June 8, 2001

Mr. A. J. Scalice
Chief Nuclear Officer
and Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3 —- ISSUANCE OF AMENDMENTS REGARDING RESIDUAL HEAT REMOVAL SUPPRESSION POOL COOLING (TAC NOS. MB0319, MB0320 AND MB0321)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment Nos. 241 , 272 , and 230 to Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2, and 3, respectively. These amendments are in response to your application No. TS-411 dated November 6, 2000.

These amendments revise the Technical Specifications to implement TSTF-230 Revision 1, allowing four residual heat removal suppression pool cooling subsystems to be inoperable for 8 hours.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

William O. Long, Sr. Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260 and 50-296

Enclosures: 1. Amendment No. 241 to License No. DPR-33
2. Amendment No. 272 to License No. DPR-52
3. Amendment No. 230 to License No. DPR-68
4. Safety Evaluation

cc w/enclosures: See next page

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DATE	5/29/2001	5/29/2001	6/1/2001	6/4/2001

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 241
License No. DPR-33

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated November 6, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-33 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 241, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Kahtan N. Jabbour for/

Patrick M. Madden, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: June 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 241

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.6-31	3.6-31
3.6-32	3.6-32
B 3.6-71	B 3.6-71
B 3.6-72	B 3.6-72

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 272
License No. DPR-52

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated November 6, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-52 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 272 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Kahtan N. Jabbour for/

Patrick M. Madden, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: June 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 272

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.6-31	3.6-31
3.6-32	3.6-32
B 3.6-71	B 3.6-71
B 3.6-72	B 3.6-72

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 230
License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Tennessee Valley Authority (the licensee) dated November 6, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-68 is hereby amended to read as follows:

   2. Technical Specifications

      The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 230 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by Kahtan N. Jabbour for/

Patrick M. Madden, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 8, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 230

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
3.6-31	3.6-31
3.6-32	3.6-32
B 3.6-71	B 3.6-71
B 3.6-72	B 3.6-72

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 241 TO FACILITY OPERATING LICENSE NO. DPR-33,

AMENDMENT NO. 272 TO FACILITY OPERATING LICENSE NUMBER DPR-52,

AND AMENDMENT NO. 230 TO FACILITY OPERATING LICENSE NUMBER 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 application dated November 6, 2001, the Tennessee Valley Authority (the licensee) requested amendments to revise the Browns Ferry Nuclear Plant (BFN), Units 1, 2 and 3 Technical Specifications (TS). The proposed amendments would revise TS Section 3.6.2.3, Residual Heat Removal (RHR) Suppression Pool Cooling to adopt TS Task Force change 230 Revision 1 (TSTF-230 Rev.1). This change to “Required Action C of Limiting Condition for Operation (LCO) 3.6.2.3" would allow four RHR suppression pool cooling subsystems to be inoperable for up to 8 hours.

2.0 DISCUSSION

2.1 Proposed TS Changes

The approval of this license amendment request (LAR) will result in the licensee having more time to restore operability to a residual heat removal (RHR) suppression pool cooling subsystem when four subsystems are inoperable. A unit is presently required to do a prompt shutdown if all four RHR suppression pool cooling subsystems are found to be inoperable.

The LAR does not change, in any way, the design or function of any safety or non-safety related systems or components previously reviewed by the U.S. Nuclear Regulatory Commission (NRC) staff and found to be acceptable. The LAR asks that the generic position TSTF-230, allowing the restoration time when all suppression pool cooling subsystems are inoperable to be changed to 8 hours, be adopted. The proposed TS changes add additional information to TS LCO 3.6.2.3.C and delete information from TS LCO 3.6.2.3.D, that in both cases clarify the completion time limits for the RHR suppression pool cooling subsystems.

Current TS 3.6.2.3, Condition C states:

C. Three suppression pool cooling subsystems inoperable.

The associated Required Action C.1 states:

C.1 Restore required RHR suppression pool cooling subsystem to OPERABLE status.

The proposed amendment would make the following changes:

Proposed TS 3.6.2.3, Condition C would state:

*C. Three **or more RHR** suppression pool cooling subsystems*

and Required Action C.1 would state:

*C.1 Restore required RHR suppression pool cooling subsystem**s** to OPERABLE status*.

