

December 30, 2003

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

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 2 AND 3 — ISSUANCE OF
AMENDMENTS REGARDING CORE OPERATING LIMITS
(TAC NOS. MB8433 AND MB8434)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment Nos. 287 and 245 to Facility Operating Licenses Nos. DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 2 and 3, respectively. These amendments are in response to your application dated April 14, 2003, as supplemented by your letters dated September 5, 2003, and November 7, 2003, which provided clarifying information.

The amendments would revise Technical Specifications (TSs) 3.3.4.1 "End-of-Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation," 3.7.5 "Main Turbine Bypass System," and 5.6.5 "Core Operating Limits Report (COLR)." The revision to TS 5.6.5 adds references to Framatome Advanced Nuclear Power analytical methods that will be used to determine core operating limits.

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

Sincerely,

/RA/

Kahtan N. Jabbour, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-260 and 50-296

Enclosures: 1. Amendment No. 287 to
License No. DPR-52
2. Amendment No. 245 to
License No. DPR-68
3. Safety Evaluation

cc w/enclosures: See next page

December 30, 2003

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

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 2 AND 3 — ISSUANCE OF
AMENDMENTS REGARDING CORE OPERATING LIMITS
(TAC NOS. MB8433 AND MB8434)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment Nos. 287 and 245 to Facility Operating Licenses Nos. DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 2 and 3, respectively. These amendments are in response to your application dated April 14, 2003, as supplemented by your letters dated September 5, 2003, and November 7, 2003, which provided clarifying information.

The amendments would revise Technical Specifications (TSs) 3.3.4.1 "End-of-Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation," 3.7.5 "Main Turbine Bypass System," and 5.6.5 "Core Operating Limits Report (COLR)." The revision to TS 5.6.5 adds references to Framatome Advanced Nuclear Power analytical methods that will be used to determine core operating limits.

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

Sincerely,

/RA/

Kahtan N. Jabbour, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-260 and 50-296

Enclosures: 1. Amendment No. 287 to
License No. DPR-52
2. Amendment No. 245 to
License No. DPR-68
3. Safety Evaluation

cc w/enclosures: See next page

DISTRIBUTION: See attached list

Package: ML033650164

TSPages: ML040020305, ML040020315

Accession Number: ML033650142

OFFICE	PDII-2/PM	PDII-2/IN	PDII-2/LA	SRXB/SC	OGC	PDII-2/SC
NAME	KJabbour	CSydnor	BClayton	FAkstulewicz	RWeisman	MLMarshall for: AHowe
DATE	12/4/03	12/08/03	12/03/03	12/8/03	17 Dec 2003	12/19/03

OFFICIAL RECORD COPY

DISTRIBUTION FOR BROWNS FERRY NUCLEAR PLANT, UNITS 2 AND 3 — ISSUANCE
OF AMENDMENTS REGARDING CORE OPERATING LIMITS TAC NOS. MB8433 AND
MB8434)

Dated: December 30, 2003

Distribution:

PUBLIC

PDII-2 R/F

EHackett

KJabbour

AHowe

BClayton (Hard Copy)

CSydnor

OGC

ACRS

GHill(4)

FAkstulewicz

TBoyce

THuang

SCahill, RII

SCoffin,

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 287
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 April 14, 2003, as supplemented by letters dated September 5, 2003, and November 7, 2003, 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. 287, 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 60 days from the completion of Unit 2 spring 2005 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Allen G. Howe, 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: December 30, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 287

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

3.3-30
3.3-31
3.7-17
5.0-24
— — —

INSERT

3.3-30
3.3-31
3.7-17
5.0-24
5.0-24a

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 245
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 April 14, 2003, as supplemented by letters dated September 5, 2003, and November 7, 2003, 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. 245, 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 60 days from the completion of Unit 3 spring 2004 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Allen G. Howe, 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: December 30, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 245

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

3.3-30

3.3-31

3.7-17

5.0-24

— — — —

INSERT

3.3-30

3.3-31

3.7-17

5.0-24

5.0-24a

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 287 TO FACILITY OPERATING LICENSE NO. DPR-52
AND AMENDMENT NO. 245 TO FACILITY OPERATING LICENSE NO. DPR-68
TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT, UNITS 2 AND 3
DOCKET NOS. 50-260 AND 50-296

1.0 INTRODUCTION

By letter dated April 14, 2003, as supplemented by letters dated September 5, 2003, and November 7, 2003, the Tennessee Valley Authority (TVA or the licensee) submitted a request for changes to the Browns Ferry Nuclear Plant (BFN) Technical Specifications (TSs) for Units 2 and 3. The requested changes are, (1) to revise two Limiting Conditions for Operation (LCO) by adding LCO 3.3.4.1.c and LCO 3.7.5.c to LCO 3.3.4.1 and LCO 3.7.5, respectively, which require core thermal limits adjustments for inoperable equipment, and (2) to add references to Framatome Advanced Nuclear Power (FANP) analytical methods to Core Operating Limits Report (COLR) TS 5.6.5.b. TVA's supplemental letters provided clarifying information that did not expand the scope of the original application or change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

2.1 Regulatory Evaluation

Section 182a of the Atomic Energy Act, as amended, requires applicants for nuclear power plant operating licenses to include TSs as part of the operating license. The content of the TSs is specified in Title 10 of the *Code of Federal Regulations*, Section 50.36, "Technical Specifications." Traditionally, cycle-specific parameter limits have been listed in the plant TSs. In an effort to avoid TS changes for every fuel reload cycle that results in changing cycle-specific parameter limits, licensees have relocated the cycle-specific core operating parameters from the TSs to the COLR. This is done in accordance with the guidelines of the U.S. Nuclear Regulatory Commission (NRC) Generic Letter (GL) 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications." GL 88-16 also provides that licensees identify, in the TS section titled "Reporting Requirements," the previously approved analytical methods used to determine the core operating limits by identifying the topical report number, title, and date (or identify by NRC letter and date the staff's safety evaluation for a plant-specific methodology).

