

Distribution:

LWR #2 File	RHeineman
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RCDeYoung	EHughes <i>w/o Tech Specs</i>
HSmith/JLee	HBristow " " "
FWilliams	KGoller
BScott <i>w/o Tech Specs</i>	DEisenhut
IE (3)	JGill
NDube <i>w/o Tech Specs</i>	MSlater
<del>JSaltzman</del>	GKnighton
MJinks (2)	TIC
WMiller <i>w/o Tech Specs</i>	NSIC
ACRS (16)	IDinitz <i>w/o Tech Specs</i>
JStolz	RSBoyd
Local PDR	SBurwell

Docket No. 50-256

JUL 2 1976

Tennessee Valley Authority  
 ATTN: Mr. Gowin Williams, Jr.  
 Manager of Power  
 810 Power Building  
 Chattanooga, Tennessee 37401

Gentlemen:

The Nuclear Regulatory Commission has issued the enclosed facility Operating License No. DPR-68 and Technical Specifications (Appendices A and B), which authorizes the Tennessee Valley Authority to operate the Browns Ferry Nuclear Plant, Unit 3, located in Limestone County, Alabama, at steady state reactor core power levels not in excess of 3295 megawatts thermal. However, activities authorized under License No. DPR-68 are limited temporarily by restrictions contained on page 1a in the Technical Specifications (Appendix A) to fuel loading, and associated control rod motion necessary to assure fuel loading in a safe manner, until the following matters have been resolved: (1) approval by the Commission's staff of the restoration, modification, and administrative changes in the Browns Ferry Nuclear Plant, which will be adopted for Units 1, 2 and 3 as a result of the March 22, 1975 fire; the remaining staff evaluation on this matter deals with (a) the reviews of the consultant's final reports and (b) the adequacy of the fire protection training programs; (2) approval by the Commission's staff of the evaluation of (a) suppression pond hydrodynamic loads during a loss-of-coolant accident, and (b) dynamic loads associated with relief valve operation; (3) approval by the Commission's staff of evaluation of the performance of the modified residual heat removal pumps during a postulated loss-of-coolant accident; and (4) a report by the Commission's Office of Inspection and Enforcement that the following matter have been satisfactorily resolved: (a) the clogged water lines to the residual heat removal and control rod pump bearing coolers reported as a 50.55(e) item on April 22, 1976; and (b) the installation of a second isolation valve in the 1-inch demineralized water system pipe that penetrates the drywell.

A copy of a related notice, which is being forwarded to the Office of the Federal Register for publication, is enclosed for your information.

Two signed originals of Amendment No. 9 to Indemnity Agreement No. B-52, which covers the activities authorized under License No. DPR-68 are

OFFICE →						
DATE →						
TIME →						

JUL 2 1976

Tennessee Valley Authority

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enclosed for your review and acceptance. Please sign and return one copy of Amendment No. 9 to this office.

Sincerely,

~~Original~~ Signed by

John F. Stolz, Chief  
Light Water Reactors Branch No. 1  
Division of Project Management

enclosures:

1. Facility Operating License  
No. DPK-004/Technical  
Specifications (Appendices A and B)
2. Federal Register notice
3. Amendment No. 9 to Indemnity  
Agreement No. 8-52.

cc: See next page

*[Handwritten signature]*  
7/2/76

*DSKerhelt*

OFFICE >>	DPM:LWR #2	DPM:LWR #1	OELD	EP <i>[initials]</i>	AIG	<i>[initials]</i>
	HSmith/SBurwell	JStolz		GKnighton/Moore	IDinitz	DS-176
	<i>3/15/76</i> 7/2/76	<i>7/2/76</i>	7/1/76	7/2/76	7/1/76	

JUL 2 1976

Tennessee Valley Authority

- 3 -

cc: Mr. Robert H. Marquis  
General Counsel  
629 New Sprinkle Building  
Knoxville, Tennessee 37919

Mr. R. Wisenberg  
Tennessee Valley Authority  
303 Power Building  
Chattanooga, Tennessee 37401

Mrs. Maude S. Miller, Librarian  
Athens Public Library  
South and Forrest  
Athens, Alabama 35611

Mr. Bruce Blanchard  
Environmental Projects Review  
Department of the Interior  
Room 5321  
18th and C Streets, N. W.  
Washington, D. C. 20240

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

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

Mr. Dave Hopkins  
Environmental Protection Agency  
1421 Peachtree Street, N. E.  
Atlanta, Georgia 30309

Mr. William E. Garner  
Route 4, Box 334  
Scottsboro, Alabama 35768

Mr. Neil Thomasson (2)  
ATTN: Loretta Long  
Office of Radiation Programs  
Environmental Protection Agency  
Room 647A East Tower Waterside Hall  
401 M Street, S. W.  
Washington, D. C. 20460

Mr. Sheldon Myers  
Executive Director of Civil Works  
Office of Federal Activities  
Environmental Protection Agency  
Room W-541, Waterside Hall  
401 M Street, S. W.  
Washington, D. C. 20460

