

Docket Nos. 50-259  
and 50-260

NOV 11 1975

DISTRIBUTION

Docket Files(3)  
NRC PDRs(3)  
Local PDR  
ORB#1 Reading  
TBAbernathy, TIC  
KRGoller  
JMMcGough  
TJCarter  
RAPurple  
TVWambach  
SMSheppard  
DEisenhut  
SVarga  
NDube  
PKreutzer(2)

OT&E(3)  
ACRS(16)  
OELD  
BScharf(15)  
BJones(8)  
CHEbron  
JSaltzman  
AESTeen  
PCollins

Tennessee Valley Authority  
ATTN: Mr. James E. Watson  
Manager of Power  
818 Power Building  
Chattanooga, Tennessee 37201

Gentlemen:

The Commission has issued the enclosed Amendments No. 1 3 and 1 3 to Facility Licenses No. DPR-33 and DPR-52 for the Browns Ferry Nuclear Plant, Units 1 and 2. These amendments include Changes No. 1 5 to the Technical Specifications and are in response to your request of October 10, 1975.

The amendments revise the licenses and the Technical Specifications to provide for standard provisions for special nuclear, source, and byproduct materials. When the license for Unit 3 is issued it will contain the standard provisions.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original signed by  
R. A. Purple

Robert A. Purple, Chief  
Operating Reactors Branch #1  
Division of Reactor Licensing

Enclosures:

1. Amendment No. 1 6 to DPR-33
2. Amendment No. 1 3 to DPR-52
3. Safety Evaluation
4. Federal Register Notice

cc w/enclosures:  
See next page

*const*

*[Handwritten signature]*

OFFICE →	RL:ORB#1	OELD	RL:ORB#1		
SURNAME →	TVWambach:dc		RAPurple		
DATE →	11/11/75	11/ /75	11/ /75		

NOV 11 1975

cc w/enclosures:

Robert H. Marquis  
General Counsel  
629 New Sprankle Building  
Knoxville, Tennessee 37919

Athens Public Library  
South and Forrest  
Athens, Alabama 35611

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

cc w/enclosures and incoming:

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

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

BROWNS FERRY NUCLEAR PLANT UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 13  
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 October 10, 1975, 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; and
  - 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.
2. Accordingly, Facility License No. DPR-33 is hereby amended by revising Paragraphs 2.B.(2), (3), (4), (5) and Paragraph 2.C.(2) to read as follows:

OFFICE >						
SURNAME >						
DATE >						

- "2.B.(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."

"2.C.(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 15."

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Purple, Chief  
Operating Reactors Branch #1  
Division of Reactor Licensing

Attachment:  
Change No. 15 to the Technical  
Specifications

Date of Issuance: November 11, 1975

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-260

BROWNS FERRY NUCLEAR PLANT UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

License No. DPR-52  
Amendment No. 18

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Tennessee Valley Authority (the licensee) dated October 10, 1975, 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; and
  - 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.
2. Accordingly, Facility License No. DPR-52 is hereby amended by revising Paragraphs 2.B.(2), (3), (4), (5) and Paragraph 2.C.(2) to read as follows:

OFFICE >						
SURNAME >						
DATE >						

- "2.B.(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."

"2.C.(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 15."

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Purple, Chief  
Operating Reactors Branch #1  
Division of Reactor Licensing

Attachment:  
Change No. 15 to the Technical  
Specifications

Date of Issuance: November 11, 1975

ATTACHMENT TO LICENSE AMENDMENT NO. 1 5 TO LICENSE NO. DPR-35

AND LICENSE AMENDMENT NO. 1 3 TO LICENSE NO. DPR-52

(CHANGE NO. 1 5 TO THE TECHNICAL SPECIFICATIONS)

DOCKET NOS. 50-259 AND 50-260

Revise Appendix A as follows:

Remove pages 227 and 239 and insert revised pages 227 and 239.

OFFICE →						
SURNAME →						
DATE →						

### 3.8.C Radiological Environmental Monitoring Program

#### D. Mechanical Vacuum Pump

1. The mechanical vacuum pump shall be capable of being automatically isolated and secured on a signal of high radioactivity in the steam lines whenever the main steam isolation valves are open.
2. If the limits of 3.8.D.1 are not met, the vacuum pump shall be isolated.

#### E. Miscellaneous Radioactive Materials Sources

##### 1. Source Leakage Test

Each sealed source containing radioactive material in excess of those quantities of byproduct material listed in 10 CFR 30.71 Schedule B and all other sources, including alpha emitters, in excess of 0.1 microcurie, shall be free of  $> 0.005$  microcurie of removable contamination. Each sealed source with removable contamination in excess of the above limit shall be immediately withdrawn from use and (a) either decontaminated and repaired, or (b) disposed of in accordance with Commission regulations.

### 4.8.C Radiological Environmental Monitoring Program

Scheffield, and Champion Paper Company are sampled monthly. All other supplies shown in Table 4.8.C are sampled quarterly. The samples shall be analyzed for gross beta, tritium, and at least ten specific gamma-emitting radio-nuclides.

#### D. Mechanical Vacuum Pump

At least once during each operating cycle verify automatic securing and isolation of the mechanical vacuum pump.

