



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

February 2, 2010

Mr. Preston D. Swafford
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
3R Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENT REGARDING ADOPTION OF TSTF-511, REVISION 0,
"ELIMINATE WORKING HOUR RESTRICTIONS FROM TS 5.2.2 TO SUPPORT
COMPLIANCE WITH 10 CFR PART 26" (TAC NOS. ME2439 AND ME2440)

Dear Mr. Swafford:

The U.S. Nuclear Regulatory Commission (NRC or Commission) has issued the enclosed Amendment No. 327 to Facility Operating License No. DPR-77 and Amendment No. 320 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated October 20, 2009.

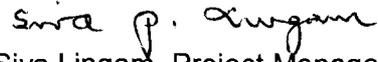
The amendments revise TS 6.2.2, "Facility Staff," to eliminate working hour restrictions in paragraph g to support compliance with the revisions to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 26, "Fitness for Duty Programs." The changes are consistent with guidance contained in the NRC-approved Technical Specifications Task Force (TSTF) change traveler, TSTF-511, Revision 0, "Eliminate Working Hour Restrictions from TS 5.2.2 to Support Compliance with 10 CFR Part 26." The availability of this improvement was announced in the *Federal Register* on December 30, 2008 (73 FR 79923), as part of the consolidated line item improvement process.

P. Swafford

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A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,



Siva Lingam, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosures: 1. Amendment No. 327 to
License No. DPR-77
2. Amendment No. 320 to
License No. DPR-79
3. Safety Evaluation

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 327
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated October 20, 2009, 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 Title 10 of the *Code of Federal Regulations* (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.

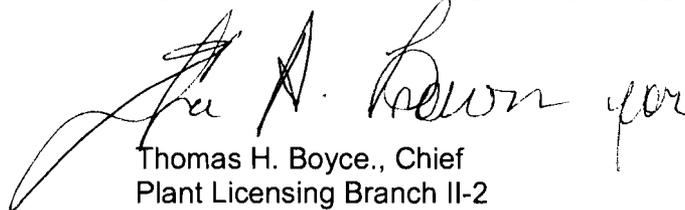
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 327 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance, to be implemented no later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "T. H. Boyce", is written over the typed name and title.

Thomas H. Boyce., Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Operating License
and Technical Specifications

Date of Issuance: February 2, 2010

ATTACHMENT TO LICENSE AMENDMENT NO. 327

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace Page 3 of Operating License DPR-77 with the attached page.

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

6-2

INSERT

6-2

- (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, instrument calibration or associated with radioactive apparatus or components; and
 - (5) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Sequoyah and Watts Bar Unit 1 Nuclear Plants.
- 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

The Tennessee Valley Authority is authorized to operate the facility at reactor core power levels not in excess of 3455 megawatts thermal.
 - (2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 327 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.
 - (3) Initial Test Program

The Tennessee Valley Authority shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Tennessee Valley Authority's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

 - a. Elimination of any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;
 - b. Modification of test objectives, methods or acceptance criteria for any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;
 - c. Performance of any test at power level different from there described; and

ADMINISTRATIVE CONTROLS

- c. A Radiological Control technician# shall be onsite when fuel is in the reactor.
- d. DELETED
- e. DELETED
- f. The Operations Superintendent shall hold a Senior Reactor Operator license.
- g. DELETED

- h. An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

#The Radiological Control technician may be offsite for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.



UNITED STATES
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WASHINGTON, D.C. 20555-0001

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 320
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated October 20, 2009, 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 Title 10 of the *Code of Federal Regulations* (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.

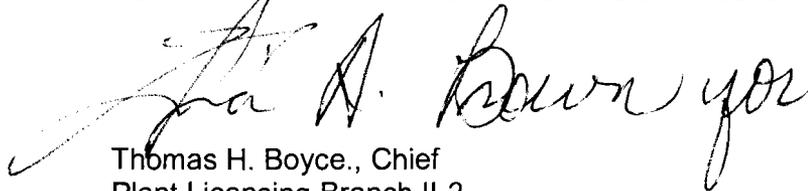
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 320 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance, to be implemented no later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Tom H. Boyce", is written over the typed name and title.

