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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. 187
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 12, 1991, 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. 187, 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

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: November 18, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 187

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. * Denotes overleaf page.

REMOVE	INSERT
1.0-5	1.0-5
1.0-6	1.0-6*

N. Rated Power - Rated power refers to operation at a reactor power of 3,293 MWt; this is also termed 100 percent power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated neutron flux, and rated nuclear system pressure refer to the values of these parameters when the reactor is at rated power. Design power, the power to which the safety analysis applies, corresponds to 3,440 MWt.

O. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All nonautomatic containment isolation valves on lines connected to the reactor coolant systems or containment which are not required to be open during accident conditions are closed. These valves may be opened to perform necessary operational activities.

2. At least one door in each airlock is closed and sealed.

3. All automatic containment isolation valves are operable or each line which contains an inoperable isolation valve is isolated as required by Specification 3.7.D.2.

4. All blind flanges and manways are closed.

P. Secondary Containment Integrity

1. Secondary containment integrity means that the required unit reactor zones and refueling zone are intact and the following conditions are met:

a) At least one door in each access opening to the turbine building, control bay and out-of-doors is closed.

b) The standby gas treatment system is operable and can maintain 0.25 inches of water negative pressure in those areas where secondary containment integrity is stated to exist.

c) All secondary containment penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable secondary containment automatic isolation system, or

2. Closed by at least one secondary containment automatic isolation valve deactivated in the isolated position.

2. Reactor zone secondary containment integrity means the unit reactor building is intact and the following conditions are met:

a) At least one door between any opening to the turbine building, control bay and out-of-doors is closed.

P. Secondary Containment Integrity (Cont'd)

2. b) The standby gas treatment system is operable and can maintain 0.25 inches water negative pressure on the unit zone.

c) All the unit reactor building ventilation system penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable reactor building ventilation system automatic isolation system, or

2. Closed by at least one reactor building ventilation system automatic isolation valve deactivated in the isolated position.

If it is desirable for operational considerations, a reactor zone may be isolated from the other reactor zones and the refuel zone by maintaining at least one closed door in each common passageway between zones.* Reactor zone safety-related features are not compromised by openings between adjacent units or refuel zone, unless it is desired to isolate a given zone.

3. Refuel zone secondary containment integrity means the refuel zone is intact and the following conditions are met:

a) At least one door in each access opening to the out-of-doors is closed.

b) The standby gas treatment system is operable and can maintain 0.25 inches water negative pressure on the refuel zone.

c) All refuel zone ventilation system penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable refuel zone ventilation system automatic isolation system, or

2. Closed by at least one refuel zone ventilation system automatic isolation valve deactivated in the isolated position.

If it is desirable for operational considerations, the refuel zone may be isolated from the reactor zones by maintaining all hatches in place between the refuel floor and reactor zones and at least one closed door in each access between the refuel zone and the reactor building.* Refuel zone safety-related features are not compromised by openings between the reactor building unless it is desired to isolate a given zone.

*To effectively control zone isolation, all accesses to the affected zone will be locked or guarded to prevent uncontrolled passage to the unaffected zones.

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. 200
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 12, 1991 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. 200 , 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

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: November 18, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 200

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. * Denotes overleaf page.

REMOVE	INSERT
1.0-5	1.0-5
1.0-6	1.0-6*

N. Rated Power - Rated power refers to operation at a reactor power of 3,293 MWt; this is also termed 100 percent power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated neutron flux, and rated nuclear system pressure refer to the values of these parameters when the reactor is at rated power. Design power, the power to which the safety analysis applies, corresponds to 3,440 MWt.

O. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All nonautomatic containment isolation valves on lines connected to the reactor coolant systems or containment which are not required to be open during accident conditions are closed. These valves may be opened to perform necessary operational activities.

2. At least one door in each airlock is closed and sealed.

3. All automatic containment isolation valves are operable or each line which contains an inoperable isolation valve is isolated as required by Specification 3.7.D.2.