#### E. Miscellaneous Radioactive Materials Sources

##### 1. Surveillance Requirement

Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an agreement State, as follows:

- a. Each sealed source, except startup sources subject to core flux, containing radioactive material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months. The leakage test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample.
- b. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another user unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certification from a transferor indicating that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested.
- c. Startup sources shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux.

### 3.8.D/4.8.D Mechanical Vacuum Pump

The purpose of isolating the mechanical vacuum pump line is to limit the release of activity from the main condenser. During an accident, fission products would be transported from the reactor through the main steam lines to the condenser. The fission product radioactivity would be sensed by the main steam line radioactivity monitors which initiate isolation.

### 4.8.A and 4.8.B BASES

The surveillance requirements given under Specification 4.8.A and 4.8.B provide assurance that liquid and gaseous wastes are properly controlled and monitored during any release of radioactive materials in the liquid and gaseous effluents. These surveillance requirements provide the data for the licensee and the Commission to evaluate the station's performance relative to radioactive wastes released to the environment. Reports on the quantities of radioactive materials released in effluents shall be furnished to the Commission on the basis of Section 6 of these technical specifications. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such actions as the Commission deems appropriate.

### 3.8.E and 4.8.E BASES

Ingestion or inhalation of radioactive source material may give rise to total body or organ irradiation. This specification ensures that leakage from radioactive material sources does not exceed allowable limits. In the unlikely event that those quantities of radioactive byproduct materials of interest to this specification, which are exempt from leakage testing, are ingested or inhaled, they represent less than one maximum permissible body burden for total body or organ irradiation. The limits for all other sources, including alpha emitters, are based upon 10 CFR 70.39(c) limits for plutonium.

DATE					
SURNAME					
OFFICE					

We have reviewed the material submitted by the licensee in support of the license amendments. During our review, we have discussed with the licensee a modification to the Technical Specifications relating to leak-testing of sealed sources and have concluded that the Technical

Evaluation

The licensee's proposal would replace specific descriptions of special nuclear, source, and byproduct materials which appear in license forms DPR-33 and DPR-52 with a standard description in conformance with a format acceptable to us. We have reviewed the proposed license language and found that it provides flexible yet controlled licensing provisions necessary to assure that plant activities can be conducted without endangering the health and safety of the public. The changes simplify the language and therefore may avoid unnecessary license amendments in the future.

Discussion

By letter dated October 10, 1975, Tennessee Valley Authority (the licensee) proposed changes to the Technical Specifications and amendment to the licensed conditions for the receipt, possession, and use of special nuclear source and byproduct material at the Browns Ferry Nuclear Plant, Units 1 and 2.

Introduction

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
 SUPPORTING AMENDMENT NO. 1 6 TO FACILITY LICENSE NO. DPR-33  
 AND AMENDMENT NO. 1 8 TO FACILITY LICENSE NO. DPR-52  
 (CHANGE NO. 1 5 TO TECHNICAL SPECIFICATIONS)  
 TENNESSEE VALLEY AUTHORITY  
 BROWNS FERRY NUCLEAR POWER PLANT, UNITS 1 & 2  
 DOCKET NOS. 50-259 AND 50-260

DATE	SURNAME	OFFICE

Date: NOV 1 1975

We have concluded, based on the considerations discussed above, that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public, will not be endangered by operation in the proposed manner, and (3) 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.

Conclusion

The licensee's radiation protection program has been evaluated. We have concluded that the incorporation of flexible yet controlled licensing provisions for the receipt, possession, and use of byproduct, source, and special nuclear material into the operating license for the Browns Ferry Nuclear Plant, Units 1 and 2, is acceptable. These amendments to the licenses do not authorize an increase in the amount of special nuclear material as reactor fuel.

Specifications, as modified, are acceptable in that they provide reasonable assurance that byproduct, source, and special nuclear material will be stored, used, and accounted for in a manner which meets the applicable radiation protection provisions of 10 CFR Parts 20, 30, 40, and 70.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-259 AND 50-260

TENNESSEE VALLEY AUTHORITY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

Notice is hereby given that the U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 1 8 to Facility Operating License No. DPR-33 and Amendment No. 1 3 to Facility Operating License No. DPR-52 issued to Tennessee Valley Authority which revised Technical Specifications for operation of the Browns Ferry Nuclear Plant, Units 1 and 2, located in Limestone County, Alabama. The amendments are effective as of the date of issuance.

The amendments revise the licenses and the Technical Specifications to provide for standard provisions for special nuclear, source and byproduct materials.

The application for these amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments is not required since the amendments do not involve a significant hazards consideration.

OFFICE >						
SURNAME >						
DATE >						

For further details with respect to this action, see (1) the application for amendments dated October 10, 1975, (2) Amendment No. 14 to License No. DPR-53 and Amendment No. 13 to License No. DPR-52 with Change No. 15, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C., and at the Athens Public Library, South and Forrest, Athens, Alabama 35611.

A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this **NOV 11 1975**

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by  
R. A. Purple

Robert A. Purple, Chief  
Operating Reactors Branch #1  
Division of Reactor Licensing

OFFICE >	RL:ORB#1	OELD	RL:ORB#1			
SURNAME >	TVWambach:dc		RAPurple			
DATE >	11/10/75					