Docket No. 50-328

November 9, 1993

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

Dear Dr. Medford:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M87697) (TS 93-12)

The Commission has issued the enclosed Amendment No. 162 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant Unit 2. This amendment is in response to your application dated September 8, 1993.

The amendment adds Operating License Condition 2.C.(17) to provide a limited extension of the surveillance test intervals for certain specified instrumentation on Unit 2 to coincide with the Cycle 6 refueling outage. The surveillance intervals that are affected will not exceed 25 months.

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. 162 to License No. DPR-79
2. Safety Evaluation

cc w/enclosures:
See next page

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DATE:	10/14/93	10/18/93	10/27/93	10/29/93	11/9/93

DOCUMENT NAME: G:\SQN\87697.AMM

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AMENDMENT NO. 162 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328
DATED: November 9, 1993

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cc: Plant Service List

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. 162
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 September 8, 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. 162, 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 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Frederick J. Hebdon

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: November 9, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 162

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	INSERT
Operating License, Page 11	Operating License, Page 11

s. Primary Coolant Outside Containment (Section 22.2, III.D.1.1

Prior to exceeding 5 percent power Level, TVA is required to complete the leak tests on Unit 2, and results are to be submitted within 30 days from the completion of the testing.

(17) Surveillance Interval Extension

The performance interval for those surveillance requirements identified in the licensee's request for surveillance interval extension dated September 8, 1993, shall be extended to April 15, 1994, to coincide with the Cycle 6 refueling outage. The extended interval shall not exceed a total of 25 months.

D. Exemptions from certain requirements of Appendices G and J to 10 CFR Part 50 are described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplements No. 1 and No. 5. These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, these exemptions are hereby granted. The facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission.

A temporary exemption from General Design Criterion 57 found in Appendix A to 10 CFR part 50 is described in the Office of Nuclear Reactor Regulation's Safety Evaluation Report, Supplement No. 5, Section 6.2.4. This exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. The exemption, therefore, is hereby granted and shall remain in effect through the first refueling outage as discussed in Section 6.2.4 of Supplement 5 to the Safety Evaluation Report. The granting of the exemption is authorized with the issuance of the Facility Operating License. The facility will operate, to the extent authorized herein, in conformity with the application as amended, the provisions of the Act, and the regulations of the Commission. Additional exemptions are listed in attachment 2.

E. Physical Protection

The Licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revision to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Safeguards Contingency Plan is incorporated into the Physical Security Plan. The plans, which contain Safeguards Information protected under 10 CFR 73.21, are entitled: "Sequoyah Physical Security Plan," with revisions submitted through November 23, 1987; and "Sequoyah Security Personnel Training and Qualification Plan," with revisions submitted through April 16, 1987. Changes made in accordance with 10 CFR 73.55 shall be implemented in accordance with the schedule set forth therein.

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

ENCLOSURE 3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 162 TO FACILITY OPERATING LICENSE NO. DPR-79

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-328

1.0 INTRODUCTION

By application dated September 8, 1993, the Tennessee Valley Authority (TVA or the licensee) proposed amendments to the Technical Specifications (TS) for Sequoyah Nuclear Plant (SQN) Units 1 and 2. The requested changes would add Operating License Condition 2.C.(17) to provide limited extension of the performance interval for certain specified surveillance tests on Unit 2 to coincide with the Cycle 6 refueling outage. The surveillance tests that are affected are instrumentation tests that are presently required to be performed at 18-month intervals and are listed herein. The proposed revised intervals will not exceed 25 months.

2.0 DISCUSSION

As originally scheduled, the present operating cycle for Unit 2 started on May 15, 1992, and would end 18 months later with the start of the Cycle 6 refueling outage. Therefore, all instruments that are on a testing requirement frequency of 18 months, would be required to be performed before November 15, 1993. However, Unit 2 entered a forced outage on March 1, 1993, that has lasted more than 7 months. To regain the usable fuel resulting from the additional shutdown period, the licensee is planning to extend the present operating cycle for Unit 2 to April 2, 1994. This revised outage date results in the test intervals for certain surveillance tests (plus the 25 percent maximum extension allowed by TS 4.0.2) being exceeded prior to the outage.

The surveillance tests for which an extension is requested cannot be performed during power operation without risking a unit transient or would impact the present Unit 2 startup schedule. Without the extensions, either an unnecessary plant shutdown or a delay in the revised startup schedule in order to perform the tests would be needed.

Normally the proposed extension period would end on the new date that the unit is shut down to begin the refueling outage, April 2, 1994. However, to arrive at the final proposed date that would include all tests in the proposed extension, an additional 2-week extension past the start of the refueling outage (to April 15, 1994) is needed in order to maintain TS-compliance of the

low-temperature overpressure protection instrumentation. These instruments must remain in the operable status in Modes 4, 5 and 6 with the reactor vessel head in place as the unit is being shut down.

