

January 22, 2002

Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 - ISSUANCE OF AMENDMENT TO
INCORPORATE PART OF TSTF-51, REVISION 2, INTO THE TECHNICAL
SPECIFICATIONS TO ELIMINATE CERTAIN ESF OPERABILITY
REQUIREMENTS DURING CORE ALTERATIONS (TAC NO. MB2005)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment No. 35 to Facility Operating License No. NPF-90 for Watts Bar Nuclear Plant, Unit 1. This amendment responds to your application of May 14, 2001. These changes incorporate part of TSTF-51, Revision 2 into the Watts Bar technical specifications (TS). TSTF-51 allows revising the TS to eliminate engineered safety features operability requirements that do not involve the movement of irradiated fuel during core alterations.

A copy of the safety evaluation is also enclosed. Notice of issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

L. Mark Padovan, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosures: 1. Amendment No. 35 to NPF-90
2. Safety Evaluation

cc w/enclosures: See next page

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DATE	1/09/02		1/04/02		12/13/01		1/14/02		1/22/02	

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-390

WATTS BAR NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 35
License No. NPF-90

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated May 14, 2001, 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. NPF-90 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 35, 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. This license amendment is effective as of the date of its issuance, and shall be implemented prior to entering Mode 6 for the Cycle 4 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Project Licensing Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 22, 2002

ATTACHMENT TO AMENDMENT NO. 35

FACILITY OPERATING LICENSE NO. NPF-90

DOCKET NO. 50-390

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove Pages

Insert Pages

3.3-52	3.3-52
3.3-54	3.3-54
3.3-58	3.3-58
3.7-22	3.7-22
3.7-23	3.7-23
3.7-25	3.7-25
3.7-26	3.7-26
3.9-6	3.9-6
3.9-12	3.9-12
3.9-14	3.9-14
B 3.3-157	B 3.3-157
B 3.3-159	B 3.3-159
B 3.3-164	B 3.3-164
B 3.3-167	B 3.3-167
B 3.7-53	B 3.7-53
B 3.7-54	B 3.7-54
B 3.7-55	B 3.7-55
B 3.7-60	B 3.7-60
B 3.9-12	B 3.9-12
B 3.9-13	B 3.9-13
B 3.9-14	B 3.9-14
B 3.9-15	B 3.9-15
B 3.9-25	B 3.9-25
B 3.9-26	B 3.9-26
B 3.9-27	B 3.9-27
— —	B 3.9-28
B 3.9-31	B 3.9-31

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 35 TO FACILITY OPERATING LICENSE NO. NPF-90
TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT, UNIT 1
DOCKET NO. 50-390

1.0 INTRODUCTION

Tennessee Valley Authority's (TVA's or the licensee's) letter of May 14, 2001, requested changes to the Watts Bar, Unit 1, Technical Specifications (TS). The requested changes would eliminate TS requirements for engineered safety features (ESFs) during core alterations, other than irradiated fuel movement. The affected TS Limiting Conditions for Operations (LCOs) are as follows:

- 3.3.6, Containment Vent Isolation Instrumentation
- 3.3.7, Control Room Emergency Ventilation System Actuation Instrumentation
- 3.7.10, Control Room Emergency Ventilation System
- 3.7.11, Control Room Emergency Air Temperature Control System
- 3.9.4, Containment Penetrations
- 3.9.7, Refueling Cavity Water Level
- 3.9.8, Reactor Building Purge Air Cleanup Units.

The corresponding sections of the TS Bases are also affected. TVA used NRC-approved Technical Specification Task Force (TSTF)-51, Revision 2, as the model for its requested changes.

The purpose of this amendment request is to improve the performance of activities during refueling outages. Keeping containment penetrations open for equipment and personnel access during outages greatly contributes to improving performance. With the current TS requirements, TVA has to close the equipment hatch to complete core alterations and fuel handling activities. Doing this interrupts several outage tasks.

