

JUL 23 1976

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Dockets Nos. 50-259  
and 50-260

Tennessee Valley Authority  
ATTN: Mr. Godwin Williams, Jr.  
Manager of Power  
818 Power Building  
Chattanooga, Tennessee 37201

Gentlemen:

The Commission has issued the enclosed Amendments Nos. 25 and 22 to Facility Licenses Nos. DPR-33 and DPR-52 for the Browns Ferry Nuclear Plant, Units Nos. 1 and 2. These amendments consist of changes to the Technical Specifications in response to your request of July 15, 1976.

These amendments revise the Technical Specifications to allow one control rod accumulator at a time to be removed from service for maintenance when fuel handling is not being performed.

Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

C. Trammell

*bl*

A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Enclosures:

1. Amendment No. 25 to DPR-33
2. Amendment No. 22 to DPR-52
3. Safety Evaluation
4. Federal Register Notice

cc w/encl:  
See next page

*will sent to be added as circ stick the same per conv. lab w/wambach and sent to that they would be as accumulator maintenance if rod logic in protection area soon*

*7/22/76 J.B. Jones*

<i>8/12/76</i> OFFICE → X-27433 SURNAME → DATE →	DOR:ORB#1 <i>TVW</i> TVWambach:1b 20 7/18/76	DOR:ORB#1 <i>C. Trammell</i> ASchwencer. 7/23/76	OELD <i>L. Bonner #3</i> 7/21/76				
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JUL 23 1976

cc w/enclosures:

H. S. Sanger  
General Counsel  
629 New Sprankle Building  
Knoxville, Tennessee 37919

Athens Public Library  
South and Forrest  
Athens, Alabama 35611

Mr. William E. Garner  
Route 4, Box 354  
Scottsboro, Alabama 35768

Mr. Thomas Lee Hammons  
Chairman, Limestone County Board  
of Revenue  
Athens, Alabama 35611

Ira L. Myers, M.D.  
State Health Officer  
State Department of Public Health  
State Office Building  
Montgomery, Alabama 36104



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 25  
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 July 15, 1976, 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.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*for* *Charles M. Trammell*  
A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the  
Technical Specifications

Date of Issuance: July 23, 1976



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 22  
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 July 15, 1976, 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.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*for* *Charles M. Trammell*  
A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the  
Technical Specifications

Date of Issuance: July 23, 1976

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 25 TO FACILITY LICENSE NO. DPR-33

AMENDMENT NO. 22 TO FACILITY LICENSE NO. DPR-52

DOCKETS NOS. 50-259 & 50-260

Revise Appendix A as follows:

Remove page 108 and insert revised pages 108 and 108a.

## LIMITING CONDITIONS FOR OPERATION

## SURVEILLANCE REQUIREMENTS

3.3 REACTIVITY CONTROLApplicability

Applies to the operational status of the control rod system.

Objective

To assure the ability of the control rod system to control reactivity while fuel is in the reactor vessel.

Specification

While more than one fuel assembly is in the reactor vessel, the requirements of 3.3.A through 3.3.F shall be met.

- A. All control rods shall be inserted in the full-in position.
- B. The directional control valves shall be disarmed electrically for all control rods.
- C. The manual valves in the drive water supply shall be in the shut position to prohibit rod movement.

4.3 REACTIVITY CONTROLApplicability

Applies to the surveillance requirements of the control rod system.

Objective

To verify the ability of the control rod system to control reactivity.

Specification

- A. Control rod position shall be verified in accordance with Table 4.2.A.
- B. Each directional control valve shall be verified to be electrically disarmed at intervals not to exceed once every 3 days.
- C. The drive water supply valve (85-593) to each hydraulic control unit shall be verified closed and the water supply valves (85-612, 85-615) to each shall be verified open at intervals not to exceed once every 3 days.

LEAVING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

- D. The control rod accumulators shall be charged except any one control rod accumulator may be removed from service for maintenance provided that fuel loading operations in the affected unit are not being performed.
- E. Two SRM channels shall be functional.
- F. One control rod drive pump shall be in service.

