

May 30, 1995

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 AMENDMENT TO OPERATING LICENSE - SEQUOYAH NUCLEAR
PLANT, UNIT 1 (TAC NO. M91982) (TS 95-09)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 200 to Facility Operating License No. DPR-77 for the Sequoyah Nuclear Plant Unit 1. This amendment is in response to your application dated April 6, 1995.

The amendment modifies Operating License Condition 2.C.(25) to provide a limited extension of the ice condenser surveillance test interval on Unit 1 to coincide with the Cycle 7 refueling outage.

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/II
Office of Nuclear Reactor Regulation

Docket No. 50-327

- Enclosures: 1. Amendment No. 200 to License No. DPR-77
- 2. Safety Evaluation

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. 200
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 April 6, 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.

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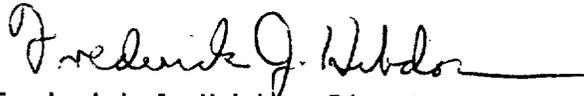
2. Accordingly, the license is hereby amended by modifying Paragraph 2.C.(25) to Facility Operating License No. DPR-77 to read as follows:

(25) Surveillance Interval Extension

The performance intervals for those surveillance requirements identified in the licensee's requests for surveillance interval extensions dated November 2, 1994, and April 6, 1995, shall be extended to October 1, 1995, to coincide with the Cycle 7 refueling outage. The extended interval shall not exceed a total of 29.5 months for 18-month surveillances, 48 months for 36-month surveillances, and 71.5 months for 54-month surveillances.

3. This license amendment is effective as of its date of issuance, to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Date of Issuance: May 30, 1995



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 200 TO FACILITY OPERATING LICENSE NO. DPR-77

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-327

1.0 INTRODUCTION

By application dated April 6, 1995, the Tennessee Valley Authority (TVA or the licensee) proposed an amendment to the Facility Operating License for Sequoyah Nuclear Plant (SQN) Unit 1. The requested change would modify Operating License Condition 2.C.(25) to allow a one-time extension of the performance interval for the ice condenser Surveillance Requirement (SR) 4.6.5.1.d on Unit 1 to coincide with the Cycle 7 refueling outage (RFO). As a result of the proposed extension, the surveillance interval for the ice condenser 18-month surveillance will extend approximately 4 weeks beyond the 25 percent extension allowed by TS 4.0.2. TVA expects Unit 1 shutdown to commence on September 9, 1995, and to be below Mode 4 (where operability of the ice condenser is no longer required) later in the month. Therefore, extension to October 1, 1995, has been requested.

2.0 DISCUSSION

The Unit 1 forced shutdown on March 2, 1993, lasted approximately 13 months. During that outage, the Cycle 6 RFO ice condenser surveillance test was performed in June 1993. Due to delays in restarting the unit, the ice condenser surveillance test was repeated in October 1993 to support the predicted schedule for the Cycle 7 RFO. However, further delays in restarting the unit resulted in extending the present operating cycle such that the RFO will begin approximately 4 weeks beyond the date that the ice condenser test should be performed to conform with the TS. The allowable extension provided by TS 4.0.2 will expire on September 5, 1995.

SR 4.6.5.1.d prescribes an 18-month surveillance interval for weighing ice in the ice condenser to ensure that sufficient ice is present at the beginning of each refueling cycle such that at least 1,930,000 pounds of ice remains at the end of the fuel cycle. This quantity of ice (993 pounds on average per basket for the 1,944 baskets) is the analyzed value for the large break loss-of-coolant accident (LOCA) containment analysis described in the Updated Final Safety Analysis Report (UFSAR). The large break LOCA is the limiting accident for the design of the ice condenser and forms the basis for the amount of ice required.

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app. evaluation regulatory

ENCLOSURE 2

Ice sublimates with time during the operating cycle, which requires the addition of ice to the bed during refueling outages. Historically, sublimation rates are not uniform throughout the ice bed. Higher rates are found in the rows next to the containment shell and crane wall. Calculations show that, starting in mid-August, there is a possibility that the average weight for the 72 baskets in Row 1, Group 3, will be less than the value specified in the UFSAR of 993 pounds at a confidence level of 95 percent. This is the only row-group that is projected to be below the UFSAR value. Based on the current weighted average sublimation rate for this row-group, the predicted average per basket weight on October 1, 1995, the last day of the proposed surveillance extension period, is 979 pounds.

Although the current FSAR analyzed safety limit is 1,930,000 pounds of ice, Westinghouse Electric Corporation has analyzed the SQN containment in WCAP-12455 for an ice weight of 1,880,000 pounds of ice. The peak calculated containment pressure for this case did not exceed 11.9 psig, which is below the containment design pressure of 12 psig. This WCAP was referenced in SQN Unit 1 and 2 Amendment Numbers 131 and 118, respectively, which was issued on March 2, 1990. The 1,880,000 pounds of ice represent an average basket weight of approximately 968 pounds per basket, which is below the minimum predicted basket weight that would occur during the extension period.

3.0 EVALUATION

Periodic surveillance requirements were not intended to adversely affect safe plant operation simply because a specified surveillance interval does not coincide with plant operating schedules. Normally, variations in schedules can be accommodated through the existing technical specifications. Specifically, TS 4.0.2 is an administrative control that ensures surveillance tests are performed within the specified interval, since it provides for an allowable tolerance of 25 percent for performing surveillances beyond the normal surveillance interval. This tolerance provides operational flexibility to allow for scheduling and performance considerations while still ensuring that the reliability of the equipment or system associated with the surveillance is not significantly degraded beyond that obtained from the nominal specified surveillance interval.

The staff has determined that the change in the refueling schedule will not be adverse to safety and that reasonable assurance exists that the ice condenser will not be degraded significantly by the requested interval extension. The surveillance interval extension proposed by TVA would result in a slightly diminished confidence in the reliability that would be provided by TS 4.0.2; but, based on the above discussion, TVA has satisfactorily addressed this concern.

The proposed license condition would extend the allowable surveillance intervals for the ice condenser from 18-months to 23.5 months. The staff believes that the additional extension of the surveillance interval of approximately 4 weeks beyond the present maximum extension allowed by the TS

(including the 25 percent allowed by TS 4.0.2) is not significant for the ice condenser tests. Therefore, the staff finds the proposed license condition acceptable.

4.0 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.

5.0 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 (FR). 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.

6.0 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: May 30, 1995

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

SEQUOYAH NUCLEAR PLANT

cc:

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