

July 11, 1994

Docket Nos. 50-327  
and 50-328

Mr. Oliver D. Kingsley, Jr.  
President, TVA Nuclear and  
Chief Nuclear Officer  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M89482 AND M89483) (TS 93-18)

The Commission has issued the enclosed Amendment No. 184 to Facility Operating License No. DPR-77 and Amendment No. 176 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant, Units 1 and 2, respectively. These amendments are in response to your application dated May 16, 1994.

The amendments change the Electrical Power Systems surveillance requirements wording to reflect the use of the new common station service transformers with auto load tap changers as the normal power supply for the 6.9 kV unit boards.

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

Sincerely,  
Original Signed by:  
David E. LaBarge, Sr. Project Manager  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 184 to License No. DPR-77
2. Amendment No. 176 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

NAME:	PDII-4/LA <i>BAC</i>	PDII-4/PM <i>DL</i>	EELB <i>CWB</i>	OGC <i>Co. with</i>	PDII-4/D
OFFICE:	BClayton	DLaBarge	CBerlinger		FHebdon <i>PST</i>
DATE:	6/16/94	6/16/94	6/21/94	6/28/94	7/11/94

DOCUMENT NAME: G\SQN\89482.AMM

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Mr. Oliver D. Kingsley, Jr.  
Tennessee Valley Authority

cc:

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## SEQUOYAH NUCLEAR PLANT

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Mr. William E. Holland  
Senior Resident Inspector  
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U.S. Nuclear Regulatory Commission  
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Mr. Michael H. Mobley, Director  
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Nashville, TN 37243-1532

County Judge  
Hamilton County Courthouse  
Chattanooga, TN 37402



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. 184  
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 May 16, 1994, 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. 184, 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 within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebdon, Director  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 11, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 184

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 page is identified by the captioned amendment number and contains a marginal line indicating the area of change.

REMOVE

3/4 8-2

INSERT

3/4 8-2

## ELECTRICAL POWER SYSTEMS

### ACTION (Continued)

- b. 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. Restore at least two offsite circuits and four diesel generator sets to OPERABLE status within 72 hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. 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. With only one offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. 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 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. Restore at least four diesel generator sets to OPERABLE status within 72 hours from time of initial loss or be in least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

### 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, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) unit power supply from the unit generator supported circuit to the preferred power (GDC 17) circuit.



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. 176  
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 May 16, 1994, 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. 176, 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 within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebdon, Director  
Project Directorate II-4  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 11, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 176

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Revise the Appendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised page is identified by the captioned amendment number and contains a marginal line indicating the area of change.

REMOVE

3/4 8-2

INSERT

3/4 8-2

## ELECTRICAL POWER SYSTEMS

### ACTION (Continued)

- b. 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. Restore at least two offsite circuits and four diesel generator sets to OPERABLE status within 72 hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. 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. With only one offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. 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 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. Restore at least four diesel generator sets to OPERABLE status within 72 hours from time of initial loss or be in least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

### 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, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) unit power supply from the unit generator supported circuit to the preferred power (GDC 17) circuit.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20565-0001

ENCLOSURE 3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 184 TO FACILITY OPERATING LICENSE NO. DPR-77  
AND AMENDMENT NO. 176 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 May 16, 1994, the Tennessee Valley Authority (the licensee) proposed amendments to the Technical Specifications (TS) for Sequoyah Nuclear Plant (SQN) Units 1 and 2. The requested changes would change the wording of the Electrical Power Systems Surveillance Requirement (SR) 4.8.1.1.1.b to reflect the use of the new common station service transformers with auto load tap changers as the normal power supply for the 6.9 kilovolt (kV) unit boards.

2.0 EVALUATION

The 161 kV switchyard is the preferred power supply for station loads during normal and accident conditions. The common station service transformers (CSSTs) are powered from the 161 kV switchyard and, at present, are the alternate power supply for the 6.9 kv unit boards. Each of the two unit station service transformers (USSTs) are powered from its main generator and is, at present, the preferred power supply for the 6.9 kV unit boards when the generator is operating. Power can be transferred either manually or automatically from the USSTs to the CSSTs and SR 4.8.1.1.1.b requires that this feature (manual and automatic transfer from the normal power supply to the alternate power supply) be tested at least once every 18 months.

TVA has replaced the existing CSSTs with new CSSTs that have auto tap changers to accommodate voltage variations in the 161 kV system. The existing CSSTs use manual, off-line, tap changers; whereas the new transformers will be able to adjust secondary voltage to plus or minus 10 percent by using 16 taps that provide 1.25 percent adjustment per tap. The changer is capable of changing taps at the rate of approximately one tap each second after a two-second delay. The delay prevents unnecessary operation of the tap changer for momentary voltage changes on the 161 kV bus.

With installation of the new CSSTs, the normal lineup for powering the 6.9 kV unit boards will be changed so that normal bus power will be supplied from the CSSTs and alternate power supplied from the USSTs. Thus, it will no longer be necessary to transfer power during unit startups and shutdowns, or to rely on

automatic power transfer in the event of a fault or plant trip in order to maintain power to the 6.9 kV unit boards. However, since this feature will continue to be available should it be necessary for maintenance, the SR is being retained but the circuit designations reversed. Therefore, in order to provide a more accurate indication of the transfer requirements when normal alignment is changed to the CSSTs, the licensee proposed changing the word "normal" to "unit generator supported" and "alternate" to "preferred power (GDC 17)" in SR 4.8.1.1.1.b.

Since the wording change to SR 4.8.1.1.1.b does not change the testing frequency nor the test method (i.e., the test continues to show that power can be transferred from the USSTs to the CSSTs manually and automatically), the staff finds the proposed change acceptable.

### 3.0 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.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change 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 amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (59 FR 29637). 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.

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

Principal Contributor: David E. LaBarge

Dated: July 11, 1994

AMENDMENT NO. 184 FOR SEQUOYAH UNIT NO. 1 - DOCKET NO. 50-327 and  
AMENDMENT NO. 176 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328  
DATED: July 11, 1994

DISTRIBUTION:

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NRC & Local PDRs	
SN Reading File	
S. Varga	014-E4
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M. Lesser	
C. Berlinger	07-E1
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G. Hill	T5-C-3 (2 per docket)
C. Grimes	011-E22
ACRS(10)	
OPA	02-G5
OC/LFDCB	T9-E10

cc: Plant Service List