

November 19, 1985

Docket Nos. 50-259/260/296

Mr. Hugh G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

The Commission has issued the enclosed Amendment Nos. 124 , 119 and 95 to Facility Operating License Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. These amendments are in response to your application dated May 8, 1985 (TVA BFNP TS-209).

The amendments change the Technical Specifications (TS) to add additional cable tray fixed water spray systems and clarify the test requirements for these systems.

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next monthly Federal Register notice.

Sincerely,



Richard J. Clark, Project Manager  
Operating Reactors Branch #2  
Division of Licensing

Enclosures:

1. Amendment No. 124 to License No. DPR-33
2. Amendment No. 119 to License No. DPR-52
3. Amendment No. 95 to License No. DPR-68
4. Safety Evaluation

cc w/enclosures:  
See next page

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Mr. Hugh G. Parris  
Tennessee Valley Authority

Browns Ferry Nuclear Plant  
Units 1, 2, and 3

cc:

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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. 124  
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 May 8, 1985, 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:

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PDR ADOCK 05000259  
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 124, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 19, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 124

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise Appendix A as follows:

1. Remove the following pages and replace with identically numbered pages.

324, 325

2. The marginal lines on these pages denote the areas being changed.

TABLE 3.11.A FIRE PROTECTION SYSTEM HYDRAULIC REQUIREMENTS

<u>Station</u>	<u>Flow Required (gpm)</u>	<u>Residual Pressure (psig)</u>
<b>1. Reactor Building Roof</b>		
A. Valve 26-849	200	65
B. Valve 26-889	200	65
<b>2. Refuel Floor</b>		
A. Valve 26-835	75	70
B. Valve 26-843	75	70
C. Valve 26-870	75	70
D. Valve 26-865	75	70
E. Valve 26-876	75	70
F. Valve 26-888	75	70
G. Valve 26-898	75	70
<b>3. Cable Tray Fixed Water Spray Systems (1)</b>		
A. Unit 1 - A,B,C & D	200	70
B. Unit 1 - E & F	180	65
C. Unit 1 - G & H	300	55
D. Unit 1 - K & L	70	65
E. Unit 1 - N, P, & Q	115	75
F. Unit 2 - A & B	200	70
G. Unit 2 - C, D, E & F	200	70
H. Unit 2 - J, K & L	85	65
I. Unit 2 - N, P, Q & R	120	60
J. Unit 3 - A & B	200	70
K. Unit 3 - C, D, E & F	265	75
L. Unit 3 - J, K, L & M	135	75
M. Unit 3 - N, P & Q	100	40
N. Turbine Building	30	55
O. Unit 3 - Diesel Generator Building	55	50
<b>4. Diesel Generator Buildings</b>		
A. Valve 26-1032	75	70
B. Valve 26-1069	75	70

TABLE 3.11.A FIRE PROTECTION SYSTEM HYDRAULIC REQUIREMENTS

<u>Station</u>	<u>Flow Required (GPM)</u>	<u>Residual Pressure (PSIG)</u>
5. Pump Intake Station		
A. Valve 26-578	75	70
6. Control Bay		
A. Valve 26-1076	75	70
7. Yard Loop (2)		
A. Hydrant at Valve 0-26-526	500	65
B. Hydrant at Valve 0-26-530	500	65
8. Cooling Tower Loop		
A. Hydrant at Valve 0-26-1023-6	500	65

Note (1) Cable tray fixed water spray systems are to be tested simultaneously with one 1½-inch hose station.

Note (2) Yard hydrants and the cooling tower hydrant are to be tested using the longest path for flow.



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. 119  
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 May 8, 1985, 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. 119, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 19, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 119

FACILITY OPERATING LICENSE NO. DPR-52

DOCKET NO. 50-260

Revise Appendix A as follows:

1. Remove the following pages and replace with identically numbered pages.

324, 325

2. The marginal lines on these pages denote the areas being changed.

TABLE 3.11.A FIRE PROTECTION SYSTEM HYDRAULIC REQUIREMENTS

<u>Station</u>	<u>Flow Required (gpm)</u>	<u>Residual Pressure (psig)</u>
1. Reactor Building Roof		
A. Valve 26-849	200	65
B. Valve 26-889	200	65
2. Refuel Floor		
A. Valve 26-835	75	70
B. Valve 26-843	75	70
C. Valve 26-870	75	70
D. Valve 26-865	75	70
E. Valve 26-876	75	70
F. Valve 26-888	75	70
G. Valve 26-898	75	70
3. Cable Tray Fixed Water Spray Systems (1)		
A. Unit 1 - A,B,C & D	200	70
B. Unit 1 - E & F	180	65
C. Unit 1 - G & H	300	55
D. Unit 1 - K & L	70	65
E. Unit 1 - N, P, & Q	115	75
F. Unit 2 - A & B	200	70
G. Unit 2 - C, D, E & F	200	70
H. Unit 2 - J, K & L	85	65
I. Unit 2 - N, P, Q & R	120	60
J. Unit 3 - A & B	200	70
K. Unit 3 - C, D, E & F	265	75
L. Unit 3 - J, K, L & M	135	75
M. Unit 3 - N, P & Q	100	40
N. Turbine Building	30	55
O. Unit 3 - Diesel Generator Building	55	50
4. Diesel Generator Buildings		
A. Valve 26-1032	75	70
B. Valve 26-1069	75	70

TABLE 3.11.A FIRE PROTECTION SYSTEM HYDRAULIC REQUIREMENTS

<u>Station</u>	<u>Flow Required (GPM)</u>	<u>Residual Pressure (PSIG)</u>
5. Pump Intake Station		
A. Valve 26-578	75	70
6. Control Bay		
A. Valve 26-1076	75	70
7. Yard Loop (2)		
A. Hydrant at Valve 0-26-526	500	65
B. Hydrant at Valve 0-26-530	500	65
8. Cooling Tower Loop		
A. Hydrant at Valve 0-26-1023-6	500	65

Note (1) Cable tray fixed water spray systems are to be tested simultaneously with one 1½-inch hose station.

