September 5, 2002

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

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS REGARDING RELOCATION OF ICE CONDENSER ICE BED TEMPERATURE MONITORING AND INLET DOOR POSITION MONITORING SYSTEM TECHNICAL SPECIFICATIONS TO THE TECHNICAL REQUIREMENTS MANUAL (TAC NOS. MB4652 AND MB4653) (TSC 00-04)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment No. 277 to Facility Operating License No. DPR-77 and Amendment No. 268 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant (SQN), Units 1 and 2, respectively. These amendments are in response to your application dated March 4, 2002. The amendments relocate ice condenser ice bed temperature monitoring and inlet door position monitoring systems from the SQN Technical Specifications to the Technical Requirements Manual consistent with Title 10, Part 50, Section 50.36 of the *Code of Federal Regulations*.

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

Sincerely,

/RA/
Ronald W. Hernan, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosures: 1. Amendment No. 277
to License No. DPR-77
2. Amendment No. 268
to License No. DPR-79
3. Safety Evaluation

cc w/enclosures: See next page

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 277
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 March 4, 2002, 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. 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. 277, 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, and shall be implemented within 45 days of issuance. The implementation of this amendment shall include the relocation of certain technical specification requirements to the Sequoyah Nuclear Plant, Unit 1, Technical Requirements Manual as described in the licensee's application dated March 4, 2002, and evaluated in the staff's Safety Evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Kahtan N. Jabbour, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: September 5, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 277

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

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 area of change.

REMOVE	INSERT
Index Page VIII	Index Page VIII
3/4 6-26	3/4 6-26
3/4 6-28	3/4 6-28
3/4 6-29	3/4 6-29
3/4 6-31	3/4 6-31
B 3/4 6-5a	B 3/4 6-5a
B 3/4 6-5b	B 3/4 6-5b

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 268
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 March 4, 2002, 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. 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. 268, 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, and shall be implemented within 45 days of issuance. The implementation of this amendment shall include the relocation of certain technical specification requirements to the Sequoyah Nuclear Plant, Unit 2j Technical Requirements Manual as described in the licensee's application dated March 4, 2002, and evaluated in the staff's Safety Evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Kahtan N. Jabbour, Acting Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: September 5, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 268

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain a vertical line(s) indicating the area of change.

REMOVE	INSERT
Index Page VIII	Index Page VIII
3/4 6-27	3/4 6-27
3/4 6-29	3/4 6-29
3/4 6-30	3/4 6-30
3/4 6-32	3/4 6-32
B 3/4 6-5a	B 3/4 6-5a

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 277 TO FACILITY OPERATING LICENSE NO. DPR-77

AND AMENDMENT NO. 268 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 March 4, 2002, the Tennessee Valley Authority (TVA) proposed to the U.S. Nuclear Regulatory Commission (NRC), an amendment to the Technical Specifications (TSs) for Sequoyah Nuclear Plant (SQN), Units 1 and 2. The requested changes would relocate SQN ice condenser ice bed temperature monitoring and inlet door position monitoring systems TS requirements to the Technical Requirements Manual (TRM) consistent with Title 10, Part 50, Section 50.36 of the *Code of Federal Regulations* (10 CFR 50.36).

2.0 BACKGROUND

The proposed revision to the SQN TSs for Units 1 and 2 will relocate Limiting Conditions for Operation (LCOs) and associated Action and Surveillance Requirements (SRs) that are not required to be contained in the TSs in accordance with 10 CFR 50.36(c)(2)(ii). These specifications include TS 3/4.6.5.2 for ice bed temperature monitoring system and TS 3/4.6.5.4 for inlet door position monitoring system. These specifications would be relocated in their entirety to the TRM without change to the requirements currently contained within TSs. The Bases associated with these specifications would also be relocated to the TRM to support the proposed revision. As part of the relocation, Surveillance Requirements (SRs) 4.6.5.1.a and 4.6.5.3.1.a would be modified to remove references to the ice bed temperature monitoring system and the inlet door position monitoring system, respectively. Necessary changes to the index pages and the Bases pages would be included to denote the deletion of these specifications from the TSs.

The relocation of the above specifications and Bases will place them in the TRM, which is a 10 CFR 50.59 controlled document that provides an appropriate level of review and approval for the revision of requirements that are important to safety, but do not satisfy the criteria of 10 CFR 50.36(c)(2)(ii) for TS requirements. Changes to the TRM requirements are subject to the requirements of 10 CFR 50.59 because TVA has incorporated the TRM into the SQN Updated Final Safety Analysis Report (UFSAR). The proposed revision will maintain an appropriate level of control of the relocated requirements and an improved level of consistency with NUREG-1431, “Standard Technical Specifications, Westinghouse Plants,” Revision 2 (STS). The ice condenser is a passive system requiring only maintenance of the ice inventory

in the ice bed. As such there are no actuation circuits or actuator-driven equipment which are required for the ice condenser to operate in the event of a design-basis accident (DBA), such as a loss-of-coolant accident (LOCA) or main steamline break (MSLB) inside containment.

