 miles of new transmission lines were constructed on 74 miles of new and 73 miles of existing rights of way.

Maintenance

The mechanical mowing that is required is programmed on a four-year cycle. Whenever the terrain is rough and inaccessible TVA uses chemical maintenance. The chemical formulation is EPA approved and is environmentally acceptable. The areas that are chemically treated are programmed on a six- to seven-year cycle. The lines are normally flown four times a year to detect any potential mechanical or erosion problems associated with the transmission lines.

Status of Transmission Lines

The status of the transmission lines are as follows:

Widows Creek-Charleston, Loop to Sequoyah 161-kV - The initial clearing and construction activities were completed and the lines were put in service in August 1972. The right of way was mechanically mowed in April-May 1977 and is scheduled to be mowed again in 1981. The right of way has a dense vegetative cover and we have not identified any erosion.

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Sequoyah-Watts Bar 161-kV Line and Sequoyah-Chickamauga 161-kV Line No. 1 - The right of way clearing and construction activities were completed and these lines were put in service in September 1973. The right of way was mechanically mowed in 1976 and mechanical mowing will be programmed on a four-year cycle. The vegetation is well established and most of the right of way has dense stands of brush species. The right of ways have fully recovered from construction impacts and we have not identified any erosion problems.

Sequoyah-Chickamauga No. 2 and Sequoyah-East Cleveland 161-kV Lines - The initial clearing and construction activities were completed and the lines were put in service in November 1973. The right of way was mechanically mowed in 1976 and mechanical mowing will be programmed on a four-year cycle. The right of way has a dense vegetative cover and we have not identified any erosion.

Sequoyah-Concord 161-kV Line - The right of way clearing and construction activities were completed and these lines were put in service in September 1972. The right of way was mechanically mowed in 1977 and is scheduled for remowing in 1981. The right of ways have fully recovered from construction impacts and we have not identified any erosion problems.

Sequoyah-Charleston No. 2 161-kV Line - This connection was provided by installing conductors on the vacant side of the existing Sequoyah-Charleston No. 1 161-kV transmission line. This line was placed in service in April 1974. The right of way was mechanically mowed in March-April 1976, and is re-scheduled to be mowed in the summer of 1980. The right of way has a dense vegetative cover and we have not identified any erosion problems.

Sequoyah-Franklin (AEDC) 500-kV Line - The initial clearing began in June 1973; construction was completed and the line was put in service October 1975. Sections of the right of way were mechanically mowed in late 1978. This line required approximately 45 miles of new right of way and has approximately 602 acres of wooded right of way that requires maintenance and approximately 118 acres of the 602 acres consists of rough, inaccessible terrain that requires chemical application. In 1979, the 118 acres were sprayed by helicopter. The chemical formulation used was two gallons of Tordon 101 plus two gallons of DP, an amine formulation. This chemical combination is EPA approved and is environmentally acceptable. The sections of the right of way that are mechanically mowed will be programmed on four-year cycles. The areas that are sprayed by helicopter will be programmed on a six- to seven-year cycle. The right of way has fully recovered from the construction impacts and we have not identified any erosion problems.

Sequoyah-Georgia State Line (Bowen) 500-kV Line - This transmission line required 21.4 miles of new right of way. The initial clearing began in 1971; construction was completed and the line was put in service April 1972. The right of way has fully recovered from construction impacts and we have not identified any erosion problems. The right of way was mechanically mowed in 1976 and mechanical mowing will be programmed on a four-year cycle.

Widows Creek-Bull Run Loop to Sequoyah 500 kV - The initial clearing and construction activities were completed and this loop was placed in service in April 1972. The right of way was mechanically mowed in June 1977, and is rescheduled to be mowed again in the summer of 1981. The right of ways have fully recovered from construction impacts and we have not identified any erosion problems.

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Conclusions

All construction of new lines has been completed and full redress and recovery from construction impacts has been achieved. The vegetation on the rights of way consists of grass seeded areas, volunteer vegetation, and/or dense stands of brush species. The lines associated with the Sequoyah Nuclear Plant were last flown the week of October 9-12, 1979. TVA has not identified any erosion problems associated with the transmission lines.