4. All blind flanges and manways are closed.

P. Secondary Containment Integrity

1. Secondary containment integrity means that the required unit reactor zones and refueling zone are intact and the following conditions are met:

a) At least one door in each access opening to the turbine building, control bay and out-of-doors is closed.

b) The standby gas treatment system is operable and can maintain 0.25 inches of water negative pressure in those areas where secondary containment integrity is stated to exist.

c) All secondary containment penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable secondary containment automatic isolation system, or

2. Closed by at least one secondary containment automatic isolation valve deactivated in the isolated position.

2. Reactor zone secondary containment integrity means the unit reactor building is intact and the following conditions are met:

a) At least one door between any opening to the turbine building, control bay and out-of-doors is closed.

P. Secondary Containment Integrity (Cont'd)

2. b) The standby gas treatment system is operable and can maintain 0.25 inches water negative pressure on the unit zone.

c) All the unit reactor building ventilation system penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable reactor building ventilation system automatic isolation system, or

2. Closed by at least one reactor building ventilation system automatic isolation valve deactivated in the isolated position.

If it is desirable for operational considerations, a reactor zone may be isolated from the other reactor zones and the refuel zone by maintaining at least one closed door in each common passageway between zones.* Reactor zone safety-related features are not compromised by openings between adjacent units or refuel zone, unless it is desired to isolate a given zone.

3. Refuel zone secondary containment integrity means the refuel zone is intact and the following conditions are met:

a) At least one door in each access opening to the out-of-doors is closed.

b) The Standby Gas Treatment System is operable and can maintain 0.25 inches water negative pressure on the refuel zone.

c) All refuel zone ventilation system penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable refuel zone ventilation system automatic isolation system, or

2. Closed by at least one refuel zone ventilation system automatic isolation valve deactivated in the isolated position.

If it is desirable for operational considerations, the refuel zone may be isolated from the reactor zones by maintaining all hatches in place between the refuel floor and reactor zones and at least one closed door in each access between the refuel zone and the reactor building.* Refuel zone safety-related features are not compromised by openings between the reactor building unless it is desired to isolate a given zone.

*To effectively control zone isolation, all accesses to the affected zone will be locked or guarded to prevent uncontrolled passage to the unaffected zones.

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. 159
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 July 12, 1991, 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.159 , 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

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: November 18, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 159

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. * Denotes overleaf pages.

REMOVE	INSERT
1.0-5	1.0-5
1.0-6	1.0-6*
3.7/4.7-15	3.7/4.7-15*
3.7/4.7-16	3.7/4.7-16

N. Rated Power - Rated power refers to operation at a reactor power of 3,293 MWt; this is also termed 100 percent power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated neutron flux, and rated nuclear system pressure refer to the values of these parameters when the reactor is at rated power. Design power, the power to which the safety analysis applies, corresponds to 3,440 MWt.

O. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All nonautomatic containment isolation valves on lines connected to the reactor coolant system or containment which are not required to be open during accident conditions are closed. These valves may be opened to perform necessary operational activities.

2. At least one door in each airlock is closed and sealed.

3. All automatic containment isolation valves are operable or each line which contains an inoperable isolation valve is isolated as required by Specification 3.7.D.2.

4. All blind flanges and manways are closed.

P. Secondary Containment Integrity

1. Secondary containment integrity means that the required unit reactor zones and refueling zone are intact and the following conditions are met:

a) At least one door in each access opening to the turbine building, control bay and out-of-doors is closed.

b) The standby gas treatment system is operable and can maintain 0.25 inches of water negative pressure in those areas where secondary containment integrity is stated to exist.

c) All secondary containment penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable secondary containment automatic isolation position, or

2. Closed by at least one secondary containment automatic isolation valve deactivated in the isolated position.

2. Reactor zone secondary containment integrity means the unit reactor building is intact and the following conditions are met:

a) At least one door between any opening to the turbine building, control bay and out-of-doors is closed.

P. Secondary Containment Integrity (Cont'd)

2. b) The Standby Gas Treatment System is operable and can maintain 0.25 inches water negative pressure on the unit zone.

c) All the unit reactor building ventilation system penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable reactor building ventilation system automatic isolation system, or

2. Closed by at least one reactor building ventilation system automatic isolation valve deactivated in the isolated position.

