

April 14, 2000

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

RECEIVED

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENTS REGARDING ELECTRICAL POWER SYSTEM LIMITING
CONDITIONS FOR OPERATION (TAC NOS. MA4898 AND MA4899)

Dear Mr. Scalice:

The Commission has issued the enclosed Amendment No. 255 to Facility Operating License No. DPR-77 and Amendment No. 246 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 license amendment application dated February 26, 1999.

These amendments revise Technical Specification (TS) Section 3.8.1.1 action statements to correct an oversight when License Amendment Nos. 241 and 231 were issued to SQN Units 1 and 2, respectively, on December 16, 1998. These previous amendments extended the allowed outage time for the station emergency diesel generators (EDGs) from 72 hours to 7 days, as reflected in the TS action statement for inoperable EDGs. The oversight was failure to address TS action statements involving inoperable offsite AC circuits and combinations of inoperable offsite power supplies and EDGs, thereby creating some inconsistencies in the TSs.

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/

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. 255 to DPR-77
2. Amendment No. 246 to DRP-79
3. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 14, 2000

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Ronald W. Hernan, Senior Project Manager, Section 2
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Enclosures: 1. Amendment No. 255 to License No. DPR-77
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3. Safety Evaluation

cc w/enclosures: See next page



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. 255
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 February 26, 1999, 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. 255 , 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard P. Correia, 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: **April 14, 2000**

ATTACHMENT TO LICENSE AMENDMENT NO. 255

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

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

INSERT

3/4 8-2

3/4 8-2

ELECTRICAL POWER SYSTEMS

ACTION (Continued)

- c. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. | R209
| R104
- d. With two of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of 4 diesel generator sets by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the diesel generator sets are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. | R209
| R104
- e. With either diesel generator sets 1A-A and/or 2A-A inoperable simultaneous with 1B-B and/or 2B-B, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least 1) 1A-A and 2A-A or 2) 1B-B and 2B-B to OPEPABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. | R209
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SURVEILLANCE REOUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability. | R232



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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 246
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 February 26, 1999, 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. 246, 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 from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard P. Correia, 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: April 14, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 246

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

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

3/4 8-2

INSERT

3/4 8-2

ELECTRICAL POWER SYSTEMS

ACTION (Continued)

- c. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. | R195
| R89
- d. With two of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of 4 diesel generator sets by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the diesel generator sets are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours. | R195
| R89
- e. With either diesel generator sets 1A-A and/or 2 A-A inoperable simultaneous with 1B-B and/or 2B-B, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least 1) 1A-A and 2A-A or 2) 1B-B and 2B-B to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. | R195

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability. | R219



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 255 TO FACILITY OPERATING LICENSE NO. DPR-77
AND AMENDMENT NO. 246 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 February 26, 1999, the Tennessee Valley Authority (TVA, the licensee) proposed an amendment to the Technical Specifications (TSs) for Sequoyah Nuclear Plant (SQN) Units 1 and 2. The requested changes would revise action statements for TS Section 3.8.1.1, "A.C. Sources - Operating," to correct an oversight that occurred when License Amendment Nos. 241 and 231 were issued to SQN Units 1 and 2, respectively, on December 16, 1998. These previous amendments extended the allowed outage time (AOT) for the station emergency diesel generators (EDGs) from 72 hours to 7 days, as reflected in the TS action statement for inoperable EDGs. The oversight was failure to address TS action statements involving inoperable offsite alternating current (AC) circuits and combinations of inoperable offsite power supplies and EDGs, thereby creating some repetition and inconsistencies in the TSs.

The SQN, Units 1 and 2, are Westinghouse 4-loop pressurized water reactors located near Chattanooga, Tennessee.

2.0 DISCUSSION

The SQN station is supplied offsite AC power from a significant number of electrical feeders from the TVA system grid through a central dual-voltage switchyard. In addition, SQN Units 1 and 2 are each equipped with two electrical Class 1E EDGs to supply emergency power to the safety-related electrical buses in the unlikely event of a loss of offsite power. The TS Limiting Conditions for Operation (LCOs) for SQN (TS 3.8.1.1) require, as a minimum, the following power supplies to be operable:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, **and**
- b. Four separate and independent diesel generator sets.

