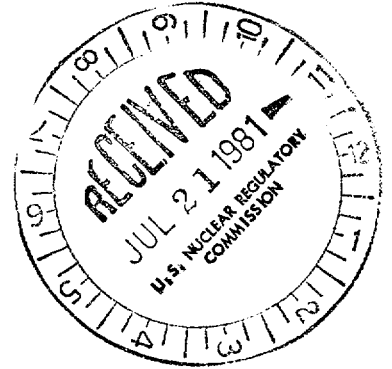


July 15, 1981

Docket No. 50-327



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. 8 TO FACILITY OPERATING LICENSE
NO. DPR-77 - SEQUOYAH NUCLEAR PLANT, UNIT 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 8 to Facility Operating License No. DPR-77.

This amendment updates technical specifications 3.7.5 and 4.7.5 to reflect design changes resulting from the implementation of the new Essential Raw Cooling water (ERCW) pumping station. This amendment also increases the ultimate heat sink temperature of 81 degrees F to 83 degrees F.

A copy of the related safety evaluation supporting Amendment No. 8 to Facility Operating License DPR-77 is enclosed. Also enclosed is a copy of the Federal Register Notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

ES

Elinor G. Adensam, Acting Chief
Licensing Branch #4
Division of Licensing

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Enclosures:

- 1. Amendment No. 8
- 2. Safety Evaluation
- 3. Federal Register Notice

cc w/enclosures:
See next page

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PDR ADOCK 05000327
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SURNAME	Stallone/hmc	Adensam		Adensam	RTedesco		
DATE	7/15/81	7/15/81	7/15/81	7/15/81	7/15/81		

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
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Mr. H. N. Culver
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Westinghouse Electric Corp.
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Tennessee Valley Authority
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Chattanooga, Tennessee 37401

Mr. J. F. Cox
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

U.S. Environmental Protection
Agency
ATTN: Ms. F. Munter
Office of Federal Activities
Room W-535, Waterside Mall
401 M Street, S.W.
Washington, D. C. 20460

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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 8
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application 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 July 14, 1981, complies 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 amended 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-077 is hereby amended to read as follows:

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BATE	PDR ADOCK	05000327					
	P	PDR					

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 8, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

151
Elinor G. Adensam, Acting Branch Chief
Licensing Branch No. 4
Division of Licensing

Attachment:
Appendix A Technical
Specification Changes

Date of Issuance: July 15, 1981

OFFICE ▶	DL:LB.#4	LA:DL:LB.#4	ASB	LGB	OELD	DL:LB.#4	AD:6/DL
SURNAME ▶	Carter/hmc	MDuncan	OParr	MVirgilie	EAdensam	RAdesco	
DATE ▶	7/15/81	7/15/81	7/15/81	7/15/81	7/15/81	7/15/81	7/15/81

ATTACHMENT TO LICENSE AMENDMENT NO. 8

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

<u>Overleaf</u>		<u>Amended</u>	
<u>Page</u>		<u>Page</u>	
3/4	7-16	3/4	7-15
B3/4	7-3	B3/4	7-4

PLANT SYSTEMS

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5 The ultimate heat sink shall be OPERABLE with the average temperature of water at the ERCW system suction of less than or equal to 83°F.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the average temperature of the water at the ERCW system suction greater than 83°F be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIRMENTS

4.7.5 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average temperature to be within its limits.

PLANT SYSTEMS

3/4.7.6 FLOOD PROTECTION

LIMITING CONDITION FOR OPERATION

3.7.6 Flood protection shall be provided for all safety related components and structures.

APPLICABILITY: At all times

ACTION:

- a. With a Stage I flood warning issued initiate and complete within 10 hours the Stage I flood protection procedure which shall include being in at least HOT STANDBY within 6 hours; with a SHUTDOWN MARGIN of at least 5% delta k/k and T_{avg} less than or equal to 350°F within the following 4 hours. If within 10 hours following the issuance of a Stage I flood warning communications between the TVA Division of Water Resources and the Sequoyah Plant cannot be verified, or if a Stage II flood warning is issued verify that the Stage I flood protection procedure is complete and initiate and complete the Stage II flood protection procedure within the following 17 hours.
- b. With a critical combination of flood and/or headwater alert issued concurrent with a loss of communications between the TVA Power Control Center and the Sequoyah Plant restore the communications system to OPERABLE status within 3 hours or initiate and complete the Stage I flood protection procedure described in ACTION a above within 10 hours. Upon completion of the Stage I flood protection procedure initiate and complete the Stage II flood protection procedure within the following 14 hours.
- c. With a Fontana Dam alert concurrent with a loss of communications between the Fontana Dam and the Sequoyah Plant restore the communication system to OPERABLE status within 1 hour or initiate and complete the Stage I flood protection procedure described in ACTION a above within 10 hours. Upon completion of the Stage I flood protection procedure initiate and complete the Stage II flood protection procedure within the following 17 hours.
- d. With either the Norris, Cherokee, Douglas, Fort Loudoun, Fontana, Hiwassee, Apalachia, Blue Ridge or Tellico dam failed seismically, and with a critical combination of flood and/or headwater alert issued initiate and complete the Stage I flood protection procedure described in Action a above within 10 hours. Upon completion of the Stage I flood protection procedure initiate and complete the Stage II flood protection procedures within the following 17 hours.