Note (2) Yard hydrants and the cooling tower hydrant are to be tested using the longest path for flow.



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. 95  
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 May 8, 1985, 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. 95, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 19, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 95

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise Appendix A as follows:

1. Remove the following pages and replace with identically numbered pages.

355a, 355b

2. The marginal lines on these pages denote the area being changed.

TABLE 3.11.A FIRE PROTECTION SYSTEM HYDRAULIC REQUIREMENTS

<u>Station</u>	<u>Flow Required (gpm)</u>	<u>Residual Pressure (psig)</u>
1. Reactor Building Roof		
A. Valve 26-849	200	65
B. Valve 26-889	200	65
2. Refuel Floor		
A. Valve 26-835	75	70
B. Valve 26-843	75	70
C. Valve 26-870	75	70
D. Valve 26-865	75	70
E. Valve 26-876	75	70
F. Valve 26-888	75	70
G. Valve 26-898	75	70
3. Cable Tray Fixed Water Spray Systems (1)		
A. Unit 1 - A,B,C & D	200	70
B. Unit 1 - E & F	180	65
C. Unit 1 - G & H	300	55
D. Unit 1 - K & L	70	65
E. Unit 1 - N, P, & Q	115	75
F. Unit 2 - A & B	200	70
G. Unit 2 - C, D, E & F	200	70
H. Unit 2 - J, K & L	85	65
I. Unit 2 - N, P, Q & R	120	60
J. Unit 3 - A & B	200	70
K. Unit 3 - C, D, E & F	265	75
L. Unit 3 - J, K, L & M	135	75
M. Unit 3 - N, P & Q	100	40
N. Turbine Building	30	55
O. Unit 3 - Diesel Generator Building	55	50
4. Diesel Generator Buildings		
A. Valve 26-1032	75	70
B. Valve 26-1069	75	70

Amendment No. 95

355a

TABLE 3.11.A FIRE PROTECTION SYSTEM HYDRAULIC REQUIREMENTS

<u>Station</u>	<u>Flow Required (GPM)</u>	<u>Residual Pressure (PSIG)</u>
5. Pump Intake Station		
A. Valve 26-578	75	70
6. Control Bay		
A. Valve 26-1076	75	70
7. Yard Loop (2)		
A. Hydrant at Valve 0-26-526	500	65
B. Hydrant at Valve 0-26-530	500	65
8. Cooling Tower Loop		
A. Hydrant at Valve 0-26-1023-6	500	65

Note (1) Cable tray fixed water spray systems are to be tested simultaneously with one 1½-inch hose station.

Note (2) Yard hydrants and the cooling tower hydrant are to be tested using the longest path for flow.

Amendment No. 95

355b



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 119 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 95 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 May 8, 1985 (TVA BNFPS TS-209), the Tennessee Valley Authority (TVA, the licensee) requested amendments to Facility Operating License Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. The requested changes are related to the Technical Specifications (TS) for the cable tray fixed water spray fire suppression systems. Additional water spray systems would be added to the TS and the test requirements are clarified. The changes are proposed for all three units.

2.0 EVALUATION

Table 3.11.A, Fire Protection System Hydraulic Requirements, of the existing TS for each unit does not list all of the cable tray fixed water spray systems installed in the plant to provide protection in the event of a fire for the following areas: high cable tray congestion which reduces the effectiveness of automatic sprinkler systems and manual fire fighting operations; cable penetrations from the cable spreading room into the reactor and turbine buildings containing congested cable trays which are not readily accessible for manual fire fighting operations; cable tray crossings where the trays of one division cross the trays of another division; and divisional gaps, where two cable tray runs of opposite divisions are within a few feet of each other and nondivisional cable trays are within the boundary zones of both divisions. These systems are described in the report, Browns Ferry Nuclear Plant Design Changes for the Recovery from the Fire of March 22, 1975, Part X, Section A.5.2. The proposed TS have been revised to list all of the systems installed to meet TVA's commitments for protection of the required cable trays.

Table 3.11.A would also be revised to clarify that each cable tray fixed water spray system is to be tested with water flow through the test connection of each fixed spray system simultaneously with water flow through one 1½-inch fire hose connection at the hydraulic flow (gpm) and

pressure (psig) listed in the table. The licensee has verified that the hydraulic data listed in Table 3.11.A conforms to the design hydraulic requirements for each spray system and proposed tests meet the inspection, test and maintenance commitments listed in the above-referenced Recovery from Fire Report.

The staff has reviewed these proposed TS changes and determined they are needed to correct the existing TS to assure appropriate operability and surveillance requirements will be provided for all the required cable tray water spray fire suppression systems.

### 3.0 ENVIRONMENTAL CONSIDERATIONS

The amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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. 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.

### 4.0 CONCLUSION

We have 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, and (2) 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.

Principal Contributor: W. H. Miller, Jr.

Dated: November 19, 1985