2.2 Technical Evaluation

2.2.1 LCO 3.3.4.1 End-of-Cycle Recirculation Pump Trip (EOC-RPT) Instrumentation

The licensee proposed to add LCO 3.3.4.1.c to LCO 3.3.4.1. The proposed change references additional core thermal limits adjustment factors for linear heat generation rate (LHGR) for equipment out-of-service (EOOS) to ensure that thermal margins are maintained.

The methods for calculating the additional core thermal limits adjustment factors have previously been reviewed and approved as part of the NRC staff review of the FANP reload methodologies. A minor revision to the EOOS LCO is now needed to account for the differences in applying the core limits adjustment factors because FANP will now perform the core design analysis, and transient and accident analysis services for BFN Units 2 and 3, where these analyses were previously performed by Global Nuclear Fuels. For FANP fuel, power-dependent corrections and flow-dependent corrections are applied as necessary to the LHGR limits, and no corrections are applied to the Average Planar LHGR limits. For this reason, for the subject LCOs, when using FANP analysis methods, it may be necessary to apply an LHGR adjustment if the EOC-RPT system instrumentation or main turbine bypass system is not operable. The proposed change to the TSs requires the licensee to implement the previously approved methods to make necessary adjustments for EOC-RPT instrumentation. Therefore, the staff finds that the proposed change is acceptable.

2.2.2 LCO 3.7.5 Main Turbine Bypass System

The licensee proposed to add LCO 3.7.5c to LCO 3.7.5. The proposed change references additional core thermal limits adjustment factors for LHGR for EOOS to ensure that thermal margins are maintained.

The same basis as described above in Section 2.2.1 applies to this LCO. Specifically, the methods for calculating the additional core thermal limits adjustment factors have previously been reviewed and approved as part of the staff review of the FANP reload methodologies. Therefore, the staff finds that the proposed change is acceptable.

2.2.3 TS 5.6.5.b COLR

The licensee proposed to add 16 additional NRC approved FANP topical reports, provided in Reference 1, to the list of approved analytical methods in this TS.

The staff has reviewed the justification for the proposed revision and the applicability of each proposed approved topical report to BFN Units 2 and 3 TS 5.6.5.a. Based on this review, the staff has determined that the proposed TS revision is acceptable because: (1) the transition to FANP fuel will necessarily involve appropriate adjustments to core operating limits for the two EOOS TSs stated above, and (2) these 16 topical reports to be used to determine core thermal limits have been previously reviewed and approved by the NRC, and are applicable to BFN Units 2 and 3 and the fuel proposed for use there.

2.2.4 Summary

The staff concludes that the proposed revisions to LCO 3.3.4.1, LCO 3.7.5, and TS 5.6.5.b are acceptable for the BFN Units 2 and 3 TSs.

3.0 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.

4.0 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 (68 FR 28858). 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.

6.0 REFERENCES

1. Letter from T. E. Abney to USNRC, "Browns Ferry Nuclear Plant (BFN) - Units 2 and 3 - Technical Specifications (TS) Change 425 - Framatome Fuel - Core Operating Limits Report (COLR) References," TVA-BFN-TS-425, April 14, 2003.
2. Letter from T. E. Abney to USNRC, "Browns Ferry Nuclear Plant (BFN) - Units 2 and 3 - Technical Specifications (TS) Change 425 - Framatome Fuel - Core Operating Limits Report (COLR) References - Response to Request for Additional Information (RAI) and TS Mark-up Correlation (TAC Nos. MB8433, MB8434)," TVA-BFN-TS-425, September 5, 2003.
3. Letter from T. E. Abney to USNRC, "Browns Ferry Nuclear Plant (BFN) - Units 2 and 3 - Technical Specifications (TS) Change 425 - Framatome Fuel - Core Operating Limits Report (COLR) References - Response to Request for Additional Information (RAI) (TAC Nos. MB8433, MB8434)," TVA-BFN-TS-425, November 7, 2003.

Principal Contributor: Tai Huang

Date: December 30, 2003

Mr. J. A. Scalice
Tennessee Valley Authority

BROWNS FERRY NUCLEAR PLANT

cc:

Mr. Karl W. Singer, Senior Vice President
Nuclear Operations
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Mark J. Burzynski, Manager
Nuclear Licensing
Tennessee Valley Authority
4X Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. James E. Maddox, Vice President
Engineering & Technical Services
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. Timothy E. Abney, Manager
Licensing and Industry Affairs
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

Mr. Ashok S. Bhatnagar, Site Vice President
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Browns Ferry Nuclear Plant
10833 Shaw Road
Athens, AL 35611

General Counsel
Tennessee Valley Authority
ET 11A
400 West Summit Hill Drive
Knoxville, TN 37902

State Health Officer
Alabama Dept. of Public Health
RSA Tower - Administration
Suite 1552
P.O. Box 303017
Montgomery, AL 36130-3017

Mr. Michael J. Fecht, Acting General Manager
Nuclear Assurance
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Chairman
Limestone County Commission
310 West Washington Street
Athens, AL 35611

Mr. Michael D. Skaggs, Plant Manager
Browns Ferry Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Decatur, AL 35609