Colonel Howard Sargent  
Executive Director of Civil Works  
Office of the Chief of Engineers  
Corps of Engineers  
Department of the Army  
Forrestal Building, Room 4-5000  
Washington, D. C. 20314

OFFICE →						
DATE →						



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

FACILITY OPERATING LICENSE

License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission) having found that:
  - A. The application for license filed by the Tennessee Valley Authority (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 3 (facility) has been substantially completed in conformity with Construction Permit No. CPPR-48 and the application, as amended, the provisions of the Act and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance: (i) that the activities authorized by this 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;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
  - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreement," of the Commission's regulations;

- G. The issuance of this operating license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. The issuance of Facility Operating License No. DPR-68 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this 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 licensing action in a "Memorandum and Order," dated November 27, 1973, Facility Operating License No. DPR-68 is hereby issued to the Tennessee Valley Authority to read as follows:
- A. This license applies to the Browns Ferry Nuclear Plant, Unit 3, a boiling water nuclear reactor and associated equipment (the facility), owned by the Tennessee Valley Authority. 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 65) and the licensee's Draft Environmental Statement dated July 1971 and supplement thereto dated November 8, 1971, and the licensee's Final Environmental Statement dated September 1, 1972.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the Tennessee Valley Authority:
    - (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 license;
    - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time 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 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 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; and 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 attached hereto are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications.

- (3) In the operation of the facility, the licensee shall, pursuant to the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), comply with all applicable thermal water quality standards of the State of Alabama and the United States.

D. The licensee shall maintain in effect and fully implement all provisions of the Commission's Staff-approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). The approved security plan consists of a

proprietary document titled, "Browns Ferry Nuclear Plant Physical Security Plan", which was submitted with the licensee's letter dated April 23, 1974, as supplemented by information submitted with letters dated June 27, 1974 and August 27, 1974.

E. This license is subject to the following additional conditions:

- (1) The licensee shall modify the present design of the instrumentation and controls for the standby gas treatment system to satisfy the following minimum requirements prior to a return to power following the first refueling of the facility:
  - (a) Capability for manual initiation of the standby gas treatment system from the facility's control room;
  - (b) Instrumentation in the facility's control room to indicate the system operating mode and the functional operating status of each of the trains;
  - (c) Instrumentation in the facility's control room to indicate the availability of each of the trains; and
  - (d) The cable separation criteria presently applied to the Browns Ferry Nuclear Plant, Units 1, 2 and 3 shall be implemented for the design and installation of the above controls and instrumentation.
  
- (2) The licensee is required to complete the following four plant modifications in the facility, which are related to the Fire Recovery Program, by the end of the first refueling outage of any of Browns Ferry Nuclear Plant, Units 1, 2 or 3:
  - (a) Install automatic deluge systems for all areas of cable trays where Division 1 and Division 2 cabling could be involved in the same fire;
  - (b) Install automatic pre-action sprinkler systems in all areas of the plant required for safe shutdown;
  - (c) Install a manual dry pipe sprinkler system in the cable spreading rooms; and
  - (d) Change installed manual carbon dioxide system in the cable spreading rooms to automatic actuation.

F. This license is effective as of the date of issuance and shall expire at midnight, July 31, 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

~~Original~~ signed by R. C. DeYoung

Roger S. Boyd, Director  
Division of Project Management  
Office of Nuclear Reactor Regulation



Attachment:  
Appendices A & B -  
Technical Specifications

Date of Issuance: **JUL 2 1976**

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-296

TENNESSEE VALLEY AUTHORITY

(BROWNS FERRY NUCLEAR PLANT, UNIT 3)

NOTICE OF ISSUANCE OF A FACILITY OPERATING LICENSE

The Atomic Safety and Licensing Board having dismissed the proceeding relating to licensing action in a "Memorandum and Order," dated November 27, 1973, the Nuclear Regulatory Commission (the Commission) has issued Facility Operating License No. DPR-68 to the Tennessee Valley Authority (the licensee) which authorizes operation of the Browns Ferry Nuclear Plant, Unit 3 (the facility) at steady state reactor core power levels not in excess of 3293 megawatts thermal, in accordance with the provisions of the license and the Technical Specifications. The facility is a boiling water nuclear reactor located at the licensee's site in Limestone County, Alabama.

Activities authorized under License No. DPR-68 are limited temporarily by restrictions contained on page 1a in the Technical Specifications (Appendix A) to fuel loading and associated control rod motion necessary to assure fuel loading in a safe manner until the following matters have been resolved: (1) approval by the Commission's staff of the restoration, modification and administrative changes in the Browns Ferry Nuclear Plant, which will be adopted for Units 1, 2 and 3 as a result of the March 22, 1975 fire; the remaining staff evaluation on this matter deals with (a) the reviews of the consultants' final reports and (b) the adequacy

of the fire protection training; (2) approval by the Commission's staff of the evaluation of (a) suppression pool hydrodynamic loads during a loss-of-coolant accident; and (b) dynamic loads associated with relief valve operation; (3) approval by the Commission's staff of evaluation of the performance of the modified residual heat removal pumps during a postulated loss-of-coolant accident; and (4) a report by the Commission's Office of Inspection and Enforcement that the following matters have been satisfactorily resolved: (a) the reported clogged water lines to the residual heat removal and control rod pump bearing coolers; and (b) the installation of a second isolation valve in the 1-inch demineralized water system pipe that penetrates the drywell.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license. The application for the license complies with the standards and requirements of the Act and the Commission's rules and regulations.

