Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381

MAR 2 9 1995

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

WATTS BAR NUCLEAR PLANT (WBN) - RESULTS OF FIRE ENDURANCE QUALIFICATION TESTING FOR THERMO-LAG THREE-HOUR ELECTRICAL RACEWAY FIRE BARRIER SYSTEMS (TAC M63648).

The purpose of this letter is to provide TVA's fire endurance qualification test results for Thermo-Lag three-hour electrical raceway fire barrier systems (ERFBS') designed by TVA. TVA's Thermo-Lag three-hour ERFBS' use a combination of Thermo-Lag 330-1 and 770-1 materials. The test results show that TVA's three-hour ERFBS' exceeded the acceptance criteria provided in Supplement 1 to Generic Letter 86-10 for rated three-hour electrical raceway fire barriers. Thermo-Lag ERFBS' maintained the temperature rise inside the enclosure below 250 degrees F average with a maximum temperature rise of 325 degrees F for well beyond three hours.

Based on the success of the test results, TVA determined that it is suitable to use Thermo-Lag three-hour ERFBS' at WBN in limited applications to meet 10 CFR 50 Appendix R Section III.G.2 separation requirements. This will allow TVA to cancel deviation requests currently in the Fire Protection Report or that were planned to be added.

The fire endurance testing was performed using TVA designs, procedures, and installation methods, which were similar to those used to qualify Thermo-Lag 330-1 one-hour rated ERFBS'. The designs, procedures, and installation methods are summarized in the test reports. Fire endurance

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qualification tests were performed on representative cable trays, conduits, air drops, and a junction box. Test reports are enclosed documenting the fire exposure tests conducted at Omega Point Laboratories.

TVA is also performing ampacity testing on three-hour ERFBS' and material property testing on Thermo-Lag 770-1. The results from these tests will be submitted when they become available. This letter makes no new commitments. Due to the volume of the test reports, copies are not being provided to the NRC Resident Inspector, Project Manager, or Region II office. If you should have any questions, please contact Mr. P. L. Pace at (615)-365-1824.

Sincerely,

Raul Baron

Raul R. Baron
Nuclear Assurance
and Licensing Manager (Acting)

Enclosures
cc: See page 2

Enclosures
cc (w/o Enclosures):

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ENCLOSURE

- Fire Endurance Test of Thermo-Lag 330-1 Fire Protective Envelopes (12 in. and 24 in. Cable Trays, and 5 in., 2 in., and 1 in. Steel Conduits) - Project No. 11960-97533

- Fire Endurance Test of Thermo-Lag 330-1 Fire Protective Envelopes (12 in. and 24 in. Cable Trays, and a 12 in. x 12 in. x 60 in. Junction Box) - Project No. 11960-97555