

January 3, 1994

Docket Nos. 50-327
and 50-328

Tennessee Valley Authority
ATTN: Dr. Mark O. Medford, Vice President
Technical Support
3B Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Sir:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M86797 AND M86798) (TS 93-05)

The Commission has issued the enclosed Amendment No. 175 to Facility Operating License No. DPR-77 and Amendment No. 166 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 June 16, 1993, which was supplemented by letter dated November 10, 1993.

The amendments change the lifting force specified in the surveillance requirements for the ice condenser intermediate deck doors to less restrictive values that are based on Westinghouse Electric Corporation analysis.

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. 175 to License No. DPR-77
2. Amendment No. 166 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures:
See next page

NAME:	PDII-4/LA	PDII-4/PM	SCSB	OGC	PDII-4/D
OFFICE:	BCLayton	DLaBarge	RBarrett	C. Malco	FHebdon
DATE:	11/22/93	11/23/93	12/15/93	12/21/93	1/3/94

DOCUMENT NAME: G:\SQN\86797.AMM

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AMENDMENT NO. 175 FOR SEQUOYAH UNIT NO. 1 - DOCKET NO. 50-327 and
AMENDMENT NO. 166 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328
DATED: January 3, 1994

DISTRIBUTION:

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S. Varga 14-E-4

F. Hebdon

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D. LaBarge

E. Merschoff RII

P. Kellogg RII

R. Crlenjak RII

OGC 15-B-18

D. Hagan MNBB-3206

G. Hill P1-37 (1 per docket)

C. Grimes 11-E-22

ACRS(10)

OPA 2-G-5

OC/LFDCB MNBB-9112

R. Barrett

cc: Plant Service List

Tennessee Valley Authority
ATTN: Dr. Mark O. Medford

cc:

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SEQUOYAH NUCLEAR PLANT

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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. 175
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 June 16, 1993, and supplemented by letter dated November 10, 1993, 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. 175, 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: January 3, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 175

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE
3/4 6-30

INSERT
3/4 6-30

CONTAINMENT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4. Verifying that the torque required to keep each door from closing is greater than 78 inch-pounds when the door is 40 degrees open. This torque is defined as the "door closing torque" and is equal to the nominal door torque minus a frictional torque component.
5. Calculation of the frictional torque of each door tested in accordance with 3 and 4, above. The calculated frictional torque shall be less than or equal to 40 inch-pounds.

4.6.5.3.2 Intermediate Deck Doors - Each ice condenser intermediate deck door shall be:

- a. Verified closed and free of frost accumulation by a visual inspection at least once per 7 days, and
- b. Demonstrated OPERABLE at least once per 18 months by visually verifying no structural deterioration, by verifying free movement of the vent assemblies, and by ascertaining free movement when lifted with the applicable force shown below:

<u>Door</u>	<u>Lifting Force</u>
0-1, 0-5	Less than or equal to 37.4 lbs.
0-2, 0-6	Less than or equal to 33.8 lbs.
0-3, 0-7	Less than or equal to 31.0 lbs.
0-4, 0-8	Less than or equal to 31.8 lbs.

4.6.5.3.3 Top Deck Doors - Each ice condenser top deck door shall be determined closed and OPERABLE at least once per 92 days by visually verifying:

- a. That the doors are in place, and
- b. That no condensation, frost, or ice has formed on the doors or blankets which would restrict their lifting and opening if required.



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. 166
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 June 16, 1993, and supplemented by letter dated November 10, 1993, 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.

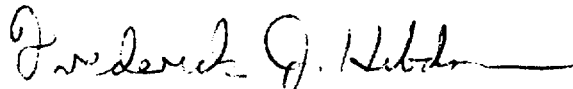
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 166, 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: January 3, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 166

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE
3/4 6-31

INSERT
3/4 6-31

CONTAINMENT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4. Verifying that the torque required to keep each door from closing is greater than 78 inch-pounds when the door is 40 degrees open. This torque is defined as the "door closing torque" and is equal to the nominal door torque minus a frictional torque component.
5. Calculation of the frictional torque of each door tested in accordance with 3 and 4, above. The calculated frictional torque shall be less than or equal to 40 inch-pounds.

