



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
FORT ST. VRAIN NUCLEAR GENERATING STATION
GENERIC LETTER 83-28, ITEMS 3.1 AND 3.2 - POST-MAINTENANCE TESTING
DOCKET NO. 50-267

I. 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 occurred during the plant startup and the reactor was tripped manually by the operator about 30 seconds after the initiation of the automatic trip signal. The failure of the circuit breakers has been determined to be related to the sticking of the under voltage trip attachment. Prior to this incident, on February 22, 1983, at Unit 1 of the Salem Nuclear 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 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 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 certain generic concerns. These concerns are categorized into four areas: (1) Post-Trip Review, (2) Equipment Classification and Vendor Interface. (3) Postmaintenance Testing, and (4) Reactor Trip System Reliability Improvements.

The third action item, Postmaintenance Testing consists of Action Item 3.1, "Postmaintenance Testing (Reactor Trip System Components)" and Action Item 3.2, "Postmaintenance Testing (All Other Safety-Related Components)." This safety evaluation report (SER) addresses Action Item 3.1 and 3.2 only.

II. REVIEW GUIDELINES

The following review guidelines were developed after initial evaluation of the various utility responses to items 3.1 and 3.2 of Generic Letter 83-28 and incorporate the best features of these submittals. As such, these review guidelines in effect represent a "good practices" approach to postmaintenance testing verification review. We have reviewed the licensee's response to items 3.1 and 3.2 against these guidelines:

- A. The licensee or applicant shall submit a statement indicating that he has reviewed plant test procedures, maintenance procedures and Technical Specifications to assure that postmaintenance operability testing of safety-related components in the reactor trip system is required to be conducted.
- B. The licensee or applicant shall submit a statement verifying that vendor recommended test guidance has been reviewed, evaluated, and where appropriate, included in the test and maintenance procedures or the Technical Specifications.

III. EVALUATION AND CONCLUSION

By letter dated November 4, 1983, the licensee of Fort St. Vrain Nuclear Generating Station provided information regarding its postmaintenance testing verification of the reactor trip system components and all other safety-related components. We have reviewed the licensee's response against the review guidelines as described in Section II. A brief description of the licensee's response and the staff's evaluation of the response against each of the review guidelines is provided below:

- A. The licensee stated that postmaintenance testing requirements for the reactor trip system components are identical to those for all safety-related components. The licensee indicated that postmaintenance testing for all safety-related components is performed in accordance with administrative procedures. These administrative procedures require that the safety-related component be tested to perform its safety function before being returned to service. Based on our review, we find this statement acceptable.
- B. The licensee stated that all vendor and engineering recommendations received are reviewed for impact on test and maintenance procedures. Appropriate test guidance is implemented into procedures where required. We find this statement acceptable.

Based on our review, we conclude that the licensee's response to postmaintenance testing verification of the reactor trip system and all other safety-related components for the Fort St. Vrain Nuclear Generating Station is acceptable.