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

APR 16 1993

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Gentlemen:

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

WATTS BAR NUCLEAR PLANT (WBN) - RESPONSE TO GENERIC LETTER (GL) 92-08 - THERMO-LAG 330-1 FIRE BARRIERS

References: 1. TVA letter to NRC dated October 16, 1992, Watts Bar Nuclear Plant (WBN) - Thermo-Lag Fire Barrier Issues - Conduit Fire Test Program (TAC M63648)

2. TVA letter to NRC dated February 10, 1993, Watts Bar Nuclear Plant (WBN) - Response to NRC Request for Additional Information - Conduit Fire Barrier Fire Endurance Testing Program (TAC M63648)

The purpose of this letter is to provide TVA's response to GL 92-08 for WBN. TVA has met with NRC staff personnel to ensure that the WBN test program for Thermo-Lag 330-1 installations meets current NRC guidance and testing requirements. The description of our testing program has been submitted for NRC review and is described in References 1 and 2.

WBN has approximately 600 linear feet of conduit Thermo-Lag 330-1 fire barriers currently installed in Unit 1 Reactor Building Annulus. This Thermo-Lag will be determined to be acceptable for use by Engineering based upon the results of the testing being conducted for WBN, or will be replaced as described in Enclosure 1.

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Current plans call for additional Thermo-Lag 330-1 installations to meet 10 CFR 50, Appendix R requirements. Thermo-Lag 330-1 installations will meet TVA design requirements which are being developed to ensure conformance to current NRC guidance and test requirements for fire endurance and ampacity ratings. Additionally, TVA will make available for NRC review the results of Thermo-Lag testing when such testing has been completed.

Enclosure 1 provides a response to each requested item. A list of commitments made as a result of this submittal is included in Enclosure 2.

If you have any questions, please contact P. L. Pace at (615) 365-1824.

Very truly yours,

W. J. Museler

William J. Museler

Enclosures
cc (Enclosures):

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ENCLOSURE 1

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2

RESPONSE TO NRC GENERIC LETTER (GL) 92-08

THERMO-LAG 330-1 FIRE BARRIERS

The following is in response to NRC reporting requirements specified in GL 92-08.

NRC ITEM

1. State whether Thermo-Lag 330-1 barriers are relied upon (a) to meet 10 CFR 50.48, to achieve physical independence of electrical systems, (b) to meet a condition of a plant's operating license, or (c) to satisfy a licensing commitment. If applicable, state that Thermo-Lag 330-1 is not used at the facility. This generic letter applies to all 1-hour and all 3-hour Thermo-Lag materials and barrier systems assembled by any assembly method such as by assembling preformed panels and conduit shapes, as well as spray, trowel and brush-on applications.

TVA RESPONSE

1. Thermo-Lag 330-1 fire barrier systems will be used at WBN to meet the requirements of 10 CFR 50 Appendix R, Section III.G.2.

NRC ITEM

2. If Thermo-Lag 330-1 barriers are used at the facility,

   (a) State whether or not the licensee has qualified the Thermo-Lag 330-1 fire barriers by conducting fire endurance tests in accordance with the NRC's requirements and guidance or licensing commitments.

   (b) State (1) whether or not the fire barrier configurations installed in the plant represent the materials, workmanship, methods of assembly, dimensions, and configurations of the qualification test assembly configuration; and (2) whether or not the licensee has evaluated any deviations from the tested configurations.

   (c) State (1) whether or not the as-built Thermo-Lag 330-1 barrier configurations are consistent with the barrier configurations used during the ampacity derating tests relied upon by the licensee for the ampacity derating factors used for all raceways protected by Thermo-Lag 330-1 (for fire protection of safe shutdown capability or to achieve physical independence of electrical systems) and (2) whether or not the ampacity derating test results relied upon by the licensee are correct and applicable to the plant design.

TVA RESPONSE

(a) Thermo-Lag 330-1 fire barrier systems for WBN will be qualified based upon appropriate fire endurance tests. A fire barrier testing program is underway to qualify the Thermo-Lag 330-1 fire barrier systems for use at Watts Bar. This testing program has been presented to the NRC and is in accordance with the NRC's requirements and guidance. No Thermo-Lag 330-1 fire barrier systems will be installed or approved for use until the results of the WBN testing program are available and appropriate instructions, procedures, or drawings issued.

(b) Except for approved deviations, the Thermo-Lag 330-1 fire barrier systems to be installed at Watts Bar will represent the materials, workmanship, methods of assembly, dimensions, and configurations of the test assembly configurations being qualified for use at WBN. The small amount of Thermo-Lag currently installed will be evaluated by Engineering for conformance to the test assembly configurations. If it is not in conformance, it will be removed and replaced, or an approved deviation prepared under the new program. TVA anticipates that there will be few deviations from the tested configurations. In the event that deviations are necessary, they will be evaluated to ensure that the installations are bounded by qualification test assembly configurations.

(c) Ampacity derating factors used for safe-shutdown raceways protected by Thermo-Lag 330-1 fire barrier systems will be consistent with those developed during testing being conducted for WBN. The as-built Thermo-Lag 330-1 barrier configurations will be consistent with the barrier configurations used during ampacity derating tests. An ampacity testing program is currently underway to determine the ampacity derating factors to be used for raceways and conduits protected with Thermo-Lag 330-1 fire barrier systems at Watts Bar. This testing program has been presented to the NRC and is in accordance with the NRC's requirements and guidance.

NRC ITEM

3. With respect to any answer to items 2(a), 2(b), or 2(c) above in the negative, (a) describe all corrective actions needed and include a schedule by which such actions shall be completed and (b) describe all compensatory measures taken in accordance with the technical specifications or administrative controls. When corrective actions have been completed, confirm in writing their completion.

TVA RESPONSE

3. No response required. Thermo-Lag 330-1 installations at WBN will conform to TVA and NRC requirements.

NRC ITEM

4. List all Thermo-Lag 330-1 barriers for which answers to Item 2 cannot be provided in the response due within 120 days from the date of this generic letter, and include a schedule by which such answers shall be provided.

TVA RESPONSE

4. No response required.

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT (WBN) UNITS 1 AND 2

RESPONSE TO NRC GENERIC LETTER (GL) 92-08

THERMO-LAG 330-1 FIRE BARRIERS

NRC commitments made as a result of this submittal.

1. TVA will issue the appropriate design and installation requirements for Thermo-Lag 330-1 fire barrier systems. These requirements are being developed to ensure conformance with current NRC guidance and test requirements for fire endurance and ampacity ratings. Installation of the Thermo-Lag 330-1 systems at WBN using these requirements is a normal construction activity which is controlled in accordance with existing TVA programs. TVA will consider this commitment complete when the design and installation requirements are issued.

2. The Thermo-Lag currently installed in Unit 1 will be evaluated by Engineering for conformance to the qualified test assembly configurations. Non-conforming Thermo-Lag will be removed and replaced, or an approved deviation prepared. Because disposition of non-conforming Thermo-Lag is controlled in accordance with existing TVA programs. TVA will consider this commitment complete when any non-conforming material is removed.

3. The results of Thermo-Lag 330-1 testing will be made available for NRC review.