4.6.5.3.2 Intermediate Deck Doors - Each ice condenser intermediate deck door shall be:

- a. Verified closed and free of frost accumulation by a visual inspection at least once per 7 days, and
- b. Demonstrated OPERABLE at least once per 18 months by visually verifying no structural deterioration, by verifying free movement of the vent assemblies, and by ascertaining free movement when lifted with the applicable force shown below:

<u>Door</u>	<u>Lifting Force</u>
0-1, 0-5	≤ 37.4 lbs.
0-2, 0-6	≤ 33.8 lbs.
0-3, 0-7	≤ 31.0 lbs.
0-4, 0-8	≤ 31.8 lbs.

4.6.5.3.3 Top Deck Doors - Each ice condenser top deck door shall be determined closed and OPERABLE at least once per 92 days by visually verifying:

- a. That the doors are in place, and
- b. That no condensation, frost, or ice has formed on the doors or blankets which would restrict their lifting and opening if required.



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

ENCLOSURE 3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 175 TO FACILITY OPERATING LICENSE NO. DPR-77
AND AMENDMENT NO. 166 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 June 16, 1993, and supplemented by letter dated November 10, 1993, 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 replace the maximum lifting forces specified for the ice condenser intermediate deck doors in Surveillance Requirement 4.6.5.3.2.b with values that were derived from a Westinghouse Electric Company analysis. The new values would be slightly higher than the present values specified in the TS, which would allow the lifting force specified for the intermediate deck doors to be slightly greater (less conservative) than the present value. The supplemental letter dated November 10, 1993, supplied information that corrected the assignments given the intermediate deck doors in the original submittal, but did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The containment ice condenser intermediate deck doors provide a barrier between the ice beds and the upper plenum of the ice condenser. They are closed during all modes of plant operation to minimize sublimation of ice that could occur from the entry of warm air, and can be opened for entry into the upper plenum for maintenance and inspections. During an accident that pressurizes the lower containment, these doors, along with the inlet and top deck doors of the ice condenser, open automatically by the forces created by the air flow to provide a flow path through the ice beds to the upper containment to control containment pressure. The intermediate deck doors also prevent reverse flow of air from the upper compartment to the lower compartment. The surveillance requirement specifies the maximum lifting force that should be applied manually to a door to ensure that it is capable of promptly opening in the event of an accident that requires air flow through the ice beds.

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The lifting forces required to perform the surveillance are as follows:

<u>DOOR</u>	<u>PRESENT TS VALUES</u>	<u>PROPOSED NEW VALUES</u>
0-1, 0-5	≤ 33 lbs.	≤ 37.4 lbs
0-2, 0-6	≤ 30 lbs.	≤ 33.8 lbs.
0-3, 0-7	≤ 28 lbs.	≤ 31.0 lbs.
0-4, 0-8	≤ 28 lbs.	≤ 31.8 lbs.

A Westinghouse Electric Corporation analysis supplied to SQN in 1976 indicated that the specified lifting forces were based on factory testing of production doors. These tests indicated that the proper values should be those indicated above in the "Proposed New Values" column. However, when the TS were generated, the lower values indicated in the "Present TS Values" column were incorporated. A study by Westinghouse has been unable to determine the source of the lower values. Since the present forces specified in the TS were 3 to 4.4 lbs. lower than necessary, SQN has experienced occasions when a lifting force was found to be too close to the TS limit, necessitating additional maintenance and testing.

The original values supplied by Westinghouse are used at other ice condenser plants and were verified to be the values used in the SQN design basis accident analysis performed by Westinghouse.

Based on the staff's evaluation of the information supplied by the licensee, the analysis performed by Westinghouse that determined the proper maximum lifting forces, and the use of these forces in the accident analysis, the staff agrees that use of the new values for the surveillance requirement is appropriate. The safety analysis corresponding to the operation of the doors is not affected, and the potential for introducing unwarranted operability concerns and maintenance activities is reduced. Therefore, the proposed TS change is satisfactory.

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 surveillance requirement. 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 (58 FR 41513). 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: January 3, 1994