

January 24, 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 AMENDMENTS (TAC NOS. M91223 AND M91224) (TS 95-01)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 194 to Facility Operating License No. DPR-77 and Amendment No. 185 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 January 3, 1995.

The amendments add a permissive statement to Surveillance Requirement 4.9.7.1 that will allow the auxiliary building bridge crane interlocks and physical stops to be defeated during implementation of the spent fuel pool storage capacity increase modification.

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

Docket Nos. 50-327 and 50-328

- Enclosures: 1. Amendment No. 194 to License No. DPR-77
- 2. Amendment No. 185 to License No. DPR-79
- 3. Safety Evaluation

cc w/enclosures: See next page

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AMENDMENT NO. 194 FOR SEQUOYAH UNIT NO. 1 - DOCKET NO. 50-327 and  
AMENDMENT NO. 185 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328  
DATED: January 25, 1995

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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. 194  
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 January 3, 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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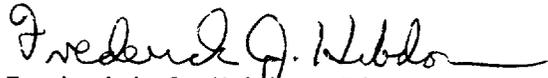
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.194 , 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 upon receipt.

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Heblon, 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 24, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 194

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 page is identified by the captioned amendment number and contains marginal lines indicating the area of change.

REMOVE

3/4 9-7

INSERT

3/4 9-7

## REFUELING OPERATIONS

### 3/4.9.7 CRANE TRAVEL - SPENT FUEL PIT AREA

#### LIMITING CONDITION FOR OPERATION

---

3.9.7 Loads traveling over fuel assemblies in the spent fuel pit area shall be restricted as follows:

a. Spent fuel storage pool:

Loads in excess of 2100 pounds\* shall be prohibited from travel over fuel assemblies in the spent fuel storage pool.

b. Cask loading area of the cask pit:

1. Loads which meet the weight, cross-sectional impact area, and allowable travel height criteria of Figure 3.9-1 may be carried over fuel assemblies stored in the cask loading area of the cask pit if the impact shield is in place over the cask loading area.
2. Loads which do not meet the weight, cross-sectional impact area, and allowable travel height criteria of Figure 3.9-1 shall be prohibited from travel over the cask loading area of the cask pit when fuel is stored in it.

APPLICABILITY: With fuel assemblies in the spent fuel storage pool or in the cask loading area of the cask pit.

#### ACTION:

With the requirements of the above specification not satisfied, place the crane load in a safe condition. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.7.1 Crane interlocks and physical stops which prevent crane hook travel over the storage pool shall be demonstrated OPERABLE within 7 days prior to crane use and at least once per 7 days thereafter during crane operation.#

4.9.7.2 When fuel is stored in the cask pit area, verify administrative requirements concerning the impact shield are met prior to moving loads in excess of 2100 pounds across the cask pit area.

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\*The spent fuel pool transfer canal gate and the spent fuel pool divider gate may travel over fuel assemblies in the spent fuel pool.

#The crane interlocks and physical stops may be defeated for activities associated with the spent fuel pit rerack project.



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. 185  
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 January 3, 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.

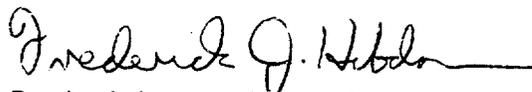
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 185, 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 upon receipt.

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 24, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 185

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 page is identified by the captioned amendment number and contains marginal lines indicating the area of change.

REMOVE

3/4 9-8

INSERT

3/4 9-8

## REFUELING OPERATIONS

### 3/4.9.7 CRANE TRAVEL - SPENT FUEL PIT AREA

#### LIMITING CONDITION FOR OPERATION

---

3.9.7 Loads traveling over fuel assemblies in the spent fuel pit area shall be restricted as follows:

a. Spent fuel storage pool:

Loads in excess of 2100 pounds\* shall be prohibited from travel over fuel assemblies in the spent fuel storage pool.

b. Cask loading area of the cask pit:

1. Loads which meet the weight, cross-sectional impact area, and allowable travel height criteria of Figure 3.9-1 may be carried over fuel assemblies stored in the cask loading area of the cask pit if the impact shield is in place over the cask loading area.
2. Loads which do not meet the weight, cross-sectional impact area, and allowable travel height criteria of Figure 3.9-1 shall be prohibited from travel over the cask loading area of the cask pit when fuel is stored in it.

APPLICABILITY: With fuel assemblies in the spent fuel storage pool or in the cask loading area of the cask pit.

ACTION:

With the requirements of the above specification not satisfied, place the crane load in a safe condition. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.9.7.1 Crane interlocks and physical stops which prevent crane hook travel over the storage pool shall be demonstrated OPERABLE within 7 days prior to crane use and at least once per 7 days thereafter during crane operation.#

4.9.7.2 When fuel is stored in the cask pit area, verify administrative requirements concerning the impact shield are met prior to moving loads in excess of 2100 pounds across the cask pit area.

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\*The spent fuel pool transfer canal gate and the spent fuel pool divider gate may travel over fuel assemblies in the spent fuel pool.

#The crane interlocks and physical stops may be defeated for activities associated with the spent fuel pit rerack project.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 194 TO FACILITY OPERATING LICENSE NO. DPR-77  
AND AMENDMENT NO. 185 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 January 3, 1995, 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 add a permissive statement to Surveillance Requirement 4.9.7.1 that will allow the auxiliary building bridge crane interlocks and physical stops to be defeated for activities associated with implementation of the spent fuel pit rerack project. As a result, the surveillance requirement that requires tests of these interlocks and stops would not be necessary during the spent fuel pool modification.

