

December 29, 1982

Docket No. 50-327

Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

Subject: Issuance of Amendment No. 24 to Facility Operating License  
No. DPR-77 - Sequoyah Nuclear Plant, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 24 to Facility Operating License No. DPR-77.

This amendment changes the license condition related to hydrogen control measures and also changes the Technical Specifications to reflect the installation of a permanent hydrogen mitigation system (DHMS).

The Commission approved on December 15, 1982, the PHMS as adequate with the conditions that four additional igniters be installed in the upper containment and that additional tests be performed to demonstrate that the igniters initiate combustion under spray conditions. We request that, by January 28, 1983, you submit a proposed test program and schedule for performing these tests in a facility which would meet the license condition.

One aspect of your proposed surveillance Technical Specifications of September 17, 1982, was not acceptable. The basis for rejection was that the proposed visual inspection for cleanliness would not ensure operability. Your letter of December 23, 1982, however, agreed with the staff that each igniter would be verified to be a minimum of 1700°F (for startup as well as every 18 months). We recognize that the additional igniter tests could substantiate a lower minimum temperature and will consider a subsequent change to this Technical Specification upon completion of this test program.

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PDR ADCK 05000327  
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DATE	.....	.....	.....	.....	.....	.....	.....

Mr. H. G. Parris

- 2 -

December 29, 1982

A copy of the related safety evaluation supporting Amendment No. 24 to Facility Operating License DPR-77 is enclosed. Also enclosed is a copy of the Federal Register Notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosures:

1. Amendment No. 24 to DPR-77
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures:

See next page

OFFICE	LA:DL:LB:AA	DL:LB:AA	DL:LB:AA				
SURNAME	MDuncan/lmc	CST:ahh	EADensam				
DATE	12/31/82	12/31/82	12/23/82				

OFFICIAL RECORD COPY

16684; 217

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 24  
License No. DPR-77.

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Sequoyah Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-77 filed by the Tennessee Valley Authority (licensee), dated September 17, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter 1;
  - B. The facility will operate in conformity with the license, as amended, 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, Facility Operating License No. DPR-77 is amended by the following change:
  - A. Change paragraph 2.C.(22)D. to read as follows:
    - D. Hydrogen Control Measures (Section 22.2.11.B.7)
      - (1) Four additional igniter units shall be installed in the containment upper containment compartment in locations acceptable to the NRC staff prior to startup following the second refueling outage.

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DATE						



ATTACHMENT TO LICENSE AMENDMENT NO. 24

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following page of the Operating License with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

9

9a

INSERT

9

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D. Hydrogen Control Measures (Section 22.2, II.B.7)

- (1) Four additional igniter units shall be installed in the containment upper containment compartment in locations acceptable to the NRC staff prior to startup following the second refueling outage.
- (2) Additional tests shall be performed on the Tayco igniter to demonstrate that the igniters will initiate combustion in a spray environment such as that expected in the upper compartment of the ice condenser containment.

E. Auxiliary Feedwater (Section 22.2, II.E.1.1)

Prior to exceeding five percent power, auxiliary feedwater pump endurance tests will be completed and a report shall be submitted to NRC within 30 days after all tests are completed.

F. Radiation Monitors (Section 22.2.II.E.4.2)

TVA will install Radiation Monitors for isolation of fluid lines carrying potential radioactivity outside of containment at the earliest practical date consistent with scheduled or forced plant outages but prior to operation following the first refueling.

G. Emergency Preparedness Plan (Section 22.2.III.A.1.1 And Appendix E)

- (a) TVA shall maintain in effect an emergency plan that meets the regulatory requirement of 10 CFR Part 50, Appendix E, and the operator Planning Objectives of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Preparedness in Support of Nuclear Power Plants," January 1980.
- (b) No later than 90 days from the date of issuance of this license, TVA shall report to the NRC the status of any items related to emergency preparedness identified by FEMA or the NRC as requiring further action.

NOTE: Page 9a was deleted and items E, F, and G were added to this page.

June 7, 2004

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2, EXEMPTION FROM THE  
REQUIREMENTS OF 10 CFR PART 50, SECTION 50.68(b)(1)  
(TAC NOS. MC1871 AND MC1872)

Dear Mr. Singer:

The Commission has approved the enclosed exemption from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.68(b)(1) for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. This action is in response to your letter of application dated February 20, 2004, as supplemented by letter dated April 27, 2004, that submitted a request for an exemption from the requirements of 10 CFR 50.68(b)(1) for loading, unloading, and handling of the components of the Holtec HI-STORM 100 dry cask storage system at SQN.