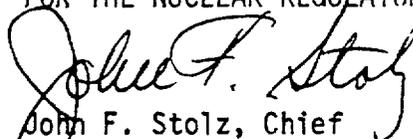
The license is effective as of its date of issuance and shall expire on July 31, 2008.

A copy of (1) the "Memorandum and Order," dated November 27, 1973; (2) Facility Operating License No. DPR-68, complete with Technical Specifications (Appendices "A" and "B"); (3) the report of the Advisory Committee on Reactor Safeguards, dated December 11, 1973; (4) the Director of Licensing's (currently known as the Office of Nuclear Reactor Regulation) Safety Evaluation and an Errata thereto dated June 26, 1972, and Supplements 1

through 8 thereto; (5) the Final Safety Analysis Report and amendments thereto; (6) the licensee's Draft Environmental Statement dated July 1971, and supplement thereto dated November 8, 1971; and (7) the licensee's Final Environmental Statement dated September 1, 1972, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W. Washington, D. C. 20555, and the Athens Public Library, South and Forrest, Athens, Alabama 35611. A copy of the license and the Safety Evaluation and Supplements 1 through 8 thereto may be obtained upon request addressed to the United States Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland this <sup>2<sup>nd</sup></sup> day of July, 1976.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Chief  
Light Water Reactors Branch No. 1  
Division of Project Management



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

Docket Nos. 50-259  
 50-260  
 50-296

AMENDMENT TO INDEMNITY AGREEMENT NO. B-52

AMENDMENT NO. 9

Effective JUL 2 1976, Indemnity Agreement No. B-52, between Tennessee Valley Authority, and the Atomic Energy Commission, dated November 8, 1971, as amended, is hereby further amended as follows:

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 3 - License number or numbers

- SNM-1268 (From 12:01 a.m., November 8, 1971, to 12 midnight, June 25, 1973, inclusive)
- SNM-1434 (From 12:01 a.m., November 19, 1973, to 12 midnight, June 27, 1974, inclusive)
- SNM-1511 (From 12:01 a.m., January 10, 1975, to 12 midnight, JUL 1 1976 inclusive)
- DPR-33 (From 12:01 a.m., June 26, 1973)
- DPR-52 (From 12:01 a.m., June 28, 1974)
- DPR-68 (From 12:01 a.m., JUL 2 1976)

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

*Jerome Saltzman*

Jerome Saltzman, Chief  
 Antitrust & Indemnity Group  
 Nuclear Reactor Regulation

Accepted \_\_\_\_\_, 1976

By \_\_\_\_\_  
 TENNESSEE VALLEY AUTHORITY

CHECKLIST FOR ISSUANCE OF FACILITY OPERATING LICENSE

11-5

\*\*\*updates the Staff's review, which supports the issuance of the Unit 3 Lic.

Applicant Tennessee Valley Authority Docket No. 50-296

Facility Browns Ferry Nuclear Plant, Unit 3

Project Manager Spots Burwell Licensing Assistant Hazel Smith

DATE

Notice of Consideration of Issuance of License:  
 Published in FEDERAL REGISTER (37 FR 19394) 9-20-72  
 Action Date 10-21-72

OR

Initial Decision or Order 11-27-73

Safety Review:  
 Safety Evaluation/Supplement 8\*\*\* 6-26-72<sup>6</sup>-76  
 ACRS Letter 12-11-73

Environmental Review:  
 Final Environmental Statement 9-1-72  
 Published in FEDERAL REGISTER (37 FR 20052) 9-23-72

Antitrust Review:  
 OAI Concurrences N/A

Notifications Required by Act & Commission Rules\*:  
 State Official 10-15-70  
 Local Official 12-11-70

Water Quality Certification: \_\_\_\_\_ Type  
 Submitted by Applicant N/A  
 Transmitted to EPA N/A

License Fee:  
 Amount: \$ 545,160.00 Paid 6-9-76

Indemnity Agreement: (attach copy to letter)  
 OAI Concurrence \_\_\_\_\_

Status of Outstanding Construction Items Checked w/IE  
 QA Program: Required to be operational\*\* 4-12-76 *not week 46/28/76*  
 In Effect \_\_\_\_\_

Inspection Final Report: (If Available) 7/2/76

Technical Specifications:  
 RI Concurrence 7/2/76  
 EP Concurrence *(staff for more pursuant to telcom)* 7/2/76

Public Announcement (to be released): (If Available  
 Attach Copy) 7/6/76

Issuance Package: ELD Concurrence  
 1. License 7/2/76  
 2. FEDERAL REGISTER Notice 5/2/76  
 3. Letter to Applicant 7/2/76  
 4. Information Report Not required  
 "JCAE" being notified by form letter

\* Date Initial Application Forwarded  
 \*\* 90 days prior to fuel loading or 30 days prior to hearing if QA item in contention