

SAFETY EVALUATION REPORT
GENERIC LETTER 83-28, ITEM 2.1 (PART 1)
EQUIPMENT CLASSIFICATION (RTS COMPONENTS)
WATTS BAR NUCLEAR PLANT, UNITS 1,2
DOCKET NOS. 50-390/391

1.0 INTRODUCTION

On February 25, 1983, both of the scram circuit breakers at Unit 1 of the Salem Nuclear Power Plant failed to open upon an automatic reactor trip signal from the reactor protection system. This incident was terminated manually by the operator about 30 seconds after the initiation of the automatic trip signal. The failure of the circuit breakers was determined to be related to the sticking of the undervoltage trip attachment. Prior to this incident, on February 22, 1983, at Unit 1 of the Salem Nuclear Power Plant, an automatic trip signal was generated based on steam generator low-low level during plant start-up. In this case, the reactor was tripped manually by the operator almost coincidentally with the automatic trip.

Following these incidents, on February 28, 1983, the NRC Executive Director for Operations (EDO), directed the staff to investigate and report on the generic implications of these occurrences at Unit 1 of the Salem Nuclear Power Plant. The results of the staff's inquiry into the generic implications of the Salem unit incidents are reported in NUREG-1000, "Generic Implications of the ATWS Events at the Salem Nuclear Power Plant." As a result of this investigation, the Commission (NRC) requested (by Generic Letter 83-28 dated July 8, 1983¹) all licensees of operating reactors, applicants for an operating license, and holders of construction permits to respond to generic issues raised by the analyses of these two ATWS events.

This report is an evaluation of the response submitted by Tennessee Valley Authority, the applicant for the Watts Bar Nuclear Plant, Units 1, 2 for the Item 2.1 (Part 1) of Generic Letter 83-28. The actual documents reviewed as part of this evaluation are listed in the references at the end of the report.

Item 2.1 (Part 1) requires the applicant to confirm that all Reactor Trip System components are identified, classified and treated as safety-related as indicated in the following statement:

Licensees and applicants shall confirm that all components whose functioning is required to trip the reactor are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities, including maintenance, work orders, and parts replacement.

Item 2.1 (Part 2) requires the licensee/applicant to confirm that an interface has been established with the NSSS or with the vendors of each of the components of the Reactor Trip System which includes:

- o periodic communication between the licensee/applicant and the NSSS vendor or the vendors of each of the components of the Reactor Trip System, and,

- o a system of positive feedback which confirms receipt by the licensee/applicant of transmittals of vendor technical information.

2.0 EVALUATION

The applicant for the Watts Bar Nuclear Plant, Units 1, 2 responded to the requirements of Item 2.1 (Part 1) with a submittal dated November 7, 1983². The applicant stated in this submittal that all components that are required to perform the reactor trip function are classified as safety-related equipment. These components, which include the reactor protection system, the solid state protection system, and all other components whose function is defined as safety-related are outlined in TVA's Operational Quality Assurance manual as critical systems, structures or components (CSSC). The applicable portions of this document have been incorporated in the plant procedures.

TVA's corporate procedures require all maintenance or modification activities, and procurement documents to be reviewed by appropriate personnel to ensure that they are properly identified as CSSC or non-CSSC and to ensure that the applicable procedures and quality requirements will be adhered to.

The Tennessee Valley Authority also provided responses to Generic Letter 63-28, Item 2.1 (Part 2) in submittals dated November 7, 1983 and April 1, 1987. The licensee/applicant has the Nuclear Experience Review (NER) program as vendor interface program to ensure that vendor and other related information would be handled from a systematic approach to continually inform the plant and other cognizant organizations of revisions, modifications, or deficiencies in plant equipment or procedures, and to determine applicability and safety significance. This program ensures that there will be an ongoing interface with the NSSS suppliers for Browns Ferry Nuclear Plant (General Electric), Sequoyah Nuclear Plant (Westinghouse), and Watts Bar Nuclear Plant (Westinghouse) throughout each plant's life. The program is committed to ensuring that technical information from these vendors is reviewed and, if applicable, incorporated or referenced in each plant design and/or procedures. This information is tracked and documented by the licensee/applicant during the entire process until it has been incorporated or resolved. This documentation is then stored for the life of the plant for further reference. Westinghouse transmits important NSSS information to the licensee/applicant by way of technical bulletins. General Electric provides such NSSS information by way of Service Information Letters (SIL).

The licensee/applicant acknowledges receipt of these documents by returning a receipt acknowledgement to the appropriate NSSS vendor. In addition to the fact that technical bulletins and SILs are numbered sequentially, Westinghouse periodically sends current lists of documents which have been recently transmitted, and General Electric sends SIL status reports twice yearly.

3.0 CONCLUSION

Based on our review of these responses, we find the applicant's statements confirm that a program exists for identifying, classifying and treating components that are required for performance of the reactor trip function as safety-related. This program meets the requirements of Item 2.1 (Part 1) of the Generic Letter 83-28, and is therefore acceptable.

Based on our review of these responses, we find the licensee's/applicant's statements confirm that a vendor interface program exists with the NSSS vendor for components that are required for performance of the reactor trip function. This program meets the requirements of Item 2.1 (Part 2) of Generic Letter 83-28, and is, therefore, acceptable.

4.0 REFERENCES

1. NRC Letter, D. G. Eisenhut to all Licensees of Operating Reactors, Applicants for Operating Licenses, and Holders of Construction Permits, "Required Actions Based on Generic Implications of Salem ATWS Events (Generic Letter 83-28)," July 8, 1983.
2. Letter, L. M. Mills, Tennessee Valley Authority to H. R. Denton, NRC, November 7, 1983
3. Letter, R. L. Gridley, Tennessee Valley Authority to NRC, April 1, 1987.

5.0 PRINCIPAL CONTRIBUTORS

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