Thomas H. Boyce., Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Operating License
and Technical Specifications

Date of Issuance: February 2, 2010

ATTACHMENT TO LICENSE AMENDMENT NO. 320

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace Page 3 of Operating License DPR-79 with the attached page.

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

6-2

INSERT

6-2

- (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; and
 - (5) Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the Sequoyah and Watts Bar Unit 1 Nuclear Plants.
- 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

The Tennessee Valley Authority is authorized to operate the facility at reactor core power levels not in excess of 3455 megawatts thermal.
 - (2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 320 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.
 - (3) Initial Test Program

The Tennessee Valley Authority shall conduct the post-fuel-loading initial test program (set forth in Section 14 of Tennessee Valley Authority's Final Safety Analysis Report, as amended), without making any major modifications of this program unless modifications have been identified and have received prior NRC approval. Major modifications are defined as:

 - a. Elimination of any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;
 - b. Modification of test objectives, methods or acceptance criteria for any test identified in Section 14 of TVA's Final Safety Analysis Report as amended as being essential;
 - c. Performance of any test at power level different from there described; and

ADMINISTRATIVE CONTROLS

- c. A Radiological Control technician# shall be onsite when fuel is in the reactor.
- d. DELETED
- e. DELETED
- f. The Operations Superintendent shall hold a Senior Reactor Operator license.
- g. DELETED

- h. An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

#The Radiological Control technician may be offsite for a period of time not to exceed 2 hours in order to accommodate unexpected absence provided immediate action is taken to fill the required positions.



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 327 TO FACILITY OPERATING LICENSE NO. DPR-77
AND AMENDMENT NO. 320 TO FACILITY OPERATING LICENSE NO. DPR-79
TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

By application dated October 20, 2009 (Agencywide Documents Access and Management System Accession No. ML092950340), Tennessee Valley Authority (TVA, the licensee) requested changes to the Technical Specifications (TSs) for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. The proposed changes would delete paragraph g of TS 6.2.2, "Facility Staff," to eliminate working hour restrictions in the TSs, as similar requirements are sufficiently imposed by Title 10 of the *Code of Federal Regulations* (10 CFR), Part 26, Subpart I.

The licensee stated that the application is consistent with the U.S. Nuclear Regulatory Commission (NRC, Commission)-approved Technical Specifications Task Force (TSTF) change traveler, TSTF-511, Revision 0, "Eliminate Working Hour Restrictions from TS 5.2.2 to Support Compliance with 10 CFR Part 26." The availability of this TS improvement was announced in the *Federal Register* on December 30, 2008 (73 FR 79923), as part of the consolidated line item improvement process.

2.0 REGULATORY EVALUATION

The history of NRC regulations pertaining to prevention of worker impairment is summarized in the *Federal Register* notice containing the final rule that amended 10 CFR Part 26 (73 FR 16966, March 31, 2008). Subpart I, "Managing Fatigue," of 10 CFR Part 26 provides the regulatory requirements for managing worker fatigue at nuclear power plants.

The NRC regulatory requirements related to the content of the TSs are contained in 10 CFR Part 50, Section 50.36, "Technical specifications." The regulations in 10 CFR 50.36 require that the TSs include items in the following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. The administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.

The NRC guidance for the format and content of the licensee TSs can be found in NUREG-1431, Revision 3, "Standard Technical Specifications – Westinghouse Plants," referred to as Standard Technical Specifications (STSs). Section 5 of STSs contains administrative controls. Paragraph d of Section 5.2.2 of STSs contains requirements for administrative procedures to limit the working hours of personnel who perform safety-related functions. This paragraph represents NRC guidance on how licensees TS requirements should address work-hour controls. Licensees adhere to the guidance to varying degrees due to minor administrative differences and differences in each licensee's current licensing basis. The inconsistent level of adherence to NRC guidance has led to inconsistent TS interpretation and implementation. This has also made it difficult for NRC to enforce the requirements.