- D. The accumulator pressure shall be checked once a day.
- E. The count rate shall be recorded once each shift.
- F. The control rod drive pump discharge pressure shall be checked once per shift.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 25 TO FACILITY LICENSE NO. DPR-33

AND AMENDMENT NO. 22 TO FACILITY LICENSE NO. DPR-52

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT UNITS 1 AND 2

DOCKETS NOS. 50-259 AND 50-260

Introduction

By application dated July 15, 1976, Tennessee Valley Authority (TVA) requested amendments to Operating Licenses DPR-33 and DPR-52 for Browns Ferry Nuclear Plant, Units 1 and 2, respectively. The amendments would revise the Technical Specifications to allow one control rod accumulator at a time to be removed from service for maintenance provided that fuel handling is not being performed. Some maintenance work must be performed on the accumulators prior to operation.

Background

The existing Technical Specifications for Units 1 and 2 are special, interim Technical Specifications that were issued for the period of restoration from the damage of the March 22, 1975 fire. They contain many unique restrictions, such as the disabling of all control rods in the fully inserted position with the control rod accumulators charged at all times that fuel is in the core. These restrictions are not contained in the normal Technical Specifications. These restrictions were imposed in order to provide a large margin of safety to ensure that control rods would not be inadvertently withdrawn during the restoration work. The restoration work on Units 1 and 2 has now been completed.

Evaluation

The control rods are held in the fully inserted position by the control rod drive mechanism and the position of the hydraulic isolation valves has been so specified that withdrawal of the rods would not be possible.

In addition, the electrical controls for the hydraulic control valves for withdrawal have been disabled. The control rod accumulators were specified to be maintained in a charged condition to provide additional margin of safety such that scram pressure would be available for insertion of a rod if for some unknown reason a rod would leave the fully inserted position.

With the incorporation of this change, all control rods but one would always have the same protection against inadvertent withdrawal as previously. However, one rod could have the scram pressure unavailable while maintenance was being performed on the accumulator or its charging lines. The control rod would continue to be disabled in its fully inserted position, both hydraulically and electrically. If in the future, authorization is granted to make control rods operable such that a rod can be withdrawn from the core, this exception to allow removing a control rod accumulator from service will be re-evaluated and appropriately restricted.

Even in the highly unlikely event that the rod with its accumulator out of service were to be fully withdrawn, the core would be subcritical by greater than 0.38%  $\Delta k/k$  for the most reactive rod. This shutdown margin was verified for each core during the operation prior to the March 22, 1975 fire. The reloaded core of Unit 2 has been verified to have the same location and orientation of fuel assemblies as existed in the Unit 2 core prior to the March 22, 1975 fire by comparison of video tape of the loaded cores. The reloaded core of Unit 1 will also be verified in the same manner subsequent to completion of the reloading. We therefore find the proposed change acceptable.

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of the amendments.

### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (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) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: July 23, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKETS NOS. 50-259 AND 50-260

TENNESSEE VALLEY AUTHORITY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 25 to Facility Operating License No. DPR-33 and Amendment No. 22 to Facility Operating License No. DPR-52 issued to Tennessee Valley Authority (the licensee) which revised the Technical Specifications of the Browns Ferry Nuclear Plant, Units Nos. 1 and 2, located in Limestone County, Alabama. The amendments are effective as of the date of issuance.

These amendments revise the Technical Specifications to allow one control rod accumulator at a time to be removed from service for maintenance when fuel handling is not being performed.

The application for these amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

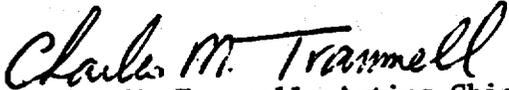
The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated July 15, 1976, (2) Amendment No.25 to License No. DPR-33 and Amendment No. 22 to License No. DPR-52, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. 20555, and at the Athens Public Library, South and Forrest, Athens, Alabama 35611.

A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 23rd day of July 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Charles M. Trammell, Acting Chief  
Operating Reactors Branch #1  
Division of Operating Reactors