



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 209 TO FACILITY OPERATING LICENSE NO. DPR-33
AMENDMENT NO. 182 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT, UNITS 1 AND 3

DOCKET NOS. 50-259 AND 50-296

1.0 INTRODUCTION

By letter dated July 2, 1992, the Tennessee Valley Authority (the licensee) requested changes to the Technical Specifications (TS) for the Browns Ferry Nuclear Plant (BFN) Units 1 and 3. The proposed changes revise the TS related to the Residual Heat Removal (RHR) valve pressure switches. The licensee is replacing the present non-class IE pressure switches with class IE pressure switches. These switches are used in the RHR system to prevent an intersystem LOCA. The staff had approved similar changes for BFN Unit 2 on December 10, 1990.

The existing pressure switches (instruments PS-68-93 and PS-68-94) have two sets of contacts with a range of 50 - 1200 pounds per square inch, gage (psig), with a setpoint of 100 ± 15 psig. The wide range of the existing switches has caused excessive drift, which results in unacceptable instrument accuracy. The new switches have a range of 20 - 180 psig. Since class IE pressure switches could be purchased with only one set of contacts, the licensee has deleted a redundant permissive signal generated by one set of contacts.

2.0 EVALUATION

By letters dated May 24, 1990 and September 17, 1990, the licensee had requested changes to the BFN Unit 2 TS regarding the RHR valve pressure switches. These changes were accepted by the staff on December 10, 1990. The staff finds that the licensee's submittal of July 2, 1992 for the BFN Units 1 and 3 RHR valve pressure switches is bounded by the evaluation previously performed for BFN Unit 2. Details of this conclusion are discussed below.

The licensee has proposed to make the following changes to the TS for BFN Units 1 and 3:

- a. Tables 3.2.B and 4.2.B were revised to delete the function "Instrument Channel - Reactor Low Pressure (PS-68-93 & 94, SW #1)."

The staff's December 10, 1990 safety evaluation for BFN Unit 2 accepted this change based on the fact that this function is redundant to other functions, and can be deleted without a decrease in safety. The

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proposed changes for BFN Units 1 and 3 are acceptable for the same reasons.

- b. Table 4.2.A was revised to add pressure switch numbers PS-68-93 and PS-68-94.

This change adds the new pressure switches to the appropriate Technical Specifications and are acceptable.

- c. Table 4.2.A was revised to change the functional test note to (31) for BFN Unit 1, and to (30) for BFN Unit 3, from the present note (1). The Notes for Table 4.2.A were revised to add notes 31 and 30 for BFN Unit 1 and BFN Unit 3, respectively. These notes state that "Functional tests shall be performed once every 3 months." This revision changes the functional test frequency from monthly to once every three months.

The staff's December 10, 1990 safety evaluation for BFN Unit 2 accepted this extension to the functional test frequency based on the fact that the new pressure switches have improved reliability and accuracy. Therefore, the functional test frequency can be extended without decreasing the safety function of the instruments. The proposed changes for BFN Units 1 and 3 are acceptable for the same reasons.

- d. Table 4.2.A was revised to change the calibration frequency to once every 18 months from once every three months.

The staff's December 10, 1990 safety evaluation for BFN Unit 2 accepted this extension to the calibration frequency based on the fact that the new pressure switches have improved reliability and accuracy. Therefore, the calibration frequency can be extended without decreasing the safety function of the instruments. The proposed changes for BFN Units 1 and 3 are acceptable for the same reasons.

The staff notes that the licensee has not performed a unit-specific setpoint calculation for BFN Units 1 and 3, and has used BFN Unit 2 calculations for setpoint values. The licensee has committed to confirm these values by unit-specific calculations prior to restart of BFN Units 1 and 3. The staff accepts this commitment.

3.0 SUMMARY

The staff concludes that the present switch contact #1 testing requirement may be eliminated, and all references to that testing may be removed from the TSs. The staff finds that the new class IE pressure switches are properly described and controlled by the revised TS. The staff also finds that the increase in functional test frequency from once a month to once every three months, and the increase in calibration test frequency from once every three months to once every 18 months is acceptable.



4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Alabama State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20, and changes Surveillance Requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (57 FR 48826). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: June 30, 1994

