



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

GENERIC LETTER 83-28, ITEMS 2.1.1 AND 2.1.2

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

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 breaker 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 startup. 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 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 these events 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, 1983) 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 responses submitted by Tennessee Valley Authority (TVA) for Items 2.1.1 and 2.1.2 of Generic Letter (GL) 83-28 for Sequoyah Nuclear Plant, Units 1 and 2. The actual documents reviewed as part of this evaluation are listed in the reference section of this report.

2.0 DISCUSSION

Item 2.1.1 requires the licensee to confirm that all Reactor Trip System components are identified, classified and treated as safety-related as indicated in the following statement:

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- ° Licensees 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 2.1.2 requires the licensee to confirm that an interface has been established with the Nuclear Steam Supply System (NSSS) vendor or with the vendors of each of the components of the Reactor Trip System which includes:

- ° Periodic communication between the licensee and the NSSS vendor or the vendors of each of the components of the Reactor Trip System, and
- ° a system of positive feedback which confirms receipt by the licensee of transmittals of vendor technical information.

3.0 EVALUATION

3.1 Item 2.1.1

TVA responded to the requirements of Item 2.1.1 with a submittal dated November 7, 1983. The licensee 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.

Based on our review of its response dated November 7, 1983, we find that TVA's statements confirm that a program exists at Sequoyah for identifying, classifying and treating components that are required for performance of the reactor trip function as safety related. We conclude that this program meets the requirements of Item 2.1.1 of (GL) 83-28 and is, therefore, acceptable.

3.1.2 Item 2.1.2

TVA provided responses to Item 2.1.2 in submittals dated November 7, 1983 and April 1, 1987. TVA has the Nuclear Experience Review (NER) program at Sequoyah as a 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 vendors for the Sequoyah

Nuclear Plant (i.e., Westinghouse is the primary NSSS vendor) throughout the life of the plant. 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 TVA 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 TVA by way of technical bulletins. TVA acknowledges receipt of these documents by returning a receipt acknowledgement to the appropriate NSSS vendor. In addition to the fact that technical bulletins are numbered sequentially, Westinghouse periodically sends current lists of documents which have been recently transmitted to plants.

Based on our review of these responses, we find that TVA's statements confirm that a vendor interface program exists at Sequoyah with the NSSS vendor for components that are required for performance of the reactor trip function. We conclude that this program meets the requirements of Item 2.1.2 of GL 83-28 and is, therefore, acceptable.

4.0 CONCLUSION

Based on the above, we conclude that TVA has acceptably addressed the staff's concerns in Items 2.1.1 and 2.1.2 of GL 83-28.

5.0 REFERENCES

1. Letter from D. G. Eisenhut, (NRC) 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 from L. M. Mills (Tennessee Valley Authority) to H. R. Denton (NRC), November 7, 1983.
3. Letter from R. L. Gridley (Tennessee Valley Authority) to NRC, April 1, 1987.

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