



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. 198 TO FACILITY OPERATING LICENSE NO. DPR-33  
AMENDMENT NO. 215 TO FACILITY OPERATING LICENSE NO. DPR-52  
AMENDMENT NO. 171 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

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

DOCKET NOS. 50-259, 50-260 AND 50-296

1.0 INTRODUCTION

By letter dated August 20, 1992, the Tennessee Valley Authority (TVA, the licensee) submitted a request to revise the Technical Specifications (TS) of the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3, in accordance with the guidelines of Generic Letter (GL) 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications." Included in this letter, were proposed changes to Section 5, "Major Design Features," of the BFN TS. These changes were subsequently determined to be outside the scope of GL 88-16. Consequently, TVA supplanted the proposed TS changes specifically related to Section 5 by a letter dated May 17, 1993. This letter utilized the guidance provided by GL 90-02, "Alternative Requirements for Fuel Assemblies in the Design Features Section of Technical Specifications," to justify proposed TS changes to Section 5.

TVA's letter of May 17, 1993, requested emergency NRC approval of the proposed Section 5 TS changes pursuant to the provisions of 10 CFR 50.91(a)(5). BFN, Unit 2 is scheduled to restart from the current Cycle 6 refueling outage on May 21, 1993. TVA will be unable to restart Unit 2 without NRC approval of the proposed Section 5 TS changes.

2.0 EVALUATION

Section 5.2, "Reactor," of the existing BFN TS provide an explicit description of the number and type of fuel assemblies and control rods utilized in the reactor core (for the current fuel cycle). In the past, each subsequent fuel cycle for each BFN unit has necessitated a TS amendment to update Section 5.2 regarding the specific description of fuel assembly designs used in the refueled reactor core. By letter dated August 20, 1992, TVA submitted a TS amendment application in accordance with GL 88-16. This amendment proposed to relocate all cycle-specific parameter limits from the TS to a Core Operating Limits Report (COLR). The purpose of this amendment was to allow TVA the flexibility of refueling any BFN unit without requiring the submittal of a cycle-specific TS amendment application for each new core reload. By letter dated May 20, 1993, the staff transmitted license amendments numbered 197, 214, and 170 for BFN, Units 1, 2, and 3, respectively, that approved TVA's proposed TS changes except for Section 5.2.

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The staff considered TVA's proposed changes to the "Major Design Features" section of the TS were inappropriately included with the TS changes associated with GL 88-16.

In response to the staff's determination that the TS changes to Section 5 could not be approved as part of TVA's original application per GL 88-16, TVA decided to reapply using the guidance of GL 90-02. In order to support Cycle 7 restart of BFN, Unit 2, and allow for future fuel cycles without the necessity of submitting a license amendment each time, TVA proposed TS changes to Sections 5.2.A and 5.2.B consistent with the language used by the new Standard Technical Specifications (STS) for General Electric Plants, BWR/4, issued by the NRC as NUREG-1433 dated September 1992.

Supplement 1 of GL 90-02, provided guidance for a line-item change of TS Section 5 for "Fuel Assemblies." This guidance recommended that licensees incorporate TS modeled after the STS to permit the substitution of fuel rods as long as the substitution was justified by cycle-specific reload analyses using NRC-approved methodology. The staff considers an NRC-approved methodology to be any methodology that the NRC staff has explicitly approved in a written safety evaluation. The NRC-approved methodology must be used only for the purpose and the scope of application specified in the reviewed document as approved or modified in the NRC approval documentation.

The staff confirmed that the TS changes proposed by TVA for Sections 5.2.A (fuel assemblies) and 5.2.B (control rods) are consistent with the STS. Furthermore, these changes are in accordance with the guidelines of GL 90-02, Supplement 1. The proposed TS will ensure that future fuel assemblies and control rod assemblies utilized at BFN are designed and analyzed in accordance with NRC-approved methodologies. Consequently, the NRC staff concludes the TS changes proposed by TVA in their application of May 17, 1993 are acceptable.

### 3.0 EMERGENCY CIRCUMSTANCES

TVA requested, in its application of May 17, 1993, that proposed changes to Section 5 of the BFN TS be approved on an emergency basis. TVA claimed in this letter that an emergency situation existed because current TS prevent the resumption of Unit 2 power operation. Furthermore, TVA explained that the cause of this emergency situation was the NRC's determination that the changes to Section 5 of the BFN TS proposed by the August 20, 1992 letter, could not be approved within the scope of GL 88-16. As such, TVA was impelled to supplement its original TS amendment application and to request emergency NRC approval due to the limited time available prior to Unit 2 restart.

TVA's original TS amendment application of August 20, 1992, was submitted in a timely manner. However, the staff's determination that the justification for proposed TS changes to Section 5 were not suitable, was not identified until just recently. Upon notification that its TS amendment application was deficient, TVA revised the proposed changes to Section 5 of the BFN TS and provided an appropriate justification as quickly as was practicable.

After reviewing this situation pursuant to the provisions of 10 CFR 50.91(a)(5), the staff concluded an emergency situation does exist that would prevent startup of BFN, Unit 2 and that TVA did respond in a timely manner.



#### 4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that the proposed license amendment involves no significant hazards consideration if operation of the facility, in accordance with the amendment, would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

Core reload design analyses which address the applicable safety criteria are performed prior to each cycle of operation. These safety criteria require that the radiological consequences of any design basis accident not exceed the guidelines set forth in 10 CFR 100. The analytical methodologies used to satisfy these guidelines are approved by NRC. The proposed amendments require that these analytical methodologies continue to be approved by NRC. The anticipated operational transients and design basis accidents described in the FSAR are initiated by operator errors or equipment malfunctions other than by the fuel or control rod assemblies. Thus, the adoption of this amendment will not increase the probability or consequences of any accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated because the proposed amendments will not result in changes to any safety-related equipment or safety functions. The proposed amendments will not change any equipment, systems, or setpoints designed to prevent or mitigate accidents.

3. Involve a significant reduction in a margin of safety.

Operation of the facility, in accordance with the proposed amendment, would not involve a significant reduction in the margin of safety because an adequate margin of safety is ensured by performing analyses using NRC-approved methodologies to verify compliance with the conditions and acceptance criteria assumed in the FSAR. These analyses are performed to establish specific numerical values for core operating limits/restrictions to insure that adequate margin to safety is maintained should an event occur. These limits/restrictions will be contained in the TS and the Core Operating Limits Reports. The TS will continue to require compliance and operation within the bounds of these limits/restrictions. No changes will be made to actions required by the TS in the event of noncompliance. Development of limits/restrictions and core reload design for future cycles will conform to NRC-approved methods.

Accordingly, based on the evaluation above pursuant to 10 CFR 50.92(c), the NRC staff concludes that the proposed amendment does not involve significant hazards considerations.



#### 5.0 STATE CONSULTATION

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

#### 6.0 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. 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 made a final no significant hazards consideration determination with respect to the amendments. 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.

#### 7.0 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: May 21, 1993



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