

September 30, 1983

Docket Nos: 50-327  
and 50-328

Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

Subject: Issuance of Amendment No. 31 to Facility Operating License  
No. DPR-77 and Amendment No. 22 to Facility Operating  
License No. DPR-79 - Sequoyah Nuclear Plant, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 31 to  
Facility Operating License No. DPR-77 and Amendment No. 22 to Facility Operating  
License No. DPR-79.

The amendments change the Technical Specifications to revise the diesel generator  
surveillance requirements to reflect the actual as-designed logic that exists.  
The amendments are in response to your letters dated June 15 and July 29, 1983.

A copy of the related safety evaluation supporting Amendment No. 31 to Facility  
Operating License DPR-77 and Amendment No. 22 to Facility Operating License  
DPR-79 is enclosed.

Sincerely,

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Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosures:

1. Amendment No. 31 to DPR-77
2. Amendment No. 22 to DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

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SURNAME	MDuncan/hmc	CStahle	EAdensam				
DATE	9/26/83	9/20/83	9/28/83				

SEQUOYAH

Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

cc: Herbert S. Sanger, Jr., Esq.  
General Counsel  
Tennessee Valley Authority  
400 Commerce Avenue  
E 11B 33  
Knoxville, Tennessee 37902

Mr. H. N. Culver  
Tennessee Valley Authority  
400 Commerce Avenue, 249A HBB  
Knoxville, Tennessee 37902

Mr. Bob Faas  
Westinghouse Electric Corp.  
P.O. Box 355  
Pittsburgh, Pennsylvania 15230

Mr. Jerry Wills  
Tennessee Valley Authority  
400 Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Mr. Donald L. Williams, Jr.  
Tennessee Valley Authority  
400 Commerce Avenue, W10C131C  
Knoxville, Tennessee 37902

Resident Inspector/Sequoyah NPS  
c/o U.S. Nuclear Regulatory  
Commission  
2600 Igou Ferry Road  
Soddy Daisy, Tennessee 37379

Director, Office of Urban  
& Federal Affairs  
108 Parkway Towers  
404 James Robertson Way  
Nashville, Tennessee 37219

Attorney General  
Supreme Court Building  
Nashville, Tennessee 37219

U.S. Environmental Protection  
Agency  
ATTN: EIS Coordinator  
345 Courtland Street  
Atlanta, Georgia 30308

Honorable Don Moore, Jr.  
County Judge  
Hamilton County Courthouse  
Chattanooga, Tennessee 37402

Regional Administrator  
Nuclear Regulatory Commission,  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Michael H. Mobley, Director  
Division of Radiological Health  
T.E.R.R.A. Building  
150 9th Avenue North  
Nashville, Tennessee 37203

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September 30, 1983

AMENDMENT NO. 31 TO FACILITY OPERATING LICENSE DPR-77 - SEQUOYAH UNIT 1  
AMENDMENT NO. 22 TO FACILITY OPERATING LICENSE DPR-79 - SEQUOYAH UNIT 2

DISTRIBUTION w/enclosures:

✓ Docket No. 50-327/328  
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OELD  
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R. Diggs, ADM  
D. Eisenhut/R. Purple  
J. Souder  
T. Barnhart (8)  
E. L. Jordan, DEQA: I&E  
J. M. Taylor, DRP: I&E  
L. J. Harmon, IE File  
D. Brinkman, SSPB  
H. Denton

bcc w/enclosures:

NRC PDR  
Local PDR  
NSIC  
PRC System  
A. Rosenthal, ASLAB  
ASLBP  
ACRS (16)  
W. Jones (10)

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 31  
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment to the Sequoyah Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-77 filed by the Tennessee Valley Authority (licensee), dated June 15 and July 29, 1983, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the license, as amended, 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 hereby amended by page changes to the Appendix A 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 Appendix A, as revised through Amendment No. 31, are hereby incorporated into the license.

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The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*[Handwritten signature]*

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Attachment:  
Appendix A Technical  
Specification Change

Date of Issuance: September 30, 1983

OFFICE	LA:DL:AB.#4	DL:LB.#4	QELD	DL:LB.#4	AD:L:LB		
SURNAME	MDuncan/hmc	CStahle	<i>[Signature]</i>	EAdensam	TMovak		
DATE	9/26/83	9/20/83	9/17/83	9/27/83	9/28/83		

ATTACHMENT TO LICENSE AMENDMENT NO. 31

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

Amended  
Page

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## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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Within 5 minutes after completing this 24 hour test, perform Specification 4.8.1.1.2.c.4. The generator voltage and frequency shall be  $6900 \pm 690$  volts and  $60 \pm 1.2$  Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.

9. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 4000 kw.
10. Verifying the diesel generator's capability to:
  - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power.
  - b) Transfer its loads to the offsite power source, and
  - c) Be restored to its shutdown status.
11. Verifying that the automatic load sequence timers are OPERABLE with the setpoint for each sequence timer within  $\pm 5$  percent of its design setpoint.
12. Verifying that the following diesel generator lockout features prevent diesel generator starting only when required:
  - a) Engine overspeed
  - b) 86 GA lockout relay
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting the diesel generators simultaneously, during shutdown, and verifying that the diesel generators accelerate to at least 900 rpm in less than or equal to 10 seconds.
- f. At least once per 10 years\* by:
  1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and
  2. Performing a pressure test of those portions of the diesel fuel oil system design to Section III, subsection ND of the ASME Code at a test pressure equal to 110 percent of the system design pressure.

\*These requirements are waived for the initial surveillance.

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 22  
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment to the Sequoyah Nuclear Plant, Unit 2 (the facility) Facility Operating License No. DPR-79 filed by the Tennessee Valley Authority (licensee), dated June 15 and July 29, 1983, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the license, as amended, 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 hereby amended by page changes to the Appendix A Technical Specifications as indicated in the attachments 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 Appendix A, as revised through Amendment No.22 , are hereby incorporated into the license.

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The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Attachment:  
Appendix A Technical  
Specification Change

Date of Issuance: September 30, 1983

*Immediately before  
issuing Decided for  
Preparation of Comments  
To any Comments  
to be made by  
9/26/83*

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SURNAME	MDuncan/hmc	CStanley	Robert M. M.	EAdensam	Movak		
DATE	9/24/83	9/11/83	9/11/83	9/11/83	9/26/83		

ATTACHMENT TO LICENSE AMENDMENT NO. 22

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

Amended  
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## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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8. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kw. The generator voltage and frequency shall be  $6900 \pm 690$  volts and  $60 \pm 1.2$  Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. Within 5 minutes after completing this 24 hour test, perform Specification 4.8.1.1.2.d.4.b
9. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 4000 kw.
10. Verifying the diesel generator's capability to:
  - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power.
  - b) Transfer its loads to the offsite power source, and
  - c) Be restored to its shutdown status.
11. Verifying that the automatic load sequence timers are OPERABLE with the setpoint for each sequence timer within  $\pm 5$  percent of its design setpoint.
12. Verifying that the following diesel generator lockout features prevent diesel generator starting only when required:
  - a) Engine overspeed
  - b) 86 GA lockout relay
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting the diesel generators simultaneously, during shutdown, and verifying that the diesel generators accelerate to at least 900 rpm in less than or equal to 10 seconds.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 31 TO FACILITY OPERATING LICENSE DPR-77  
AND AMENDMENT NO. 22 TO FACILITY OPERATING LICENSE DPR-79  
TENNESSEE VALLEY AUTHORITY

INTRODUCTION

In letters dated June 15, July 29, and September 21, 1983, Tennessee Valley Authority (TVA) requested a change to the diesel generator surveillance requirements. The proposed surveillance requirements for the diesel generators would reflect the actual as-designed logic that exists for the Sequoyah Units 1 and 2. The present design protects the diesel generator from a sustained overcurrent condition when in parallel with offsite power. It does not have, however, the added feature of returning to a standby status if a safety injection signal occurs while in the test mode (parallel to offsite power).

EVALUATION

The technical specification requires verification at least once per 18 months during shutdown that, with offsite power available, the emergency diesel generator (EDG), while operating in a test mode and connected to its bus, shall return to standby operation with the initiation of a simulated safety injection signal (SIS). This test is required with and without a concurrent SIS actuation signal. The Sequoyah Nuclear Plant design does not incorporate the return of the EDG to standby status under simulated SIS. However, with both SIS and loss of offsite power this function is accomplished via instantaneous overcurrent relays which trip the diesel generator output breaker and return the EDG to standby operation.

TVA states that while the EDG is under test, it is connected in parallel with the offsite power source to the 6900 volt shutdown board. With either the normal or alternate offsite feeder breaker in closed position, the instantaneous overcurrent relays (one per phase) are placed into the EDG breaker trip circuit. With the loss of offsite power to the shutdown board the respective normal or alternate breaker will open after a five-second delay. During this delay the EDG will see an overcurrent (approximately 45%) and its output breaker will open within 5 cycles. The EDG will remain in the no-load running condition with all non-critical trips except for engine overspeed and generator differential bypassed. During this interval the loss of voltage relays on the emergency bus will clear all loads, and since the EDG is on ready standby will command the sequencing of loads on to the EDG. With offsite power available, if any SIS is initiated while the EDG is under test, the Class IE equipment will continue to run without interruption and the EDG will continue to operate in parallel with offsite power. The return of the diesel to standby operation is accomplished by manual action. TVA has proposed to verify the operation of the overcurrent relays while the EDG is in the test mode as a replacement to the surveillance requirement outlined in Section 4.8.1.1.2.d.11 of

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Sequoyah's present technical specification. This revision deviates from the Standard Technical Specifications.