2.0 EVALUATION

By letter dated April 28, 1993, the Commission issued Amendment Nos. 167 and 157 to Facility Operating License Nos. DPR-77 and DPR-79 for the Sequoyah Nuclear Plant Units 1 and 2 respectively. The amendments were in response to a submittal from the licensee dated March 27, 1992 (and supplements), which incorporated the technical specification changes and evaluation needed for expansion of the spent fuel storage capacity to 2316 fuel assemblies. The increase is accomplished by adding a fuel rack storage module to the cask pit and replacing the present spent fuel storage racks with new high density racks with Boral as a neutron absorber in the cell walls, thereby allowing for more dense storage of spent fuel.

Subsequent to the processing of this amendment, the licensee has recognized the need to specifically address testing of the auxiliary building bridge crane interlocks and physical stops required by Surveillance Requirement (SR) 4.9.7.1. This SR requires that the "crane interlocks and physical stops which prevent crane hook travel over the storage pool shall be demonstrated OPERABLE within 7 days prior to crane use and at least once per 7 days thereafter during crane operation." In order for the auxiliary building crane hook to be moved over the spent fuel pool to remove the old racks and install

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the new racks, these interlocks and stops must be defeated, a condition not specifically allowed by the TS. With these interlocks and stops bypassed, the surveillance test cannot be performed.

In the submittals related to reracking, the licensee addressed four load-handling accidents, developed a safe-load path for each rack, and determined that the operation will comply with the criteria of Section 5.1.1 of NUREG-0612 for the control of heavy loads in the spent fuel pool. Administrative controls to be employed will ensure that at no time will the old or new racks be carried over fuel assemblies in the spent fuel pool. This was found to be acceptable by the staff in the safety evaluation for the amendment.

Due to the physical design of the electrical interlocks and physical stops, crane movement in the spent fuel pool is prevented during the modification. Therefore, in order to perform the spent fuel pool reracking evolutions, they must be defeated. The licensee has determined that administrative controls that are in place while the interlocks and stops are defeated prevent creation of accident scenarios that have not been previously addressed.

Based on this information, and the acceptability of the administrative controls established to control reracking in the spent fuel pool, the staff has determined that defeating the crane interlocks and physical stops is acceptable while the spent fuel pool racks are being replaced. Consequently, the corresponding surveillance requirement for testing the interlocks and physical stops is not necessary while the spent fuel pool racks are being replaced. Therefore, addition of the note referenced to Surveillance Requirement 4.9.7.1 that allows the crane interlocks and physical stops to be defeated for activities associated with the spent fuel pit rerack project is acceptable.

### 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 EXIGENT CIRCUMSTANCES

The staff has reviewed the licensee's proposed amendments and finds (1) that exigent circumstances exist, as provided for in 10 CFR 50.91(a)(6), in that the licensee and the Commission must act quickly and that time does not permit the Commission to publish a Federal Register notice allowing 30 days for prior public comment, and (2) that the licensee has not failed to use its best efforts to make a timely application and avoid creating the exigent circumstance. The Commission noticed the licensee's January 3, 1995 application for amendments in the Federal Register on January 9, 1995 (60 FR 2404), at which time the Commission made a proposed finding that the amendments involved no significant hazards condition and there has been no public comment in response to the notice.

## 5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 provide that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would not:

- a. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The SQN TSs prohibit loads in excess of 2100 pounds from travel over fuel assemblies in the spent-fuel pool and require the associated crane interlocks and physical stops to be periodically demonstrated operable. During the installation process, the crane interlocks and physical stops must be defeated to allow the removal and installation of racks and associated tools to be moved over the spent-fuel pool. Additionally, administrative controls are in place to return the crane interlocks and physical stops to an operable status after each phase of crane use. It should be noted that movement over fuel in the spent-fuel pool is prohibited. Therefore, the defeat of the interlocks and physical stops does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- b. Create the possibility of a new or different kind of accident from any previously analyzed.

A fuel movement and rack change-out sequence has been developed that illustrates that it will not be necessary to carry existing or new racks over fuel in the cask loading area or any region of the pool containing fuel. A lateral-free zone clearance from stored fuel shall be maintained.

Accordingly, it can be concluded that the bypassing of the interlocks and removal of the physical stops does not create the possibility of a new or different kind of accident from any previously analyzed.

- c. Involve a significant reduction in a margin of safety.

The SQN rerack project will ensure maximum emphasis to mitigate the potential load-drop accident by implementing measures to eliminate shortcomings in all aspects of the operation. Elimination of shortcomings will be accomplished by comprehensive training of the installation crew, redundancies built in lifting devices, procedures to address each phase of the project, and prohibitions of lifts over fuel assemblies in the spent-fuel pool. Therefore, defeating the crane interlock and physical stops to perform the required lifts does not involve a significant reduction in a margin of safety.

Based on the above, the Commission has made a final determination that the proposed amendments involve no significant hazards consideration.

## 6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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. Also, the staff has made a final no significant hazards consideration determination. 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.

## 7.0 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

Date: January 24, 1995

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

SEQUOYAH NUCLEAR PLANT

cc:

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