



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 3, 1995

Mr. O. D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: WATTS BAR UNIT 1 - ISSUANCE OF DRAFT FACILITY OPERATING
LICENSE NO. NPF-20 (TAC M91489)

Dear Mr. Kingsley:

By letter dated May 20, 1985, the staff provided TVA with a draft of the Watts Bar Unit 1 facility operating license, and a draft of the Environmental Protection Plan (EPP, Appendix B to the license). Since that time, numerous events have occurred, prompting the staff to revise the drafts. Enclosed for your review and comment is the revised draft of the operating license. The principal objective of this transmittal is to allow timely identification of any clarification needed regarding the requirements contained in these documents. We will issue a revised draft Appendix B after issuance of Supplement 1 to the Final Environmental Statement.

We expect that the license conditions for the full-power license will be the same as those in the draft low-power license (with the exception of the maximum power level, Section 2.C.(1)), unless changes are made before issuance of the full-power license. In addition, there is potential that new license conditions may be added as a result of closing out the Safety Evaluation Report (SER) open and confirmatory issues.

We request that you provide your comments at least one month before the projected fuel load date. If you require any clarification of this matter, please contact the Project Manager, Peter Tam at (301)415-1451.

Handwritten stamp: *Handwritten Copy*

NRC FILE CENTER COPY

9503070236 950303
PDR ADOCK 05000390
A PDR

Handwritten initials: *DF01*

O. J. Kingsley, Jr.

- 2 -

This requirement affects nine or fewer respondents and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,

Original signed by

Frederick J. Hebdon, Director
Project Directorate II-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosure: Draft Facility OL No. NPF-20

cc w/enclosures: See next page

DISTRIBUTION

Docket File	J. Jaudon	RII
PUBLIC	C. Julian	RII
WBN Rdg. File	P. Fredrickson	RII
S. Varga	G. Walton	RII
J. Zwolinski	K. Clark	RII
OGC	ACRS (4)	

DOCUMENT NAME: LICENSE.DRF

TO GET a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure
"E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PDII-4/PM <input checked="" type="checkbox"/>	PDII-4/D <input checked="" type="checkbox"/>				
NAME	BC Walton	PTam	FHebdon			
DATE	2/23/95	2/23/95	3/3/95			

OFFICIAL RECORD COPY

(DRAFT DATED MARCH 1995)

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-390

WATTS BAR NUCLEAR PLANT, UNIT 1

FACILITY OPERATING LICENSE

License No. NPF-20

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for license filed by the Tennessee Valley Authority (TVA, the licensee), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 Watts Bar Nuclear Plant, Unit 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-91 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 (except as exempted from compliance in Section 2.D below);
 - 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 Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D below);
 - E. Tennessee Valley Authority is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensee has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

DRAFT DATED MARCH 1995

- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Facility Operating License No. NPF-20, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, 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 (except that an exemption to the provisions of 70.24 is granted as described in paragraph 2.D below).
2. Based on the foregoing findings regarding this facility, Facility Operating License No. NPF-20 is hereby issued to the Tennessee Valley Authority to read as follows:
- A. This license applies to the Watts Bar Nuclear Plant, Unit 1, a pressurized water reactor and associated equipment (the facility) owned by the Tennessee Valley Authority. The facility is located on the west bank of the Chickamauga Lake on the licensee's site in Rhea County, Tennessee, and is described in TVA's Final Safety Analysis Report, as supplemented and amended up to Amendment No. ___ and in the Environmental Report, as supplemented and amended;
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) TVA, pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use, and operate the facility at the designated location in Rhea County, Tennessee, in accordance with the procedures and limitations set forth in this license;
 - (2) TVA, 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, and as described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) TVA, 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

DRAFT DATED MARCH 1995

reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

- (4) TVA, 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; and
 - (5) TVA, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproducts 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 Commission's regulations set forth in 10 CFR Chapter I 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
TVA is authorized to operate the facility at reactor core power levels not in excess of 170 megawatts (5 percent of 3411 megawatts) thermal.
 - (2) Technical Specifications and Environmental Protection Plan
The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - (3) Safety Parameter Display System (Section 18.2 of SER Supplement 5)
Prior to startup following the first refueling outage, TVA shall accomplish the necessary activities, provide acceptable responses, and implement all proposed corrective actions related to having the Watts Bar Unit 1 SPDS operational.
 - (4) Fire Protection Program (Section 9.5.1.8 of SER)
(Expect to be modified in SSER 16)

DRAFT DATED MARCH 1995

(5) Detailed Control Room Design Review (Section 18.1 of SER Supplement 6)

(Expect to be modified in SSER 16)

