

July 8, 1997

Mr. Oliver D. Kingsley, Jr.  
President, TVA Nuclear and  
Chief Nuclear Officer  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

SUBJECT: ISSUANCE OF AMENDMENTS - BROWNS FERRY NUCLEAR PLANT UNITS 1, 2,  
AND 3 (TAC NOS. M96453, M96454, AND M96455) (TS 380)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment Nos. 232, 248, and 208 to Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for the Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3, respectively. These amendments are in response to your application dated August 30, 1996, requesting deletion of a license condition on thermal water quality standards.

A copy of the NRC's Safety Evaluation is enclosed. A Notice of Issuance of Amendment to Facility Operating License will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original signed by  
Joseph F. Williams, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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

- Enclosures:
1. Amendment No. 232 to License No. DPR-33
  2. Amendment No. 248 to License No. DPR-52
  3. Amendment No. 208 to License No. DPR-68
  4. Safety Evaluation

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Mr. Oliver D. Kingsley, Jr.  
Tennessee Valley Authority

**BROWNS FERRY NUCLEAR PLANT**

**cc:**

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT 1

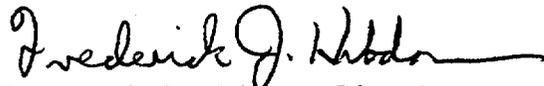
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 232  
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 August 30, 1996, 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, page 3, paragraph 2.C.(3) of Facility Operating License No. DPR-33 is amended as follows:  
  
(3) Deleted
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



Frederick J. Hebdon, Director  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment: Page 3 of License DPR-33\*

Date of Issuance: July 8, 1997

\*Page 3 is attached for convenience, for the composite license to reflect this change.

- (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form for sample analysis or equipment and instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This amended license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 3293 megawatts thermal.

(2) Technical Specifications

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

(3) Deleted.

(4) Deleted.

(5) The facility may be modified by plugging the bypass flow holes in the lower core support plate as described in Browns Ferry Nuclear Plant Units 1 and 2 Safety Analysis Report for Plant Modifications to Eliminate Significant In-Core Vibrations (NEDC-21091), October 1975. The reactor shall not be operated with the plugs installed in the lower core support plate bypass flow holes without further authorization by the NRC.



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 248  
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 August 30, 1996, 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, page 4, paragraph 2.C.(3) of Facility Operating License No. DPR-52 is amended as follows:  
  
(3) Deleted
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



Frederick J. Hebdon, Director  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment: Page 4 of License DPR-52\*

Date of Issuance: July 8, 1997

\*Page 4 is attached for convenience, for the composite license to reflect this change.

(3) Deleted.

(4) The licensee is hereby granted an exemption from the requirements of General Design Criterion 4 with respect to high energy pipes outside containment in accordance with the condition set forth in the Technical Specifications, Section 3.6.G.2 which requires completion of those items listed in "Concluding Report on the Effects of Postulated Pipe Failure Outside of Containment for the Browns Ferry Nuclear Plant Units 2 and 3" and related to Unit 2 prior to startup of Unit 2 following the first refueling outage.

(5) The facility may be modified by plugging the bypass flow holes in the lower core support plate as described in Browns Ferry Nuclear Plant Units 1 and 2 Safety Analysis Report for Plant Modifications to Eliminate Significant In-Core Vibrations (NEDC-21091), October 1975. The reactor shall not be operated with the plugs installed in the lower core support plate bypass flow holes without further authorization by the NRC.

(5)(a) Deleted

(6) The facility may be modified by drilling bypass flow holes in Type 2 and Type 3 fuel assemblies as described in NEDO-21091, "Browns Ferry Nuclear Plant, Units 1 & 2 Safety Analysis Report for Plant Modifications to Eliminate Significant In-Core Vibrations; and NEDE-21156, "Supplemental Information for Plant Modification to Eliminate Significant In-Core Vibrations," dated January 1976.

(7) The facility may be modified as described in "Browns Ferry Nuclear Plant Units 1 and 2 Emergency Core Cooling Systems Low Pressure Coolant Injection Modifications for Performance Improvement (December 1975)" submitted by application dated December 1, 1975 and supplements dated February 12, 1976, March 24, 1976, March 30, 1976, May 21, 1976, June 11, 1976, and July 21, 1976.



