

February 7, 1996

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

SUBJECT: ISSUANCE OF TECHNICAL SPECIFICATION AMENDMENTS FOR THE SEQUOYAH
NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. M94241 AND M94242) (TS 95-20)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 218 to Facility Operating License No. DPR-77 and Amendment No. 208 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 December 8, 1995.

The amendments revise the frequency of containment spray system and Residual Heat Removal System header air or smoke surveillance requirements that are conducted to verify each spray nozzle is unobstructed from every 5 years to every 10 years.

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-3
Division of Reactor Projects - I/I
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

- Enclosures: 1. Amendment No. 218 to License No. DPR-77
- 2. Amendment No. 208 to License No. DPR-79
- 3. Safety Evaluation

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Docket Files	PUBLIC
SON Reading File	S. Varga, 0-14-34
C. Grines, 0-11-E22	G. Hill (4) T-5-C3
ACRS	E. Merschoff, RII
	M. Lesser, RII

cc w/enclosures: See next page

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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. 218
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 December 8, 1995, 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.

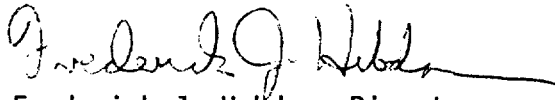
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.218 , 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. Heddon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 7, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 218

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 contain marginal lines indicating the areas of change.

REMOVE

3/4 6-16a

INSERT

3/4 6-16a

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. By verifying, that on recirculation flow, each pump develops a differential pressure of greater than or equal to 143 psid at greater than or equal to 4750 gpm when tested pursuant to Specification 4.0.5. | R84
 - c. At least once per 18 months during shutdown, by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure High-High test signal.
 - 2. Verifying that each spray pump starts automatically on a Containment Pressure High-High test signal.
 - d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed. |
- 4.6.2.1.2 Each RHR spray train shall be demonstrated OPERABLE: | R73
- a. Per surveillance requirements 4.5.2.b.2 and 4.5.2.f.3;
 - b. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed. | R73



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. 208
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 December 8, 1995, 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.

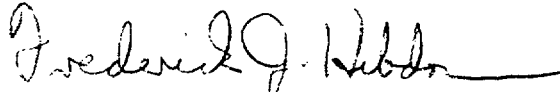
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 208, 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. Hebbon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 7, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 208

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 contain marginal lines indicating the areas of change.

REMOVE

3/4 6-16a

INSERT

3/4 6-16a

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. By verifying that on recirculation flow, each pump develops a differential pressure of greater than or equal to 143 psid at greater than or equal to 4750 gpm when tested pursuant to Specification 4.0.5. | R71
 - c. At least once per 18 months during shutdown, by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure High-High test signal.
 - 2. Verifying that each spray pump starts automatically on a Containment Pressure High-High test signal.
 - d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed. |
- 4.6.2.1.2 Each RHR Spray train shall be demonstrated OPERABLE: | R61
- a. Per surveillance requirements 4.5.2.b.2 and 4.5.2.f.3; |
 - b. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed. | R61



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 218 TO FACILITY OPERATING LICENSE NO. DPR-77

AND AMENDMENT NO. 208 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 December 8, 1995, the Tennessee Valley Authority (the licensee) proposed an amendment to the Technical Specifications (TS) for Sequoyah Nuclear Plant (SQN) Units 1 and 2. The requested changes would decrease the frequency specified in surveillance requirements (SRs) 4.6.2.1.1.d and 4.6.2.1.2.b for conducting air or smoke tests of the containment spray system headers and Residual Heat Removal System headers, respectively, from every 5 years to every 10 years. The tests are conducted to verify that each spray nozzle is unobstructed.

Guidance for the proposed changes was provided in Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation."

2.0 EVALUATION

The Containment Spray (CS) System contains two redundant spray headers containing 312 nozzles per header. It is designed to prevent containment pressure from exceeding its maximum design pressure during a large break loss of coolant accident by spraying borated water through the spray headers located at the top of the containment building. The cooler spray water condenses the steam in the containment atmosphere. If additional cooling is needed, two separate spray headers, containing 147 nozzles per header, supplied by the Residual Heat Removal (RHR) System, can be aligned manually to spray the containment atmosphere.

To ensure that these nozzles are not obstructed, the licensee injects hot air into each header at 5-year intervals and uses an infrared camera to detect flow from each nozzle. Test personnel manipulate the camera from the top of the polar crane, approximately 100 feet from the reactor cavity floor (which is a potential personnel safety hazard).

In December 1992, the NRC issued NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements." It indicated that operating history was reviewed to determine the success of the surveillance tests

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performed at various pressurized water reactors. Of the many tests reviewed, only three indicated nozzle flow problems. These problems were construction related and not due to header degradation. The conclusion drawn from the evaluation was that the corrosion of stainless steel piping is negligible during the extended surveillance interval and recommended that the interval be extended to 10 years. In addition, GL 93-05 also recommends that the surveillance interval be extended to 10 years, and points out that seven nozzles were found to be clogged at a nuclear power plant. The cause of this problem was the coating material that was applied to the carbon steel CS system piping. Since the CS and RHR piping at SQN are stainless steel, these problems are not a concern at SQN.

Following initial startup, the licensee performed flow tests of the CS and RHR nozzles three times on Unit 1 and twice on Unit 2. No plugging or flow degradation problems were detected. These tests demonstrated that obstructions did not exist in any of the spray nozzles.

Based on this analysis, the licensee's proposal to change the CS and RHR spray system nozzle testing frequency from 5 years to 10 years will continue to provide adequate assurance that the nozzles will be operable to mitigate the consequences of a design basis accident at SQN. Therefore, 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 amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes surveillance requirements. The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (61 FR 182). Accordingly, the amendment meets 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 amendment.

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 amendment 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: February 7, 1996

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

SEQUOYAH NUCLEAR PLANT

cc:

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