A copy of the exemption has been forwarded to the Office of the *Federal Register* for publication.

Sincerely,

*/RA/*

Michael L. Marshall, Jr., Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Exemption

cc w/enclosure: See next page

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

As referenced in item 2.D of the Operating License, insert the following pages as Attachment 1.

REMOVE

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INSERT

1

2

## ATTACHMENT 1

### Additional Exemptions

1. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 55, was granted for the reactor coolant pump seal injection lines (Penetrations X-43A, X-43B, X-43C, and X-43D) on December 4, 1987 (A02 871210 005).
2. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 56, was granted for the containment vacuum relief lines (Penetrations X-111, X-112, and X-113) on December 14, 1987 (A02 871217 008).
3. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 55, was granted for the residual heat removal hot leg injection line (Penetration X-17) on December 14, 1987 (A02 871217 006).
4. An exemption to 10 CFR Part 50, Appendix J, Type C leak rate testing, was granted for the residual heat removal system (Penetrations X-17, X20A, and X-20B), upper head injection system (Penetrations X-108 and X-109), and pressure relief valves in the safety injection system, chemical and volume control system, and the containment spray system (Penetration X-24) on January 15, 1988 (A02 880122 005).
5. An exemption to 10 CFR Part 50, Appendix J, Type C leak rate testing, was granted for the containment and residual heat removal spray system check valves (Penetrations 48A, 48B, 49A, and 49B) on September 22, 1988 (A02 880928 019).
6. An exemption to 10 CFR Part 50, Appendix J, was granted for permanently uncoupling the third integrated leak rate test during each 10-year service period from the 10-year unit inservice inspection on September 29, 1989 (A02 891005 004).
7. An exemption to 10 CFR 50.60, "Acceptance Criteria for Fracture Prevention for Light Water Nuclear Power Reactors for Normal Operation," was granted to permit the use of safety margins recommended in the American Society of Mechanical Engineers Code Case N-514, "Low Temperature Overpressure Protection," in lieu of the safety margins required by Appendix G to 10 CFR Part 50. The exception was granted on June 18, 1993 (A02 930625 001).
8. An exception to 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage," was granted specifically to Subsection (d), "Access Requirements," Item 5, to allow use of a hand geometry biometrics system for site access control such that photograph identification badges may be taken offsite by individuals not employed by TVA.

**ATTACHMENT 1**  
**Additional Exemptions**

9. An exemption to 10 CFR 50.71(e) (4), "Maintenance of Records, Making of Reports," was granted to permit Sequoyah to update its single unified UFSAR for the two-unit site six months after Unit 2 refueling outages. The exemption was granted on March 9, 1998 (L44 980316 005).
10. An exemption to 10 CFR 70.24, "Criticality Accident Requirements," was granted to permit Sequoyah not to maintain a criticality monitoring system in each area where special nuclear material is handled, used, or stored. This exemption was granted on March 25, 1998 (L44 980331 004). This exemption is now considered "ineffective" since the adoption of boron credit in TS-99-17 pursuant to 10 CFR 50.68(b). (PER 03-016826-000)
11. An exception to 10 CFR 50.44, "Standards for Combustible Gas Control in Light-Water-Cooled Power Reactors," 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors," and 10 CFR 50 Part 50, Appendix K, "ECCS Evaluation Models," was granted to allow the use of newly designed fuel cladding and structural material, designated M5, developed by Frametome Cogema Fuels. This exemption was granted on July 29, 2000 (L44 000807 004).
12. An exemption to 10 CFR 50.68, "Criticality Accident Requirements," was granted to permit Sequoyah to load spent fuel assemblies into the HI-STORM 100 Cask System. The exemption has conditional requirements which may preclude its use. The exemption was granted on June 7, 2004 (L44 040610 008).

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 TECHNICAL SPECIFICATION AMENDMENTS FOR THE  
SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. M91992  
AND M91993) (TS 95-04)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 199 to Facility Operating License No. DPR-77 and Amendment No. 190 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 April 6, 1995.

The amendments revise the surveillance requirement for the power range neutron flux channel calibration frequency from monthly to every 31 effective full power days and delays first performance of the surveillance after reaching 15 percent power for 96 hours.