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

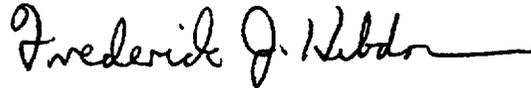
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 208  
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 August 30, 1996, 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, page 3, paragraph 2.C.(3) of Facility Operating License No. DPR-68 is amended as follows:  
  
(3) Deleted
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



Frederick J. Hebdon, Director  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment: Page 3 of License DPR-68\*

Date of Issuance: July 8, 1997

\*Page 3 is attached for convenience, for the composite license to reflect this change.

- (3) Pursuant to the Act and 10 CFR Parts 30, 40 and 70 to receive, possess and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (4) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form for sample analysis or instrument calibration or associated with radioactive apparatus or components;
- (5) Pursuant to the Act and 10 CFR Parts 30 and 70, to possess but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations in 10 CFR Chapter I: Part 20, Section 30.34 of Part 30, Section 40.41 of Part 40, Sections 50.54 and 50.59 of Part 50, and Section 70.32 of Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady state reactor core power levels not in excess of 3293 megawatts thermal.

(2) Technical Specifications

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

(3) Deleted.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 232 TO FACILITY OPERATING LICENSE NO. DPR-33  
AMENDMENT NO. 248 TO FACILITY OPERATING LICENSE NO. DPR-52  
AMENDMENT NO. 208 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 30, 1996, the Tennessee Valley Authority (TVA, the licensee) requested amendment of the operating licenses for the Browns Ferry Nuclear Plant (BFN) Units 1, 2, and 3. The proposed amendment deletes an existing license condition regarding thermal water quality standards.

2.0 DESCRIPTION OF PROPOSED CHANGE

The licensee proposes deletion of license condition 2.C.(3), which states,

In the operation of the facility, the licensee shall, pursuant to the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), comply with all applicable thermal water quality standards of the State of Alabama and the United States.

3.0 EVALUATION

The licensee's August 30, 1996 submittal states:

Water effluent thermal limits for BFN are established by the Alabama Department of Environmental Management as an authorized state for administration of the National Pollutant Discharge Elimination System (NPDES) pursuant to the Clean Water Act. As such, TVA believes that the State of Alabama and the Environmental Protection Agency (EPA) have jurisdiction over such limits, and the subject license condition is redundant and should be deleted [from the BFN license].

The licensee's NPDES permit for BFN (No. AL0022080) provides limitations on thermal discharges and other nonradiological effluents resulting from plant operations. This permit is granted by the State of Alabama, and must be renewed every five years. The NRC does not have authority to regulate the Federal Water Pollution Control Act; however, removal of the license condition does not relieve the licensee of its obligation to operate within the environmental limits imposed by the State of Alabama or responsible Federal

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agencies such as EPA. Therefore, the proposed change does not affect limits on non-radiological effluents.

The licensee notes that the thermal discharge limits have no effect on plant safety analyses. These analyses are dependent upon inlet water temperature. Since the plant discharges water downstream of the intake, the staff agrees the thermal discharge limits do not adversely affect plant safety. Since the plant safety analyses are unaffected by the proposed change, there is no change in radiological effluents.

On May 5, 1997, the NRR Project Manager for Browns Ferry discussed the proposed change with Mr. Jimmy Coles, Chief of the Industrial Waste Water Section, Water Division, of the Alabama Department of Environmental Management. Mr. Coles was briefed on the proposed deletion of the thermal water quality license condition, TVA's rationale for the change, and the basis for the NRC staff's acceptance of the change. Mr. Coles did not express any objection to the proposed change.

The proposed change does not adversely affect plant safety, and does not affect the licensee's obligation to operate in accordance with environmental requirements. Therefore, the proposed change is acceptable.

#### 4.0 STATE CONSULTATION

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

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments delete requirements based on or applicable to a matter subject to the provisions of the Federal Water Pollution Control Act. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(17). 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 upon the considerations discussed above, that: (1) such activities will be conducted in compliance with the Commission's regulations; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (3) issuance of this amendment will not be inimical to the common defense and security.

Principal Contributor: Joseph F. Williams

Dated: July 8, 1997