This plant technical specification which requires testing of the test mode override feature was based on the Standard Technical Specifications which were in turn based on R.G. 1.108. This test requirement applies to designs where on SIS occurrence with offsite power available, the DG is automatically isolated from the bus and returned to standby mode. Since this function is manually performed in Sequoyah, the referred technical specification requirement is not applicable to Sequoyah and hence should be deleted.

#### ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration (SHC) which was published in the Federal Register (48 FR 38382) on August 23, 1983, and consulted with the state of Tennessee. No public comments were received and the state of Tennessee did not have any comments.

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: September 30, 1983

Principal Contributor: Carl Stahle, Licensing Branch No. 4, DL  
John Emami, Power Systems Branch, DSI

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October 4, 1983

**DISTRIBUTION:**

Docket No. 50-327/328  
LB #4 r/f  
EAdensam  
MDuncan  
CStahle

**MEMORANDUM FOR:** James R. Miller, Chief  
Operating Reactors Branch No. 3  
Division of Licensing

**FROM:** Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

**SUBJECT:** REQUEST FOR PUBLICATION IN MONTHLY FR NOTICE - NOTICE  
OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Tennessee Valley Authority, Docket Nos. 50-327 and 50-328, Sequoyah Nuclear  
Plant, Units 1 and 2, Hamilton County, Tennessee

Date of application for amendment: June 15 and July 29, 1983

Brief description of amendment: The amendments revise the diesel generator  
surveillance requirement to reflect the actual as-designed logic that exists  
for the Sequoyah Units 1 and 2.

Date of issuance: September 30, 1983

Effective date: September 30, 1983

Amendment Nos. 31 and 22

Facility Operating License Nos. DPR-77 and DPR-79. Amendment revised the  
Technical Specifications.

Date of initial notice in Federal Register: August 23, 1983 (48 FR 38382)

The Commission's related evaluation of the amendment is contained in a Safety  
Evaluation dated September 30, 1983.

No significant hazards consideration comments received: No.

Local Public Document Room location: Chattanooga-Hamilton County Bicentennial  
Library, 1001 Broad Street, Chattanooga, Tennessee 37401.

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Elinor G. Adensam, Chief  
Licensing Branch No. 4  
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SURNAME	MDuncan/hmc	CStahle	EAdensam			
DATE	9/28/83	9/16/83	9/28/83			

July 22, 1983

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Docket Nos. 50-327/328  
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CStahle  
MDuncan

MEMORANDUM FOR: Robert A. Clark, Chief  
Operating Reactors Branch No. 3  
Division of Licensing

FROM: Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

SUBJECT: REQUEST FOR PUBLICATION IN MONTHLY FR NOTICE - NOTICE  
OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE AND PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION AND OPPORTUNITY FOR A  
HEARING

Tennessee Valley Authority, Docket Nos. 50-327 and 50-328, Sequoyah Nuclear  
Plant, Units 1 and 2, Hamilton County, Tennessee

Date of amendment request: June 15, 1983.

Description of amendment request: The amendments would revise the diesel gen-  
erator surveillance requirement. The proposed surveillance requirements for  
the diesel generators would reflect the actual as-designed logic that exists  
for the Sequoyah Units 1 and 2. The present design protects the diesel gener-  
ator from a sustained overcurrent condition when in parallel with offsite  
power. It does not have, however, the added feature of returning to a standby  
status if a safety injection signal occurs while in the test mode (parallel to  
offsite power). For this reason, the present surveillance tests cannot be  
fully carried out.

Basis for proposed no significant hazards consideration determination: The pro-  
posed amendments involve no significant hazards consideration based on the  
examples cited in 48 FR 14870. One of the examples relates to a change which

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either may result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan.

Local Public Document Room location: Chattanooga-Hamilton County Bicentennial Library, 1001 Broad Street, Chattanooga, Tennessee 37401

Attorney for Licensee: Herbert S. Sanger, Jr., Esq., General Counsel, Tennessee Valley Authority, 400 Commerce Avenue, E 11B 33, Knoxville, Tennessee 37902.

NRC Branch Chief: Elinor G. Adensam.

*EL*  
Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

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