If it is desirable for operational considerations, a reactor zone may be isolated from the other reactor zones and the refuel zone by maintaining at least one closed door in each common passageway between zones.* Reactor zone safety-related features are not compromised by openings between adjacent units or refuel zone, unless it is desired to isolate a given zone.

3. Refuel zone secondary containment integrity means the refuel zone is intact and the following conditions are met:

a) At least one door in each access opening to the out-of-doors is closed.

b) The standby gas treatment system is operable and can maintain 0.25 inches water negative pressure on the refuel zone.

c) All refuel zone ventilation system penetrations required to be closed during accident conditions are either:

1. Capable of being closed by an operable refuel zone ventilation system automatic isolation system, or

2. Closed by at least one refuel zone ventilation system automatic isolation valve deactivated in the isolated position.

If it is desirable for operational considerations, the refuel zone may be isolated from the reactor zones by maintaining all hatches in place between the refuel floor and reactor zones and at least one closed door in each access between the refuel zone and the reactor building.* Refuel zone safety-related features are not compromised by openings between the reactor building unless it is desired to isolate a given zone.

*To effectively control zone isolation, all accesses to the affected zone will be locked or guarded to prevent uncontrolled passage to the unaffected zones.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
	4.7.B.2 (Cont'd)
	d. Each train shall be operated a total of at least 10 hours every month.
	e. Test sealing of gaskets for housing doors shall be performed utilizing chemical smoke generators during each test performed for compliance with Specification 4.7.B.2.a and Specification 3.7.B.2.a.
3. From and after the date that one train of the standby gas treatment system is made or found to be inoperable for any reason, REACTOR POWER OPERATION and fuel handling is permissible only during the succeeding 7 days unless such circuit is sooner made OPERABLE, provided that during such 7 days all active components of the other two standby gas treatment trains shall be operable.	3. a. Once per operating cycle automatic initiation of each branch of the standby gas treatment system shall be demonstrated from each unit's controls.
	b. At least once per year manual operability of the bypass valve for filter cooling shall be demonstrated.
	c. When one train of the standby gas treatment system becomes inoperable the other two trains shall be demonstrated to be OPERABLE within 2 hours and daily thereafter.
4. If these conditions cannot be met:	
a. Suspend all fuel handling operations, core alterations, and activities with the potential to drain any reactor vessel containing fuel.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B. Standby Gas Treatment System	4.7.B. Standby Gas Treatment System
3.7.B.4 (Cont'd) b. Place all reactors in at least a HOT SHUTDOWN CONDITION within the next 12 hours and in a COLD SHUTDOWN CONDITION within the following 24 hours.	
3.7.C. Secondary Containment	4.7.C. Secondary Containment
* 1. Secondary containment integrity shall be maintained in the reactor zone at all times except as specified in 3.7.C.2. * LCO not applicable until just prior to loading fuel into the Unit 3 reactor vessel, provided the Unit 3 reactor zone is not required for secondary containment integrity for other units.	1. Secondary containment surveillance shall be performed as indicated below: a. Secondary containment capability to maintain 1/4 inch of water vacuum under calm wind (< 5 mph) conditions with a system inleakage rate of not more than 12,000 cfm, shall be demonstrated at each refueling outage prior to refueling.
2. If reactor zone secondary containment integrity cannot be maintained the following conditions shall be met: a. Suspend all fuel handling operations, core alterations, and activities with the potential to drain any reactor vessel containing fuel. b. Restore reactor zone secondary containment integrity within 4 hours, or place all reactors in at least a HOT SHUTDOWN CONDITION within the next 12 hours and in a COLD SHUTDOWN CONDITION within the following 24 hours.	2. After a secondary containment violation is determined, the standby gas treatment system will be operated immediately after the affected zones are isolated from the remainder of the secondary containment to confirm its ability to maintain the remainder of the secondary containment at 1/4-inch of water negative pressure under calm wind conditions.