

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT, UNIT 1
DOCKET NO. 50-259
RENEWED FACILITY OPERATING LICENSE

Renewed License No. DPR-33

1. The Nuclear Regulatory Commission (NRC or the Commission), having previously made the findings set forth in License DPR-33 issued on December 20, 1973, has now found that:
 - A. The application for license filed by the Tennessee Valley Authority (TVA or the licensee) 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 and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Browns Ferry Nuclear Plant, Unit 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-29 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
 - C. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1); and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations;
 - D. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - E. There is reasonable assurance: (i) that the activities authorized by the renewed operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
 - F. The licensee is technically and financially qualified to engage in the activities authorized by this renewed operating license in accordance with the rules and regulations of the Commission;
 - G. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

- H. The issuance of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public;
 - I. The staff, after weighing the environmental, economic, technical and other benefits of the facility against environmental costs, and considering available alternatives, has found that the adverse environmental impacts of license renewal are not so great that preserving the option of license renewal would be unreasonable, the issuance of Renewed Facility Operating License No. DPR-33, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to Part 50), of the Commission's regulations and all applicable requirements have been satisfied; and
 - J. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this renewed license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70, including 10 CFR Sections 30.33, 40.32, 70.23, and 70.31.
2. The Atomic Safety and Licensing Board having dismissed the proceeding relating to the licensing action in a "Memorandum and Order," dated November 27, 1973, Facility Operating License No. DPR-33 issued to the TVA on June 26, 1973, is superseded by Renewed Facility Operating License No. DPR-33 which is hereby issued to read as follows:
- A. This renewed license applies to the Browns Ferry Nuclear Plant, Unit 1, a boiling water nuclear reactor and associated equipment (the facility), owned by the TVA. The facility is located in Limestone County, Alabama, and is described in the "Final Safety Analysis Report" (Amendment 9) as supplemented and amended (Amendments 10 through 52), the licensee's Draft Environmental Statement and supplement thereto dated July 1971, and November 8, 1971, respectively, and the licensee's Final Environmental Statement dated September 1, 1972.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses TVA:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Limestone County, Alabama, in accordance with the procedures and limitations set forth in this renewed license;
 - (2) Pursuant to the Act and 10 CFR Parts 40 and 70, to receive, possess, and use at any time source and special nuclear material as reactor fuel in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report as supplemented and amended;

- (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 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 renewed operating 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. 255, are hereby incorporated in the renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications.

For Surveillance Requirements (SRs) that are new in Amendment 234 to Facility Operating License DPR-33, the first performance is due at the end of the first surveillance interval that begins at implementation of the Amendment 234. For SRs that existed prior to Amendment 234, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the surveillance was last performed prior to implementation of Amendment 234.

- (3) The licensee is authorized to relocate certain requirements included in Appendix A and the former Appendix B to licensee-controlled documents. Implementation of this amendment shall include the relocation of these requirements to the appropriate documents, as described in the licensee's application dated September 6, 1996, as supplemented December 11, 1996; April 11, May 1, August 14, October 15, November 5 and 14, December 3, 4, 11, 22, 23, 29, and 30, 1997; January 23, March 12 and 13, April 16, 20, and 28, May 7, 14, 19, and 27, and June 2, 5, 10 and 19, 1998; evaluated in the NRC staff's Safety Evaluation enclosed with this amendment. This amendment is effective immediately and shall be implemented within 90 days of the date of this amendment.
- (4) The licensee shall review the Technical Specification (TS) changes made by License Amendment No. 234 and any subsequent TS changes, verify that the required analyses and modifications needed to support the changes are complete, and submit them for NRC review and approval prior to entering the mode for which the TS applies. This amendment is effective immediately and shall be implemented prior to entering the mode for which the TS applies.
- (5) Deleted.
- (6) Deleted.
- (7) Deleted.
- (8) Deleted.
- (9) Deleted.
- (10) Deleted.
- (11) The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Browns Ferry Nuclear Plant Physical Security Plan, Training and Qualification Plan, and Contingency Plan," submitted by letter dated September 10, 2004, and supplemented on October 22, 2004.
- (12) Deleted.

- (13) Browns Ferry Nuclear Plant shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for BFN as approved in the safety evaluations dated December 8, 1988; March 6, 1991; March 31, 1993; November 2, 1995; and Supplement dated November 3, 1989; subject to the following provision:

The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- (14) The licensee shall maintain the Augmented Quality Program for the Standby Liquid Control System to provide quality control elements to ensure component reliability for the required alternative source term function defined in the Updated Final Safety Analyses Report (UFSAR).
- (15) The licensee is required to confirm that the conclusions made in TVA's letter dated September 17, 2004, for the turbine building remain acceptable using seismic demand accelerations based on dynamic seismic analysis prior to the restart of Unit 1.
- D. The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be included in the next scheduled update to the UFSAR required by 10 CFR 50.71(e)(4) following the issuance of this renewed operating license. Until that update is complete, TVA may make changes to the programs and activities described in the supplement without prior Commission approval, provided that TVA evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- E. The UFSAR supplement, as revised, describes certain future activities to be completed prior to the period of extended operation. TVA shall complete these activities no later than December 20, 2013, and shall notify the NRC in writing when implementation of these activities is complete and can be verified by NRC inspection.
- F. All capsules in the reactor vessel that are removed and tested must meet the test procedures and reporting requirements of the most recent NRC-approved version of the Boiling Water Reactor Vessels and Internals Project (BWRVIP) Integrated Surveillance Program (ISP) appropriate for the configuration of the specimens in the capsule. Any changes to the BWRVIP ISP capsule withdrawal schedule, including spare capsules, must be approved by the NRC prior to implementation. All capsules placed in storage must be maintained for future insertion. Any changes to storage requirements must be approved by the NRC, as required by 10 CFR Part 50, Appendix H.

- H. The licensee must complete the thirteen (13) Unit 1 restart commitments that are discussed in Appendix F of the license renewal application, dated December 31, 2003, as supplemented by letters dated January 31, 2005, March 2, and April 21, 2006. Completion of these activities must be met prior to power operation of Unit 1.
- I. This renewed license is effective as of the date of issuance and shall expire midnight on December 20, 2033.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

J. E. Dyer, Director
Office of Nuclear Reactor Regulation

Attachments:

- 1. Unit 1 - Technical Specifications - Appendices A and B

Date of Issuance: May 4, 2006