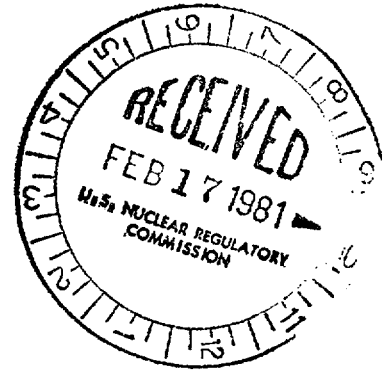


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FEB 9 1981

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

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 2 to Facility Operating License No. DPR-77. The NRC staff concluded that TVA has satisfied Condition 2.C.(2)D(1) of DPR-77, relating to hydrogen control measures.

This amendment revises the license condition for hydrogen control measures and approves your proposed changes to Appendix A Technical Specifications for the Sequoyah Nuclear Plant, Unit No. 1, which provides surveillance and operability requirements for the Interim Distribution Ignition System. These Technical Specifications and procedure changes were proposed in your letters of February 5, 1981, and December 11, 1980, respectively.

A copy of the related Safety Evaluation supporting Amendment No. 2 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,

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosures:

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

cc w/enclosures:

See next page

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SURNAME	MSe.../LM C.../h	MSe.../LM C.../h		ASchwencer		
DATE	2/6/81	2/6/81	2/ /81	2/ /81		

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

cc: Herbert S. Sanger, Jr., Esq.
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Mr. Bob Faas
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Mr. Mark Burzynski
Tennessee Valley Authority
400 Chestnut Street Tower II
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

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 2
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 February 5, 1981 and December 11, 1980 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 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) and C.2.(22)D(3) of Facility Operating License No. DPR-77 are hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 2, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the changed procedures.

(22)D(3) Hydrogen Control Measures (Section 22.2.II.B.7)

During the interim period of operation, TVA shall continue a research program on hydrogen control measures and the effects of hydrogen burns on safety functions and shall submit to the NRC quarterly reports on that research program.

- (a) TVA shall amend its research program on hydrogen control measures to include, but not limited to, the following items:
 - (i) Improved calculational methods for containment temperature and ice condenser response to hydrogen combustion and local detonation.
 - (ii) Confirmatory tests on selected equipment exposed to hydrogen burns.
 - (iii) New calculations to predict differences between expected equipment temperature environments and containment temperatures.
 - (iv) Evaluate and resolve any anomalous results from the ongoing test program.
- (b) The results of these investigations will be provided to the staff for review in May 1981. A schedule for confirmatory tests beyond this date will be provided consistent with the requirement to meet the January 31, 1982 deadline, Section (22)D(2) of the license.

3. This amended license is effective as of February 9, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Attachment:
Appendix A Technical
Specification changes

OFFICE	DATE OF ISSUANCE:	LB #2/DL	LB #2/DL	OELD	LB #2/DL
SURNAME	FEB 9 1981	MService/LM	CStahle	<i>d/Reis</i>	ASchwencer
DATE		2/9/81	2/9/81	2/9/81	2/9/81

ATTACHMENT TO LICENSE AMENDMENT NO. 2

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.

Pages

3/4 6-25a

3/4 6-25b

B3/4 6-4a

CONTAINMENT SYSTEMS

HYDROGEN CONTROL INTERIM DISTRIBUTED IGNITION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 The primary containment interim distributed ignition system shall be operable.

APPLICABILITY: MODES 1 and 2.

ACTION

With the interim distributed ignition system inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.5.4.3 The interim distributed ignition system shall be demonstrated OPERABLE:

- a. At least once per 92 days by energizing the supply breakers and verifying that at least 31 glow plugs are energized.
- b. At least once per 18 months by:
 1. Verifying the cleanliness of each glow plug by a visual inspection.
 2. Energizing each glow plug and verifying a surface temperature of at least 1500°F.

EMERGENCY OPERATING INSTRUCTION CHANGES
FOR USING INTERIM DISTRIBUTED IGNITION SYSTEMS

EOI

<u>No.</u>	<u>Change</u>	<u>Text</u>
EOI-0	Add to Section II.B	11. Energize power supply to U-I controlled hydrogen ignition system by closing breakers <u>10, 11, and 12</u> in Standby Lighting Cabinet LS-4 (near CCS surge tank).
EOI-1A	Add to Section II.G	2. Ensure controlled hydrogen ignition system is in service per EOI-0, Section II.B.11.
EOI-1A	Delete from Section II.00.5	Place H ₂ purge system in service as follows: a. If the containment atmosphere reaches 3% by volume, place the H ₂ purge system in service per S0I-83.1.

CONTAINMENT SYSTEMS

BASES

3/4.6.4.3 HYDROGEN CONTROL INTERIM DISTRIBUTED IGNITION SYSTEM

The operability of at least 31 of the 32 ignitors in the hydrogen control distributed ignition system will maintain an effective coverage throughout the containment. This system of ignitors will initiate combustion of any significant amount of hydrogen released after a degraded core accident. This system is to ensure burning in a controlled manner as the hydrogen is released instead of allowing it to be ignited at high concentrations by a random ignition source.

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. 2 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 covers changes to the license conditions on hydrogen control measures, plant procedures, and associated Technical Specifications. The amendment imposes surveillance and operability requirements on the Interim Distributed Ignition System.

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.

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For further details with respect to this action, see (1) Tennessee Valley Authority letters, dated February 5, 1981 and December 11, 1980, (2) Amendment No. 2 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. 2 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 9th day of February 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

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SURNAME	MService/LM	CSch1e	<i>[Signature]</i>	ASchwencer			
DATE	2/9/81	2/9/81	2/9/81	2/9/81			

SAFETY EVALUATION REPORT

BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 2 TO FACILITY OPERATING LICENSE NO. DPR-77

Introduction

On September 17, 1980, the Nuclear Regulatory Commission (NRC) issued the Facility Operating License No. DPR-77 to the Tennessee Valley Authority for the Sequoyah Nuclear Plant Unit No. 1, located in Hamilton County, Tennessee. The license authorized operation of Unit No. 1 at 100 percent power; however, a license condition regarding the adequacy of the hydrogen control system was included that required resolution by January 31, 1981. In Supplement No. 4 to the SER, the NRC staff concluded that TVA has satisfied the requirement. Supplement No. 4 to the SER updated our Safety Evaluation Reports on the hydrogen control measures (Section 22.2, II.B.7).

As a result of NRC staff reviews on hydrogen control, the NRC staff identified further work needed on the survivability of essential equipment during the postulated hydrogen burns beyond the work that was described in the TVA Core Degradation Program Volume II (December 15, 1980). Accordingly, license condition (3) has been modified to reflect the additional efforts that are needed on survivability.

The SER as supplemented thru Supplement 4, provides a basis for concluding that the Sequoyah Unit No. 1 may continue to safety operated while the further ongoing work on hydrogen control measures continue. The ACRS considered this matter and reported its finding in a letter to the Chairman, dated January 13, 1981.

Evaluation

Revised technical specifications and procedures are required to ensure the operability of the igniters in the Sequoyah containment in the event a substantial quantity of hydrogen is generated. In order to assure operability of the IDIS, when needed, it should be covered by surveillance and operability requirements similar to those for other safety systems. TVA has proposed appropriate requirements.

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.

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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.

Date: FEB 9 1981

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