



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

JAN 31 1992

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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) - RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION CONCERNING THE WATTS BAR NUCLEAR PERFORMANCE PLAN ON THE MASTER FUSE LIST.

The purpose of this letter is to reply to NRC's letter dated November 27, 1991, which requested additional clarification on the WBN Master Fuse List special program.

Enclosure 1 provides a restatement of the concerns in NRC's letter dated November 27, 1991, and the associated TVA response. Some of the concerns identified in the letter were also identified in the letter as acceptable. To maintain a complete record of these issues, references to the NRC conclusions for these issues are also included in the enclosure. Enclosure 2 provides the list of commitments made in this letter.

TVA's first letter on this subject was submitted to NRC on July 31, 1990, in response to three concerns stated in Section 3.3.5 of NUREG-1232, Volume 4, "Safety Evaluation Report on the Watts Bar Nuclear Performance Plan." A second TVA letter was submitted on May 31, 1991, in response to NRC's "Interim Supplemental Safety Evaluation Report Concerning the Watts Bar Nuclear Performance Plan on the Master Fuse List," dated February 6, 1991.

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

Sincerely,

John H. Garrity

Enclosures  
cc: See page 2

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U.S. Nuclear Regulatory Commission

## cc (Enclosures):

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ENCLOSURE 1

REPLY TO NRC'S NOVEMBER 27, 1991  
REQUEST FOR ADDITIONAL INFORMATION  
CONCERNING THE WATTS BAR NUCLEAR PERFORMANCE PLAN  
ON THE MASTER FUSE LIST PROGRAM

**CONCERN 1**

Concern 1 Statement A

It was not clear how this note (the drawing note that refers the reader to the Master Fuse List for Class 1E fuse information) will resolve the staff's concerns for reducing errors between the Master Fuse List and design drawings and for how one establishes collation between the Master Fuse List and fuses shown on design drawings.

Reply 1A

Based on additional information provided, the NRC indicated that this concern was satisfied in the second sentence of the second complete paragraph on the second page which reads, "The commitment to reconcile is therefore acceptable."

Concern 1 Statement B

It is not clear how consistency will be maintained between the Master Fuse List and the TVA design output drawings. In order to resolve this concern, additional information is required which describes the process or processes by which consistency will be maintained between the Master Fuse List and design output drawings following modifications and over the design life of the plant.

Reply 1B

Fuse ampere ratings for the fuses on the Master Fuse List will be removed from TVA drawings prior to fuel load to ensure there are no consistency problems. The Master Fuse List is issued as a drawing series.

**CONCERN 2**

Concern 2 Statement A

It is not clear how or by what procedure a fuse would be replaced when the fuse type or size specified in the Master Fuse List is changed.

CONCERN 2 (continued)

Reply 2A

The NRC indicated in the first sentence in the last paragraph associated with Concern 2 that this concern has been resolved for those fuses listed on the Master Fuse List by later information supplied by TVA. That sentence reads, "The above information clarifies and thus resolves by what procedure a fuse will be replaced when the fuse type or size specified in the Master Fuse List is changed and how fuses that have been included in the Master Fuse List will be verified to be consistent with the design output drawings."

Concern 2 Statement B

It was also not clear how existing fuses will be verified to agree with the Master Fuse List prior to fuel load.

Reply 2B

The NRC indicated in the second sentence in the last paragraph associated with Concern 2 that this concern has been resolved for those fuses listed on the Master Fuse List by later information supplied by TVA. That sentence reads, "For fuses identified on the Master Fuse List, the TVA commitment to perform a walkdown to ensure that those fuses depicted on the Master Fuse List agree with the plant's installed configuration partially resolves the staff concern that there is no procedure that requires a walkdown to verify that all installed fuses agree with the Master Fuse List." The remainder of the resolution is included in Reply 2C.

Concern 2 Statement C

For Class-1E fuses not included in the Master Fuse List, the staff's original concern remains. In order to resolve the staff's concern for fuses that will not be included on the Master Fuse List, additional information is required which justifies not including some of the Class-1E fuses on the Master Fuse List.

Reply 2C

This statement is interpreted to contain 3 questions:

1. By what procedure are Class 1E fuses that are not on the Master Fuse List replaced when the fuse type or size changes?
2. How are existing Class 1E fuses not on the Master Fuse List verified to agree with design output documents?
3. What is the justification for not including some Class 1E fuses on the Master Fuse List?

**CONCERN 2 (continued)**

Reply 2C1

Class 1E fuses not on the Master Fuse List are in vendor-supplied packages for which the vendor is responsible for the design. If it becomes necessary to change the fuse type or size, TVA will either contract with the vendor to make the change, or assume control of the vendor document(s) and redesign the fuse in accordance with the Design Change Notice process described in Reply 1B. When the vendor revises the design, his quality assurance and change control programs govern the change. When TVA assumes design control, the fuse is added to the Master Fuse List as part of the Design Change Notice process.

Reply 2C2

Class 1E fuses not on the Master Fuse List are in vendor-supplied packages which are verified to be correct by the vendor prior to equipment delivery. TVA avoids making changes to these packages to the extent practical; however, when fuses must be replaced, plant consistency with vendor design output documents is currently maintained by the site procedures described in Reply 3. These vendor-installed fuses are typically for protection of the vendor's equipment and do not require coordination calculations involving precise time current characteristics. Since the TVA electrical calculation program verifies the adequacy of any fuse necessary to protect the plant from failures in this equipment, no verification of these fuses is planned.

Reply 2C3

To establish a consistent approach, the plant's procedure for fuse control requires the user to go to the Master Fuse List first. The Master Fuse List will be annotated with a note which directs users to engineering-approved vendor documents for Class 1E fuses that are not specifically listed on the Master Fuse List. It should be noted that vendor technical information improvements are being made by the Vendor Information Corrective Action Program (CAP) which provides assurance that vendor technical information for safety-related equipment will be current, complete, and configuration controlled.

There is no significant safety benefit to be realized by specifically listing vendor fuses on the Master Fuse List. Since the fuses in question are vendor designed, TVA's only involvement with them would be to transcribe the fuse information from the vendor-supplied documents onto the Master Fuse List.

In addition, since the vendor is responsible for the design of these packages, TVA holds the vendor responsible for his design including fuse selection. To prohibit voiding the vendor's warranty, TVA generally prefers not to modify this equipment. If TVA chooses to modify a vendor's design, the Class 1E fuses associated with that design would be added to the Master Fuse List. In keeping with this philosophy, and since there is no significant safety benefit to be realized, fuses for which the vendor is responsible are not listed on the Master Fuse List.

**CONCERN 3**

In order to resolve the staff's concern for fuses that will not be included on the Master Fuse List, additional information is required which addresses the administrative procedures which assures correct fuse replacement for the fuses that are not on the Master Fuse List.

Reply 3

Operations, Maintenance, and Modifications personnel are permitted to replace installed fuses with one of the same manufacture and model number, or use vendor drawings to determine the appropriate fuse in accordance with Plant Administrative Instruction PAI-10.10, "Fuse Control"; Site Standard Practices SSP-6.02, "Maintenance Management System"; SSP-7.53, "Modification Workplans"; and SSP-10.04, "Material Issue, Control, and Return." Copies of these procedures are available onsite for review.

ENCLOSURE 2

LIST OF COMMITMENTS

1. Fuse data for the fuses on the Master Fuse List will be removed from TVA drawings prior to fuel load to ensure there are no consistency problems.
2. The Master Fuse List will be annotated with a note which directs users to engineering-approved vendor documents for Class 1E fuses that are not specifically listed on the Master Fuse List.