(Note: The word “required” in C.1 means the number of subsystems, one or two, required to exit Condition C.)

Also, the current Condition D, applicable when the Required Action and Completion Times for inoperable Four RHR Suppression Pool Cooling subsystems cannot be met, would be revised by deleting the condition of four inoperable subsystems, since that condition would be covered by the "three or more" condition.

2.2 Staff Evaluation Criteria and Scope of Review

In deciding the acceptability of this LAR, the staff used the following requirements, guidance, and information:

(1) The definition of OPERABILITY in the BFN TS.

(2) The definition of Limiting Condition for Operation (LCO) in 10 CFR 50.36(c).

(3) The description of the design basis function of the RHR suppression pool cooling subsystem and its association with the suppression pool spray subsystem, the containment spray subsystems, and the RHR service water subsystems as discussed in BFN TS Bases.

(4) The description of the RHR suppression pool cooling subsystem as provided in the LAR.

(5) Precedent as contained in TSTF-230 for NUREG-1433, Revision 1, “Standard Technical Specifications (STS), General Electric Plants, BWR/4" dated April 1995.

(6) Precedent as contained in recent TS conversions for Grand Gulf, Hatch Units 1 and 2, and Peach Bottom Units 2 and 3.

The LAR also described associated changes to the TS Bases. The staff reviewed these changes for consistency with the proposed TS changes, but the Bases changes are not part of the proposed amendment.

3.0 EVALUATION

The RHR suppression pool cooling subsystem at BFN consists of two independent RHR loops, each loop having two subsystems. A subsystem includes one pump, one heat exchanger and associated valves and piping. The primary function of the RHR suppression pool cooling system is to maintain suppression pool water temperature within established limits. Cooling is usually required after reactor core isolation cooling or high-pressure coolant injection turbine operation, safety relief valve testing, or high surrounding environment temperatures during summer. In addition, RHR suppression pool cooling subsystems, along with other subsystems, are required to provide suppression pool cooling in the event of a design-basis accident (DBA).

The other subsystems that are used to support or provide suppression pool cooling during a DBA include the suppression pool spray subsystem, the containment spray subsystem, and the RHR service water subsystems. In part, the basis for the approval of TSTF-230 is that each of these subsystems has a completion time limit of 8 hours to restore operability, and absent any safety concern, the RHR suppression pool cooling subsystem should have the same. The suppression pool spray subsystem, containment spray subsystem, and the RHR service water subsystems for BFN have a completion time limit of 8 hours to restore operability.

The proposed 8-hour-completion time is considered acceptable since a prompt plant shutdown as required by BFN TS LCO 3.6.2.3 has the potential for the unit to scram. For this event, there could be a steam discharge into the suppression pool while all of the RHR suppression pool cooling subsystems are inoperable and incapable of removing heat. The 8-hour limit provides time to restore one or two of the subsystems prior to requiring the unit to shutdown. The 8-hour completion time is acceptable due to the low probability of an accident and because alternative methods to remove heat from the containment are available.

This proposed change is consistent with TSTF-230 for “Standard Technical Specifications General Electric Plants, BWR/4." This LAR is not unique in that several other plants, including Grand Gulf, Hatch, and Peach Bottom, have had similar requirements which have been recently approved by the NRC staff during their Improved Standard TS conversions. TSTF-230 Rev. 1 was accepted by the NRC on July 26, 1999 (letter from William D. Beckner to James Davis).

4.0 SUMMARY

The NRC finds that the proposed changes will allow safe operation with these changes to the RHR suppression pool cooling subsystem TS Limiting Condition for Operation. The NRC staff also finds that the proposed changes are consistent with the previously approved Improved TS conversions to NUREG-1433, Rev. 1. The NRC staff, therefore, concludes that the proposed TS changes are acceptable.

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 a requirement 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 previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (65 FR 71139). 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: Jack W. Foster, NRR

Date: June 8, 2001

Mr. J. A. Scalice
Tennessee Valley Authority

BROWNS FERRY NUCLEAR PLANT

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