The action statements associated with the LCOs contain the following combinations of inoperable AC power supplies (the letters below correspond to the action statement designations):

- a. One offsite power supply inoperable
- b. One or more EDGs in specified sets of two ("A" train or "B" train) inoperable, with the stipulation that not more than one EDG may be made simultaneously inoperable on a pre-planned basis for maintenance, modification, or surveillance testing.
- c. One offsite power supply **and** one EDG inoperable
- d. Two offsite power supplies inoperable
- e. Two or more EDGs (one or both "A" train EDGs **and** one or both "B" train EDGs) inoperable

License Amendment Nos. 241 (Unit 1) and 231 (Unit 2) were issued on December 16, 1998, to extend the AOT for the EDGs from 3 days to 7 days in order that periodic (12-year) EDG maintenance could be accomplished in a single EDG planned outage. The amendments revised Action Statement (b) to reflect the 7-day AOT, but no changes were proposed or made to Action Statements (c) and (e), both of which involve EDG operability and require restoration of all four diesels to operable status within 72 hours, as opposed to 7 days. Action Statement (c) also includes a requirement redundant to Action Statement (a), and this requirement serves no useful purpose. Action Statement (d), although not directly involving inoperable EDGs, is redundant to Action Statement (a) and, therefore serves no useful purpose. To eliminate these inconsistencies and redundancies, TVA has proposed elimination of the last sentence in each of these three action statements.

3.0 EVALUATION

The NRC staff has reviewed the licensee's proposed changes to TS 3.8.1.1 and agrees that the changes would correct an inadvertent error in the amendments issued for that TS on December 16, 1998, and would provide clarity to the five action statements associated with inoperable AC power supplies during plant operations.

The last sentences of Action Statements (c) and (e) currently require restoration of all four EDGs to operable status within 72 hours. This is contrary to the changes to Action Statement (b) approved in the December 1998 amendments.

The last sentence of current Action Statement (c) also requires restoration of two offsite circuits within 72 hours following loss of one offsite diesel and one EDG. If restoration of at least one of these two power supplies is not achieved within 12 hours, the action would be to commence plant shutdown (even without the last sentence). If one of the two operable supplies were restored within that time period, then either Action Statement (a) or Action Statement (b) would apply. In addition, current Action Statement (a) requires restoration of two offsite circuits within 72 hours following the loss of one offsite circuit. Therefore, this provision of existing Action Statement (c) is redundant to Action Statement (a) and may be removed.

Action Statement (d) applies to loss of both required offsite power supplies. The last sentence specifies actions required if one offsite power supply is returned to service. This sentence is redundant with Action Statement (a), which applies to one (of the two) offsite power supply being inoperable. Therefore, the last sentence is not necessary.

The NRC staff confirmed in a conference call with TVA (J. Profitt) on March 21, 2000, that there is no ambiguity regarding the time requirements for a given event, such as loss of two (both) offsite AC circuits (power supplies), with respect to subsequent recovery actions. In other words, the "time clock" of the action statement starts with the initial loss of both offsite circuits (in this case) and continues to run until the LCO is fully complied with by restoring both offsite AC circuits to operable status. In other words, the time clock is not "restarted" when one power supply is restored even though a different action statement may now apply (e.g., Action Statement (a) would govern once the first power supply is restored). The TVA representative stated that there is no ambiguity in this regard as a plant operating policy matter.

On the basis of the above, the NRC staff finds that the proposed changes are administrative in nature, do not change any plant operating requirements, and are, therefore, 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.

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. 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 (64 FR 14287). 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: Ronald W. Hernan, DLPM, NRR

Dated: April 14, 2000

Mr. J. A. Scalice
Tennessee Valley Authority

SEQUOYAH NUCLEAR PLANT

cc:

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