



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. 178  
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 June 4, 1990 as supplemented October 24, 1990, 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.

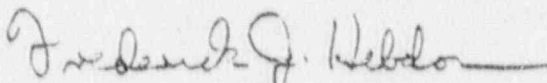
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 178, 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



Frederick J. Hebdon, Director  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 3, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 178

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3.1/4.1-1

3.1/4.1-2

INSERT

3.1/4.1-1

3.1/4.1-2

### 3.1/4.1 REACTOR PROTECTION SYSTEM

#### LIMITING CONDITIONS FOR OPERATION

##### 3.1 Reactor Protection System

###### Applicability

Applies to the instrumentation and associated devices which initiate a reactor scram.

###### Objective

To assure the OPERABILITY of the reactor protection system.

###### Specification

- A. When there is fuel in the vessel, the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be OPERABLE for each MODE of OPERATION shall be as given in Table 3.1.A.
- B. Two RPS power monitoring channels for each inservice RPS MG set or alternate source shall be OPERABLE.
  1. With one RPS electric power monitoring channel for inservice RPS MG set or alternate power supply inoperable, restore the inoperable channel to OPERABLE status within 72 hours or remove the associated RPS MG set or alternate power supply from service.

#### SURVEILLANCE REQUIREMENTS

##### 4.1 Reactor Protection System

###### Applicability

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

###### Objective

To specify the type and frequency of surveillance to be applied to the protection instrumentation.

###### Specification

- A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1.A and 4.1.B, respectively.
- B. The RPS power monitoring system instrumentation shall be determined OPERABLE:
  1. At least once per 6 months by performance of channel functional tests.

3.1/4.1 REACTOR PROTECTION SYSTEM

LIMITING CONDITIONS FOR OPERATION

3.1 Reactor Protection System

3.1.B. (Cont'd)

2. With both RPS electric power monitoring channels for an inservice RPS MG set or alternate power supply inoperable, restore at least one to OPERABLE status within 30 minutes or remove the associated RPS MG set or alternate power supply from service.

SURVEILLANCE REQUIREMENTS

4.1 Reactor Protection System

4.1.B. (Cont'd)

2. At least once per 18 months by demonstrating the OPERABILITY of overvoltage, undervoltage and underfrequency protective instrumentation by simulated automatic logic actuation and verification of the circuit protector trip level setting as follows.

- (a) overvoltage  $\leq$  132.0 VAC
- (b) undervoltage  $\geq$  108.5 VAC
- (c) underfrequency  $\geq$  56.0 Hz



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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 184  
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 June 4, 1990 as supplemented October 24, 1990, 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.

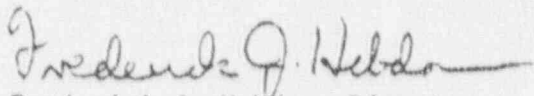
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 184, 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



Frederick J. Hebden, Director  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 3, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 184

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3.1/4.1-1

3.1/4.1-2

INSERT

3.1/4.1-1

3.1/4.1-2



### 3.1/4.1 REACTOR PROTECTION SYSTEM

#### LIMITING CONDITIONS FOR OPERATION

##### 3.1 Reactor Protection System

###### Applicability

Applies to the instrumentation and associated devices which initiate a reactor scram.

###### Objective

To assure the OPERABILITY of the reactor protection system.

###### Specification

- A. When there is fuel in the vessel, the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be OPERABLE for MODE OF OPERATION shall be as given in Table 3.1.A.
- B. Two RPS power monitoring channels for each inservice RPS MG set or alternate source shall be OPERABLE.
  1. With one RPS electric power monitoring channel for inservice RPS MG set or alternate power supply inoperable, restore the inoperable channel to OPERABLE status within 72 hours or remove the associated RPS MG set or alternate power supply from service.

#### SURVEILLANCE REQUIREMENTS

##### 4.1 Reactor Protection System

###### Applicability

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

###### Objective

To specify the type and frequency of surveillance to be applied to the protection instrumentation.

###### Specification

- A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1.A and 4.1.B, respectively.
- B. The RPS power monitoring system instrumentation shall be determined OPERABLE:
  1. At least once per 6 months by performance of channel functional tests.

3.1/4.1 REACTOR PROTECTION SYSTEM

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.1 Reactor Protection System

4.1 Reactor Protection System

3.1.B. (Cont'd)

4.1.B. (Cont'd)

2. With both RPS electric power monitoring channels for an inservice RPS MG set or alternate power supply inoperable, restore at least one to OPERABLE status within 30 minutes or remove the associated RPS MG set or alternate power supply from service.

2. At least once per 18 months by demonstrating the OPERABILITY of overvoltage, undervoltage and underfrequency protective instrumentation by simulated automatic logic actuation and verification of the circuit protector trip level setting as follows.

- (a) overvoltage  $\leq$  132.0 VAC
- (b) undervoltage  $\geq$  108.5 VAC
- (c) underfrequency  $\geq$  56.0 Hz



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

TENNESSEE VALLEY AUTHORITY  
DOCKET NO. 50-296  
BROWNS FERRY NUCLEAR PLANT, UNIT 3  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 149  
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 June 4, 1990 as supplemented October 24, 1990, 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. 149, 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



Frederick J. Hebdon, Director  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 3, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 149

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3.1/4.1-1

-

INSERT

3.1/4.1-1

3.1/4.1-1a

3.1/4.1 REACTOR PROTECTION SYSTEM

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.1 Reactor Protection System

Applicability

Applies to the instrumentation and associated devices which initiate a reactor scram.

Objective

To assure the OPERABILITY of the reactor protection system.

Specification

- A. When there is fuel in the vessel, the setpoints, minimum number of trip systems, and minimum number of instrument channels that must be OPERABLE for each MODE OF OPERATION shall be as given in Table 3.1.A.
- B. Two RPS power monitoring channels for each inservice RPS MG set or alternate source shall be OPERABLE.
  - 1. With one RPS electric power monitoring channel for inservice RPS MG set or alternate power supply inoperable, restore the inoperable channel to OPERABLE status within 72 hours or remove the associated RPS MG set or alternate power supply from service.

4.1 Reactor Protection System

Applicability

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective

To specify the type and frequency of surveillance to be applied to the protection instrumentation.

Specification

- A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1.A and 4.1.B, respectively.
- B. The RPS power monitoring system instrumentation shall be determined OPERABLE:
  - 1. At least once per 6 months by performance of channel functional tests.

3.1/4.1 REACTOR PROTECTION SYSTEM

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.1 Reactor Protection System

3.1.B. (Cont'd)

2. With both RPS electric power monitoring channels for an inservice RPS MG set or alternate power supply inoperable, restore at least one to OPERABLE status within 30 minutes or remove the associated RPS MG set or alternate power supply from service.

4.1 Reactor Protection System

4.1.B. (Cont'd)

2. At least once per 18 months by demonstrating the OPERABILITY of overvoltage, undervoltage and underfrequency protective instrumentation by simulated automatic logic actuation and verification of the circuit protector trip level setting as follows.

- (a) overvoltage  $\leq$  132.0 VAC
- (b) undervoltage  $\geq$  108.5 VAC
- (c) underfrequency  $\geq$  56.0 Hz