January 13, 1998

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

SUBJECT: ISSUANCE OF TECHNICAL SPECIFICATION AMENDMENT FOR THE SEQUOYAH NUCLEAR PLANT, UNIT 1 (TAC NO. MA0148)(TS 97-05)

Dear Mr. Zeringue:

The Commission has issued the enclosed Amendment No. 230 to Facility Operating License No. DPR-77 for the Sequoyah Nuclear Plant, Unit 1. This amendment is in response to your application dated November 21, 1997.

The amendment revises Technical Specification Surveillance Requirement (SR) 4.4.3.2.1.b for the remainder of Cycle 9 to perform stroke testing of the power-operated relief valves in Mode 5 rather than in Mode 4. The staff has reviewed the submittal for these changes and, based on our review, we find the proposed changes acceptable.

A copy of the staff's Safety Evaluation regarding this request is also enclosed. Notice of Issuance of the amendments will be included in the Commission's biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:

Ronald W. Hernan, Senior Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-327

Enclosures: 1. Amendment No. 230 to License No. DPR-77

2. Safety Evaluation

cc w/enclosures: See next page

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

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SEQUOYAH NUCLEAR PLANT

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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. 230
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 November 21, 1997, 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. 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. 230 , 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 45 days of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Frederick J. Hebdon

Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: 1. Changes to the Technical Specifications

Date of Issuance: January 13, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 230

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Revise the Appendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE	INSERT
3/4 4-4a	3/4 4-4a

RELIEF VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3.2 Two power relief valves (PORVs) and their associated block valves shall be OPERABLE. R16

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one or more PORV(s) inoperable, but capable of RCS pressure control, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. R115 R161

b. With one PORV inoperable and incapable of RCS pressure control, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours. R115 R161

c. With both PORVs inoperable and incapable of RCS pressure control, within 1 hour either restore each of the PORVs to OPERABLE status or close their associated block valves and remove power from the block valves and be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours. R115 R161

d. With one or more block valve(s) inoperable, within 1 hour: (1) restore the block valve(s) to OPERABLE status, or close the block valve(s) and remove power from the block valve(s), or close the PORV(s) and remove power from its associated solenoid valve(s); and (2) apply the ACTION b. or c. above, as appropriate, for the isolated PORV(s). R115

e. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by:

a. Performance of a CHANNEL CALIBRATION, and

b. Operating the valve through one complete cycle of full travel during mode 4.* R161

4.4.3.2.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel.

* For Unit 1 Cycle 9 operation only, this surveillance may be met by testing in Mode 5 with the pressurizer in saturated condition and temperature greater than or equal to 420 degrees Fahrenheit. Any entry into Mode 4 during Unit 1 Cycle 9 operation will require performance of this surveillance in this mode.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 230 TO FACILITY OPERATING LICENSE NO. DPR-77

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-327

1.0 INTRODUCTION

In a submittal dated November 21, 1997, the Tennessee Valley Authority (TVA), the licensee for Sequoyah Nuclear Plant (SQN), Unit 1, proposed to change Section 4.4.3.2.1 of the SQN Unit 1 Technical Specifications (TS) for the remainder of Cycle 9 to perform stroke testing of the power-operated relief valves (PORVs) in Mode 5 rather than in Mode 4. This change would be in effect for approximately 8 months (from January 1998 to September 1998), when SQN Unit 1 commences the next scheduled refueling outage. Any entry into Mode 4 for other reasons during Unit 1 Cycle 9 of operation would require performance of this surveillance testing.

2.0 EVALUATION

TS Surveillance Requirement (SR) 4.4.3.2.1.b requires each PORV to be demonstrated operable at least once per 18 months by operating the valve through one complete cycle of full travel during Mode 4. This change was submitted because the last operability verification (stroke test) was incorrectly performed with the plant in Mode 5 (reactor coolant system temperature less than 200°F) rather than in Mode 4 (temperature between 200°F and 350°F) as required by TS 4.4.3.2.1.b. This error was not discovered until early November 1997. As stated in the licensee's application, the cause of the error was the result of less than adequate change management during implementation of the TS. This SR was placed in the same procedure as a similar stroke test required by the ASME Code Pump and Valve Inservice Testing Program. However, the ASME test is required to be performed in Mode 5 (less than 200°F) for personnel safety considerations.

During the SQN Unit 1 refueling outage in March-May 1997, the PORVs were full-stroke tested with the reactor coolant system less than 200°F but with a bubble in the pressurizer for pressure control. The PORVs relieve pressure from, and are connected to, the top of the pressurizer. The pressurizer water/steam mixture was at saturated conditions at about 420°F and 309 psia for the test. These conditions are very similar to pressurizer conditions that have been performed in the past with the reactor coolant system within the Mode 4 temperature range. Historically this test is performed at the low end of the Mode 4 temperature range. The key parameters for this test is pressurizer pressure and temperature, not reactor coolant temperature. Therefore, the tests performed on May 2, 1997 on Unit 1 PORVs (in Mode 5) were technically equivalent to tests that would have been performed with the unit in Mode 4. Therefore, this request no significant safety implications.

The Unit 1 PORVs were tested on March 2, 1996, with the plant in Mode 4 (i.e., in full compliance with the TS requirements). Those tests remain valid until January 18, 1998. If TS relief is not granted and implemented by that date, TS 3.4.3.2.a requires operation with the PORV block valves closed until a valid TS test is performed. The licensee's request states that operation with the PORV block valves closed is inappropriate since the safety benefit of the PORVs would be circumvented. Shutting down the unit solely for the purpose of performing this testing has a finite risk, would put an unnecessary thermal cycle on the plant, and would have no recognizable safety value.

3.0 CONCLUSION

Based on the above evaluation, the NRC staff finds the licensee's proposed temporary change to TS SR 4.4.3.2.1.b to be 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 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 (62 FR 63565 dated December 1, 1997). 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

Dated: January 13, 1998