The new requirements of 10 CFR Part 26, Subpart I supersede TS requirements for limiting the working hours of personnel as described in paragraph d of Section 5.2.2 of STSs. Subpart I of 10 CFR Part 26 distinguishes between work-hour controls and fatigue management and strengthens the requirements for both. Subpart I of 10 CFR Part 26 requires nuclear power plant licensees to ensure against worker fatigue adversely affecting public health and safety and the common defense and security by establishing clear and enforceable requirements for the management of worker fatigue. Licensees are required to implement Subpart I of 10 CFR Part 26 by October 1, 2009, as announced in the final rule that revised 10 CFR Part 26 (73 FR 16966, March 31, 2008). TSTF-511, Revision 0, proposed a change to STSs that would delete paragraph d of STS 5.2.2. This change was approved in the *Federal Register* notice on December 30, 2008 (73 FR 79923).

2.1 Adoption of TSTF-511, Revision 0, by SQN, Units 1 and 2

Proper adoption of TSTF-511 and implementation of 10 CFR Part 26, Subpart I by TVA will provide reasonable assurance that TVA will maintain limits on the working hours of personnel who perform safety-related functions at SQN, Unit 1 and 2. TVA stated the following:

TVA implemented 10 CFR Part 26 requirements for working hour restrictions on October 1, 2009. The 10 CFR Part 26 requirements are more restrictive than the current TS requirements and as such does not require a commitment. TVA will implement the proposed TS changes within 30 days after approval is received. This does represent a deviation from the consolidated line item improvement process (CLIIP). However, this will have no impact on the NRC staff's model safety evaluation (SE) published on December 30, 2008 (73 FR 79923).

3.0 TECHNICAL EVALUATION

Controls on work hours for personnel at nuclear power plants are necessary to prevent worker fatigue from adversely affecting public health and safety and the common defense and security. Work-hour controls for SQN, Units 1 and 2 are currently located in paragraph g of TS 6.2.2. When the TS change is implemented, the regulatory requirements of 10 CFR 26, Subpart I will effectively replace the plant-specific TS requirements currently found in SQN, Units 1 and 2 TS 6.2.2, paragraph g.

The licensee proposed deleting paragraph g of TS 6.2.2. Since the new requirements of 10 CFR Part 26, Subpart I took effect on October 1, 2009, TVA must follow its requirements on work-hour controls.

The NRC staff evaluated the licensee's proposed change against the applicable regulatory requirements listed in Section 2.0 of this safety evaluation. The NRC staff also compared the proposed change to the change made to STSs by TSTF-511, Revision 0. There is reasonable assurance that the licensee will comply with the regulations for work-hour controls through the requirements of 10 CFR Part 26, Subpart I, at all times at SQN Units 1 and 2. TVA must comply with both the SQN Units 1 and 2 TSs and the regulations in 10 CFR Part 26, until the TS change is implemented. Therefore, the licensee will continue to prevent worker fatigue from adversely affecting public health and safety and the common defense and security. Therefore, the NRC staff concludes that the proposed change is acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change recordkeeping, reporting, or administrative procedures. 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 (74 FR 62837, December 1, 2009). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: V. Cusumano

Date: February 2, 2010

P. Swafford

- 2 -

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Siva Lingam, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

- Enclosures:
1. Amendment No. 327 to License No. DPR-77
 2. Amendment No. 320 to License No. DPR-79
 3. Safety Evaluation

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NRR-058

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NAME	JLamb	SLingam	CSola	RElliott	EWilliamson	EBrown for TBoyce
DATE	11/23/09	11/23/09	12/22/09	12/23/09	-----	02/02/10

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