- D. The following exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. Therefore, these exemptions are granted pursuant to 10 CFR 50.12.
- (1) The facility requires an exemption from 10 CFR 50, Appendix J, Section III.D.2(b)(ii). The justification for this exemption is contained in Section 6.2.6 of Supplement 4 to the Safety Evaluation Report. The staff's environmental assessment was published on April 18, 1985 (50 FR 15516). Therefore, pursuant to 10 CFR 50.12(a)(1) and 50.12(a)(2)(ii) and (iii), the facility is exempt from the cited requirement and, instead, is required to perform the overall air lock leak test at pressure Pa before establishing containment integrity if air lock maintenance has been performed that could affect the air lock sealing capability.
 - (2) The facility was previously granted an exemption from the criticality monitoring requirements of 10 CFR 70.24 (see Special Nuclear Material License No. SNM-1861 dated September 5, 1979). The technical justification is contained in Section 9.1 of Supplement 5 to the Safety Evaluation Report, and the staff's environmental assessment was published on April 18, 1985 (50 FR 15516). The facility is hereby exempted from the criticality alarm system provisions of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.
 - (3) The facility was previously granted an exemption from the requirements of 10 CFR 73.55(d)(5) relating to the returning of picture badges upon exit from the protected areas, such that individuals not employed by TVA who are authorized unescorted access into protected areas can take their badges offsite (see 59 FR 66061, December 22, 1994). The granting of this exemption is hereby affirmed.
 - (4) The facility requires an exemption from 10 CFR 73.55(c)(10). The justification for this exemption is contained in Section 13.6.9 of Supplement 15 to the Safety Evaluation Report. The staff's environmental assessment was published on _____, 1995 (____ FR ____). Therefore, pursuant to 10 CFR 73.5, the facility is exempted from the stated implementation schedule of the surface vehicle bomb rule, and may implement the same as late as February 27, 1996.

DRAFT DATED MARCH 1995

- E. TVA shall fully implement and maintain in effect all provisions of the physical security, personnel training and qualification, and safeguards contingency plans previously approved by the Commission and all amendments and revisions to such plans made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled "Watts Bar Nuclear Plant Physical Security Plan," with revisions submitted through March 1, 1994; "Watts Bar Nuclear Plant Personnel Training and Qualification Plan," with revisions submitted through April 1, 1994; and "Watts Bar Nuclear Plant Safeguards Contingency Plan," with revisions submitted through October 1, 1990.
- F. TVA shall implement and maintain in effect all provisions of the approved fire protection program as described in the Fire Protection Report for the facility, as approved in Supplement 16 of the SER (NUREG-0847, Supplement 16) subject to the following provision:
- TVA 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.
- G. Except as otherwise provided in the Technical Specifications (Appendix A to this license) or Environmental Protection Plan (Appendix B to this license), TVA shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within twenty-four (24) hours to the NRC Operations Center via the Emergency Notification System with written follow-up within 30 days in accordance with the procedures described in 10 CFR 50.73(b), (c), and (e).
- H. The licensee shall have and maintain financial protection of such types and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

DRAFT DATED MARCH 1995

- I. This license is effective as of the date of issuance and shall expire at midnight on (40 years from date of issuance) .

FOR THE NUCLEAR REGULATORY COMMISSION

William T. Russell, Director
Office of Nuclear Reactor Regulation

- Enclosures: 1. Appendix A -
 Technical Specifications
 2. Appendix B -
 Environmental Protection Plan

Date of Issuance:

Mr. Oliver D. Kingsley, Jr.
Tennessee Valley Authority

cc:

Dr. Mark O. Medford, Vice President
Engineering & Technical Services
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. D. E. Nunn, Vice President
New Plant Completion
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Mr. J. A. Scalice, Site Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

General Counsel
Tennessee Valley Authority
ET 11H
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. P. P. Carrier, Manager
Corporate Licensing
Tennessee Valley Authority
4G Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. B. S. Schofield
Site Licensing Manager
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, TN 37381

TVA Representative
Tennessee Valley Authority
11921 Rockville Pike
Suite 402
Rockville, MD 20852

WATTS BAR NUCLEAR PLANT

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 2900
Atlanta, GA 30323

Senior Resident Inspector
Watts Bar Nuclear Plant
U.S. Nuclear Regulatory Commission
Route 2, Box 700
Spring City, TN 37381

The Honorable Robert Aikman
County Executive
Rhea County Courthouse
Dayton, TN 37321

The Honorable Garland Lanksford
County Executive
Meigs County Courthouse
Decatur, TN 37322

Mr. Michael H. Mobley, Director
Division of Radiological Health
3rd Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

Ms. Danielle Droitsch
Energy Project
The Foundation for
Global Sustainability
P.O. Box 1101
Knoxville, TN 37901

Mr. Bill Harris
Route 1, Box 26
Ten Mile, TN 37880

Ms. Beth Zilbert, Energy Campaigner
Greenpeace
20 13th Street, NE.
Atlanta, GA 30309