Enclosure

The current Watts Bar TS require the previously mentioned ESFs to be operable in order to mitigate the consequences of the following:

- fuel handling accidents
- inadvertent criticality due to either control rod removal error or continuous rod withdrawal error during refueling
- inadvertent loading of, and subsequent operation with, a fuel assembly in an improper location

These ESFs are currently required to be operable during CORE ALTERATIONS, including the movement of irradiated fuel in the vessel and during movement of irradiated fuel within the containment.

The Watts Bar TS define CORE ALTERATIONS as follows:

CORE ALTERATION shall be the movement of any fuel, sources, or other reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

In approving TSTF-51, the staff agreed that only movement of irradiated fuel had the potential to cause an event that ESF systems would have to mitigate. TSTF-51 allows further reductions in ESF system operability requirements during irradiated fuel movement if the licensee performs an additional analysis. The analysis must demonstrate that following sufficient fission product decay, the primary success path for mitigating the fuel-handling accident no longer depends on the ESF systems. TVA is not using a decay heat analysis to justify moving irradiated fuel when the ESF functions are inoperable, but is pursuing eliminating ESF TS requirements during core alterations that do not involve moving irradiated fuel. Eliminating the Watts Bar ESF requirements from the TS is consistent with approved TS Amendments 260 and 251, dated August 28, 2000, for TVA's Sequoyah Nuclear Plant, Units 1 and 2, respectively.

2.0 EVALUATION

2.1 Description of Changes

The TS are being revised to eliminate the requirements for ESF operability during core alterations that do not involve moving irradiated fuel.

2.2 Justification

Postulated events occurring during core alterations that do not involve irradiated fuel movement do not result in fuel cladding integrity damage. Thus, the previously identified ESF systems are not needed to mitigate accidents during these particular core alterations. Therefore, we conclude that TS requirements for these ESF systems are unnecessary during core alterations that do not involve moving irradiated fuel.

The dominant change to the above listed TS LCOs is to eliminate the requirement to suspend CORE ALTERATIONS when the ESF functions are inoperable. The TS will still maintain the requirement to suspend the movement of irradiated fuel when these ESF functions are inoperable. Suspending movement of irradiated fuel eliminates the prerequisite for the fuel handling accident.

2.3 Amended Technical Specifications

LCO 3.3.6 Containment Vent Isolation Instrumentation, LCO 3.9.4 Containment Penetrations, LCO 3.9.7 Refueling Cavity Water Level, and LCO 3.9.8 Reactor Building Purge Air Cleanup Units

The proposed TS amendment eliminates the terms “during CORE ALTERATIONS” and/or “suspend CORE ALTERATIONS” in these LCOs. This TS amendment would restrict the operability requirement for these systems to the movement of irradiated fuel assemblies within the containment. This operability restriction envelopes the situations that would require these systems to be operable in order to mitigate the consequences of a fuel handling accident. The proposed TS amendment narrows the coverage of the TS to those situations during core alterations where the potential for fuel cladding damage exists. Since the proposed revisions to the TS do not result in changes to the design basis, we conclude that these revisions are acceptable.

LCO 3.3.7 Control Room Emergency Ventilation System Actuation Instrumentation, LCO 3.7.10 Control Room Emergency Ventilation Systems, and LCO 3.7.11 Control Room Emergency Air Temperature Control System

The proposed TS amendment eliminates the terms “during CORE ALTERATIONS” and/or “suspend CORE ALTERATIONS” in these LCOs. This TS amendment would restrict the operability requirements for these systems to the movement of irradiated fuel assemblies. This operability restriction envelopes the situations that would require these systems to be operable in order to mitigate the consequences of a fuel-handling accident. The proposed TS amendment narrows the coverage of the TS to those situations during core alterations where the potential for fuel cladding damage exists. Since the proposed revisions to the TS do not result in changes to the design basis, we conclude that these revisions are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding

that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (66 FR 38768). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: P. Hearn, NRR

Date: January 22, 2002

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WATTS BAR NUCLEAR PLANT

cc:

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