The licensee has requested extension of the following Surveillance Requirements:

TECHNICAL SPECIFICATION SECTION	DESCRIPTION	18-MONTH PLUS 25% ALLOWANCE EXPIRATION DATE
4.1.2.2.c	Boron Injection Flow Path Automatic Valve Actuation on Safety Injection Signal	2/14/94
4.1.3.4	Rod-Drop Timing Measurement	3/31/94
4.2.5.3	Channel Calibration of RCS Flow Instrumentation	2/23/94
4.3.1.1.1 Items 2,3,4,7, 8,9,10,11,12,13, 14,17,22	Channel Calibration of Reactor Trip System Instrumentation	2/3/94
4.3.1.1.2	Reactor Trip System Instrumentation Interlocks	2/3/94
4.3.1.1.3 Items 7,8,9, 10,12,13	Response Time of Reactor Trip System Instrumentation	2/9/94
4.3.2.1.1 Items 1,2,3,4, 5,6,7,8,9	Engineered Safety Feature Actuation System Instrumentation Channel Calibrations	1/30/94
4.3.2.1.2	Engineered Safety Feature Actuation System Instrumentation Interlocks	2/9/94
4.3.2.1.3 Items 2,3,5,6, 7,8,9,10,11,12, 13	Engineered Safety Feature Actuation System Instrumentation Response Time Measurement	1/31/94
4.3.3.5 Items 3,4,5,6, 7,9,11,12,13	Channel Calibration of Remote Shutdown Instrumentation	2/1/94
4.3.3.7.b	Channel Calibration of Accident Monitoring Instrumentation	2/1/94
4.4.3.2.1.a	Channel Calibration of Power Operated Relief Valves	2/9/94

4.4.3.2.1.b	Operation Through One Complete Cycle of Power Operated Relief Valves in Mode 4	3/8/94
4.4.12.1.b	Channel Calibration of Low Temperature Overpressure Protection System	2/8/94
4.5.1.1.2.b	Channel Calibration of Cold Leg Injection Accumulator Pressure and Level Instrumentation	2/18/94
4.5.2.e.1 and 4.5.3	Emergency Core Cooling System Flow Path Automatic Valve Actuation on Safety Injection Signal	2/14/94
4.6.3.2.e	Normal Charging Isolation Valve Actuation on Safety Injection Signal	2/14/94
4.6.4.3.b	Temperature Verification of Hydrogen Mitigation System Igniters	2/17/94
4.8.3.1.a.2	Lower-Voltage Circuit Breaker Test for Containment Penetration Conductor Overcurrent Protection Devices	2/1/94
4.8.3.3.a	Non-1E Load Circuit Breaker Test for Isolation Devices	2/3/94

The maximum surveillance interval increase for any instrument during which the plant is operating at power will be less than 2-1/4 months above the present maximum extension allowed by the TS. All tests will be performed during the refueling outage.

In its application for the amendment, TVA indicated that the margin of safety assumed by the required refueling surveillances may be slightly reduced by extending the surveillance intervals. However, TVA concluded that the reliability defined by the normal surveillance intervals (e.g., daily, weekly, monthly) will not be significantly reduced by the extension. This conclusion is based on the following considerations for extending surveillances that primarily involve instrumentation components.

1. Until testing is performed at the next refueling outage, current monitoring of instrumentation and ongoing TS surveillance tests provide assurance that the equipment involved in the extended surveillance tests will remain in an operable condition.

2. Periodic surveillance tests have been performed since the last refueling outage to monitor system and component performance and to detect any significant degradation. Surveillance testing will continue to be performed during the requested extension interval that provides added assurance that the reliability of equipment associated with the extended surveillance will not be significantly degraded by this one-time extension.

3. Historically, the electronic components in the reactor protection system and engineered safety features actuation system have shown a very high degree of reliability. This reliability is further enhanced by the online diagnostics and self-calibration routine provided by the Eagle-21 protection sets installed at Sequoyah.

TVA also supplied additional discussions related to the following specific instrument tests:

Rod-Drop Timing Measurements
Hydrogen Mitigation System Igniter Temperature
Lower-Voltage Circuit Breaker Test
Non-1E Load Circuit Breaker Test
Boron Injection, Emergency Core Cooling System, and Normal Charging Flow Path Automatic Valve Actuation on Safety Injection Signal

3.0 EVALUATION

The Unit 2 forced shutdown that started on March 1, 1993, has lasted approximately 7 months. In order to obtain optimum fuel burnup by recovering some of this core operating time, the licensee has moved the refueling outage previously scheduled to begin in September 1993 to April 1994. The impact of this rescheduling is that certain surveillance tests that are performed during a refueling outage will fall due (including the extensions permitted by TS 4.0.2) before the start of the outage, unless the surveillance intervals are extended.

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, but it provides for an allowable tolerance (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. However, circumstances can develop wherein the relief provided by TS 4.0.2 is inadequate, but good cause for additional relief can be demonstrated by the licensee.

Such is the case here. TVA has provided compelling evidence that the change in the refueling schedule was not undertaken for a reason or in a manner adverse to safety, that reasonable assurance exists that equipment associated with the subject surveillances will not be degraded significantly by the requested interval extensions, and that good cause exists for granting the extensions. The surveillance interval extensions proposed by TVA would result in a slightly diminished confidence in the reliability that would be provided by TS 4.0.2, but TVA has satisfactorily addressed this concern.

The proposed license condition would extend the allowable surveillance intervals for certain instruments from 22.5 months (nominal 18 months plus 4.5 months allowable extension per TS 4.02) to a maximum of 25 months. The staff believes that the additional 2.5 month extension is not significant for the particular instruments listed herein. 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (58 FR 50976). 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: D. LaBarge

Dated: November 9, 1993