



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

ENCLOSURE 4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 193 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 208 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3

DOCKET NOS. 50-259, 260, AND 296

1.0 INTRODUCTION

By letter dated September 10, 1992, the Tennessee Valley Authority (TVA, the licensee) submitted a request for changes to the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3 Technical Specifications (TS). The requested changes would restore the TS operability requirements of the Control Room Emergency Ventilation System (CREVS) that were temporarily modified by previous license amendments issued on September 18, 1989. The proposed TS changes would also remove the detailed list of dampers required to operate during automatic actuation of CREVS, in accordance with Generic Letter (GL) 91-08, "Removal of Component Lists from Technical Specifications." Furthermore, TVA would revise the associated TS Bases for CREVS to delete the description of the temporary changes that were in place only for Unit 2 Cycle 6, and to reflect the new CREVS design.

2.0 EVALUATION

By letter dated September 18, 1989, the NRC issued license amendments for BFN, Units 1, 2, and 3, that temporarily revised the TS to allow for fuel movement and reactor operation with the CREVS considered inoperable. These temporary TS would be in force until just prior to startup of Unit 2 for Cycle 7 operations. However, during Cycle 6, the CREVS was required to meet all applicable TS surveillances and associated action statements.

The staff considered CREVS inoperable during Unit 2 Cycle 6 only because it did not meet its design basis for pressurizing the Control Bay Habitability Zone (CBHZ) with essentially zero unfiltered inleakage as described by the BFN Updated Final Safety Analysis Report (UFSAR). TVA had discovered, prior to startup of Unit 2 for Cycle 6, that several thousand cubic feet per minute (CFM) of potentially contaminated air during a postulated accident could bypass CREVS and enter the CBHZ as unfiltered inleakage. By virtue of the license amendments issued September 18, 1989, the staff allowed TVA one fuel

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cycle of Unit 2 operation to effect appropriate corrective actions that would restore CREVS operability.

By letters dated May 5, 1992, July 31, 1992, and March 1, 1993, TVA submitted the details of its corrective action plan for CREVS. Upon implementation of these corrective actions during the Unit 2 Cycle 6 refueling outage, TVA stated that BFN would be in full compliance with General Design Criterion (GDC) 19, "Control Room," of 10 CFR Part 50, Appendix A. The staff's safety evaluation (SE) of TVA's corrective action plan for CREVS will be issued under separate correspondence prior to restart of Unit 2 for Cycle 7 operations. The staff's SE contained herein, merely addresses the adequacy of TVA's proposed TS changes for CREVS as submitted by TVA letter dated September 10, 1992.

TVA proposed changes to Limiting Conditions for Operations (LCO) 3.7.E.1, 3.7.E.3, and 3.7.E.4 to remove the temporary TS changes that were in place for Unit 2 Cycle 6 only. These temporary TS changes allowed for fuel movement and reactor operation even with CREVS inoperable. However, once Unit 2 restarts for Cycle 7 operations these temporary TS changes are no longer applicable. The removal of the expired TS requirements is principally an editorial change. Consequently, the staff considers TVA's proposed changes acceptable. However, in accepting the proposed changes to TS LCOs 3.7.E.1, 3.7.E.3, and 3.7.E.4, and deletion of the associated footnote, the staff is not indicating that the CBHZ design at BFN has been restored to zero unfiltered in-leakage. As described in TVA's corrective action plan for CREVS, a substantial amount of unfiltered in-leakage is now assumed as part of the new design basis. TVA has stated that the quantity of unfiltered in-leakage entering the BFN CBHZ does not result in doses to the control room operators in excess of GDC 19. The NRC staff is currently reviewing TVA's corrective action plan for CREVS and its revised control room operator dose calculations for confirming compliance with GDC 19. NRC acceptance of the proposed TS changes should not be misconstrued as staff approval of TVA's new CBHZ design basis or corrective action plan for CREVS.

TVA also proposed to revise the Bases for TS 3.7.E/4.7.E. These Bases would be revised to remove the description of the temporary TS changes discussed above. In addition, they would reflect the new CBHZ design basis that allows for some in-leakage, as opposed to the original UFSAR design basis that specifically stated all leakage would be out-leakage. The staff reviewed TVA's proposed Bases and finds them acceptable. However, NRC acceptance of the revised design basis for CREVS, as described in TVA's proposed Bases for TS 3.7.E/4.7.E, is contingent upon the staff also accepting TVA's corrective action plan for CREVS. Although the staff recognizes that some in-leakage is inevitable under certain accident conditions, the staff is reviewing TVA's assumptions and calculations regarding the quantity of in-leakage. Should the staff conclude that TVA's corrective action plan for CREVS or dose calculations are unacceptable, an additional Bases revision may be necessary.

Lastly, TVA proposed to remove the list of dampers from TS Surveillance Requirement (SR) 4.7.E.4. TVA stated in its September 10, 1992 letter, that these dampers were included in the control room isolation and pressurization

functional test procedure for BFN. This test procedure is a TVA controlled procedure subject to the change control provisions of the Administrative Controls section of TS (i.e., Section 6.8.1.1.). The guidelines of GL 91-08 establish an acceptable alternative to identifying lists of specific components in the TS. The staff reviewed TVA's proposed TS change to delete the list of dampers from SR 4.7.E.4 against the guidance of GL 91-08. Based on this review, the staff considers this change acceptable.

During its review of this amendment application the staff noticed that TVA did not propose the additional surveillance requirements for testing unfiltered CBHZ in-leakage as deemed necessary by the staff in its SE dated September 18, 1989. By letter dated March 1, 1993, TVA addressed the staff's concern regarding the necessity of a TS SR to demonstrate the unfiltered in-leakage rate. In this letter TVA committed to establish a Surveillance Instruction (SI) that would determine the CBHZ in-leakage rate every cycle. However, TVA maintained that a change to the BFN TS to explicitly prescribe an SR to measure CBHZ in-leakage was not necessary, and inconsistent with the NRC's Improved Standard Technical Specifications (ISTS). The staff reviewed TVA's justifications, but is not convinced that the new CREVS design basis (still under staff review) will not warrant additional TS requirements (e.g., SR for CBHZ unfiltered in-leakage) per 10 CFR 50.36.

The staff acknowledges TVA's commitment to perform measurements of the CBHZ unfiltered in-leakage each cycle as part of a BFN SI. However, the issue regarding adequate surveillance requirements for determining CBHZ integrity will be addressed by the staff's SE on TVA's corrective action plan for CREVS to be issued prior to Unit 2 Cycle 7 startup.

### 3.0 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.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and change 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 48829). 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.

5.0 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.

Principal Contributor: T. Ross

Date: April 9, 1993