3.0 EVALUATION

The ice bed monitoring system consists of resistance-temperature detectors located in various parts of the ice condenser that serve only to monitor the ice bed temperature. Since the ice bed has a very large thermal capacity, postulated off-normal conditions can be successfully tolerated for an extended period of time. Therefore, the ice bed temperature monitoring system provides an early warning of any incipient ice condenser temperature anomalies. The ice bed monitoring system is not assumed to be "OPERABLE" to mitigate the consequences of a DBA or transient. This system is normally used to perform the ice bed temperature verification of SR 4.6.5.1.a at least once per 12 hours.

The inlet door position monitoring system consists of door frame mounted limit switches that serve to only monitor door position. The inlet doors form the barrier to air flow through the inlet ports of the ice condenser for normal unit operation, preventing inleakage of warm air that could cause excessive sublimation of the ice. Proper operation of the inlet doors is necessary to mitigate the consequences of a DBA. The inlet door position monitoring system, however, is not required for proper operation of the inlet doors, nor is it considered "OPERABLE" as an initial condition for a DBA. This system is normally used to perform the inlet door continuous position verification of SR 4.6.5.3.1.a.

Therefore, the proposed relocation of the ice bed temperature monitoring system and inlet door position monitoring system specifications only places the current requirements into an acceptable alternative document that maintains the same requirements. The primary difference is that any revision of these specifications would be controlled in accordance with the NRC requirements in 10 CFR 50.59, which is acceptable for requirements that do not meet the criteria of 10 CFR 50.36(c)(2)(ii). The 10 CFR 50.59 requirements ensure that changes to these provisions will be reviewed and approved by the NRC, as appropriate, prior to implementation. As part of the relocation, SRs 4.6.5.1.a and 4.6.5.3.1.a would be modified to remove references to the ice bed temperature monitoring system and the inlet door position monitoring system.

The following evaluation addresses the application of the 10 CFR 50.36(c)(2)(ii) criteria to the ice bed temperature monitoring system and the inlet door position monitoring system:

1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

   The ice bed temperature monitoring system monitors the temperature of the ice condenser ice bed. The inlet door position monitoring system monitors the position of the ice condenser ice bed inlet doors during normal operation. The doors are kept closed to limit the loading on the ice bed refrigeration system.

   The ice bed temperature monitoring system and the inlet door position monitoring system are not installed instrumentation that is used to detect, and indicate in the control room, a

significant abnormal degradation of the reactor coolant pressure boundary; therefore, they do not satisfy Criterion 1.

2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

   The ice bed temperature monitoring system and the inlet door position monitoring system are not process variables that are initial conditions of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the ice bed temperature monitoring system and the inlet door position monitoring system do not satisfy Criterion 2.

3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission produce barrier.

   The ice bed temperature monitoring system and the inlet door position monitoring system are not systems that are part of the primary success path and which function or actuate to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Therefore, the ice bed temperature monitoring system and the inlet door position monitoring system do not satisfy Criterion 3.

4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

   Review of the ice bed temperature monitoring system and the inlet door position monitoring system has determined that these systems are not significant contributors to the health and safety of the public. The ice bed temperature and inlet door positions are provided to allow monitoring of the status of the ice bed and the ice condenser cooling system during normal operation. The information provided is not used by operators during the design basis transients, or any severe accidents. Therefore, the ice bed temperature monitoring system and the inlet door position monitoring system are not risk significant and do not satisfy Criterion 4.

The proposed change to remove the ice bed temperature monitoring system reference from SR 4.6.5.1.a is consistent with corresponding STS SR 3.6.15.1. However, the inlet door position monitoring system is referenced in STS SR 3.6.16.1. The proposed change to remove this reference from equivalent SR 4.6.5.3.1.a is consistent with the format of NUREG-1431, SR 3.6.15.1, which does not reference the ice bed temperature monitoring system, and other NUREG-1431 formats. The proposed deletion of the reference to the ice condenser door position monitoring system from this SR does not reduce the existing TS requirements on the ice bed inlet doors and does not affect nuclear safety. Therefore, this change, which is a deviation from the STS, 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 amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component within the restricted area as defined in 10 CFR Part 20. 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 (67 FR 18648). Accordingly, the amendments meet 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 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Ronald W. Hernan, NRR

Date: September 5, 2002

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