PLANT SYSTEMS

BASES

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose also includes the effects of a coincident 1.0 GPM primary to secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the accident analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to 1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and 2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the surveillance requirements are consistent with the assumptions used in the accident analyses.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200 psig are based on a steam generator RT_{NDT} of 60°F and are sufficient to prevent brittle fracture.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the component cooling water system ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident analyses.

3/4.7.4 ESSENTIAL RAW COOLING WATER SYSTEM

The OPERABILITY of the essential raw cooling water system and the auxiliary essential raw cooling water system ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the accident conditions within acceptable limits.

PLANT SYSTEMS

BASES

3/4.7.5 ULTIMATE HEAT SINK

The limitations on the temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to mitigate the effects of accident conditions within acceptable limits.

The limitations on the maximum temperature are based on providing a 30 day cooling water supply to safety related equipment without exceeding their design basis temperature and is consistent with the recommendations of Regulatory guide 1.27, "Ultimate Heat Sink for Nuclear Plants", March 1974.

3/4.7.6 FLOOD PROTECTION

The requirements for flood protection ensures that facility protective actions will be taken and operation will be terminated in the event of flood conditions. A Stage I flood warning is issued when the water in the forebay is predicted to exceed 697 feet Mean Sea Level USGS datum during October 1 through April 15, or 703 Feet Mean Sea Level USGS datum during April 15 through September 30. A Stage II flood warning is issued when the water in the forebay is predicted to exceed 703 feet Mean Sea Level USGS datum. A maximum allowed water level of 703 Mean Sea Level USGS datum provides sufficient margin to ensure waves due to high winds cannot disrupt the flood mode preparation. A Stage I or Stage II flood warning requires the implementation of procedures which include plant shutdown. Further, in the event of a loss of communications simultaneous with a critical combination flood, headwaters, and/or seismically induced dam failure the plant will be shutdown and flood protection measures implemented.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The OPERABILITY of the control room ventilation system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the control room will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10 CFR 50. ANSI N510-1975 will be used as a procedural guide for surveillance testing.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 8 TO FACILITY OPERATING LICENSE DPR-77

TENNESSEE VALLEY AUTHORITY

Introduction

On July 14, 1981, TVA proposed updating technical specifications 3.7.5 and 4.7.5 to reflect design changes resulting from the implementation of the new Essential Raw Cooling Water (ERCW) pumping station. TVA further proposed increasing the ultimate heat sink temperature from 81 degrees F to 83 degrees F since the flow deficiencies have now been resolved.

Discussion

Section 9.2.2 of the Safety Evaluation Report (NUREG-0011) for Sequoyah Nuclear Plant, Units 1 and 2, dated March 1979, states that the new ERCW pumping station is designed and located to eliminate any dependence upon the intake forebay. Therefore, the technical specifications regarding the water level in the forebay may be deleted because the new ERCW is currently in operation for both units.

The NRC staff agrees that since TVA has corrected the deficiencies that resulted in a lower heat sink temperature the Technical Specifications for Unit No. 1 may now be revised to 83 degrees F. The Sequoyah Unit 2 specifications, issued on June 25, 1981, included the revised temperature of 83 degrees F.

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

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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: July 15, 1981

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-327

TENNESSEE VALLEY AUTHORITY

NOTICE OF ISSUANCE OF AMENDMENT

FACILITY OPERATING LICENSE NO. DPR-77

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 8 to Facility Operating License No. DPR-77, issued to Tennessee Valley Authority (licensee) for the Sequoyah Nuclear Plant, Unit 1 (the facility) located in Hamilton County, Tennessee. This amendment updates technical specifications 3.7.5 and 4.7.5 to reflect design changes resulting from the implementation of the new Essential Raw Cooling Water (ERCW) pumping station. This amendment also increases the ultimate heat sink temperature from 81 degrees F to 83 degrees F.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5 (d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	B107280164	B10715	.....	.....	.....	.....	.....
DATE ▶	PDR	ADOCK	05000327	.....	.....	.....	.....
	P	PDR	.....	.....	.....	.....	.....

For further details with respect to this action, see (1) Tennessee Valley Authority letter dated July 14, 1981, (2) Amendment No. 8 to Facility Operating License No. DPR-77 with Appendix A Technical Specification page changes, and (3) the Commission's related Safety Evaluation.

All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C., and the Chattanooga Hamilton County Bicentennial Library, 1001 Broad Street, Chattanooga, Tennessee 37402. A copy of Amendment No. 8 may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 15th day of July, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

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

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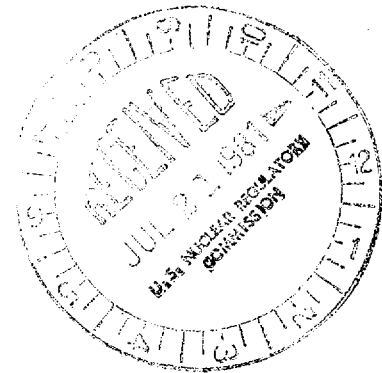
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SURNAME	Stanley/hmc	MDuncan		EAdensam	RTAdesco		
DATE	7/15/81	7/15/81	7/ /81	7/15/81	7/15/81		

July 15, 1981

AMENDMENT NO. 8 TO FACILITY OPERATING LICENSE - SEQUOYAH NUCLEAR PLANT - 1

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