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 11-3  
Division of Reactor Projects - 1/1  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

- Enclosures:
1. Amendment No. 199 to License No. DPR-77
  2. Amendment No. 190 to License No. DPR-79
  3. Safety Evaluation

DISTRIBUTION W/ENCLOSURE

Docket Files	PUBLIC
SQN Rdg. File	S. Varga O-14E4
J. Zwolinski	G. Hill T-5C3
C. Grimes O-11E22	ACRS (4)
OPA O-2G5	OC/LFDCB T-9E10
M. Lessor RII	E. Morschoff RII

cc w/enclosures: See next page

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P PDR

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ATTACHMENT TO LICENSE AMENDMENT NO. 199

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 3-11  
3/4 3-13  
B3/4 3-1

INSERT

3/4 3-11  
3/4 3-13  
B3/4 3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE IS REQUIRED</u>
1. Manual Reactor Trip	N.A.	N.A.	S/U(1) and R(9)	1, 2, and *
2. Power Range, Neutron Flux	S	D(2), (3) and Q(6)	Q	1, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	Q	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(6)	Q	1, 2
5. Intermediate Range, Neutron Flux	S	R(6)	S/U(1)	1, 2, and *
6. Source Range, Neutron Flux	S(7)	R(6)	M and S/U(1)	2, 3, 4, 5, and *
7. Overtemperature Delta T	S	R	Q	1, 2
8. Overpower Delta T	S	R	Q	1, 2
9. Pressurizer Pressure--Low	S	R	Q	1, 2
10. Pressurizer Pressure--High	S	R	Q	1, 2
11. Pressurizer Water Level--High	S	R	Q	1, 2
12. Loss of Flow - Single Loop	S	R	Q	1
13. Loss of Flow - Two Loops	S	R	N.A.	1
14. Steam Generator Water Level--Low-Low				
A. Steam Generator Water Level--Low-Low (Adverse)	S	R	Q	1, 2
B. Steam Generator Water Level--Low-Low (EAM)	S	R	Q	1, 2
C. RCS Loop AT	S	R	Q	1, 2
D. Containment Pressure (EAM)	S	R	Q	1, 2

SEQUOYAH - UNIT 1

3/4 3-11

Amendment No. 54, 141, 199

MAY 30 1995



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20545

NRC ITR

September 17, 1980

Docket No: 50-327

Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNIT 1 - ISSUANCE OF FACILITY OPERATING  
LICENSE DPR-77

The Nuclear Regulatory Commission has issued the enclosed Facility Operating License DPR-77 to the Tennessee Valley Authority for the Sequoyah Nuclear Plant, Unit 1, located in Hamilton County, Tennessee. License No. DPR-77 authorizes operation of the Sequoyah Nuclear Plant, Unit 1 at 100 percent power (3411 megawatts thermal) upon completion of certain related construction items.

Also enclosed is a copy of a related Federal Register notice which has been forwarded to the Office of the Federal Register for publication.

We are also enclosing a copy of our report "Discussion of the Environmental Effects of the Uranium Fuel Cycle", dated September 1980.

Sincerely,

Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosures:

1. Facility Operating License No. DPR-77
2. Federal Register Notice
3. Discussion of the Environmental Effects of the Uranium Fuel Cycle

cc w/enclosures:  
See next page

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# Technical Specifications

Sequoyah Nuclear Plant

Unit No. 1

Docket No. 50-327

Appendix "A" to  
License No. DPR-77

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Fall 1980

Office of Nuclear Reactor Regulation

Issued by the  
U.S. Nuclear Regulatory  
Commission



DUPLICATE DOCUMENT

Entire document previously  
entered into system under:

AND 8010080393

No. of pages: 500

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Insert the following pages into the Technical Specifications:

REMOVE

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INSERT

3/4 3-48

TABLE 3.3-8

METEOROLOGICAL MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>LOCATION</u>	<u>MINIMUM OPERABLE</u>
1. WIND SPEED		
a. Channel 1,	Nominal Elev. 780 MSL	1
b. Channel 2,	Nominal Elev. 897 MSL	1
2. WIND DIRECTION		
a. Channel 1,	Nominal Elev. 780 MSL	1
b. Channel 2,	Nominal Elev. 897 MSL	1
3. AIR TEMPERATURE - DELTA T		
a. Channel 1,	Nominal Elev. 780 to 897 MSL	
b. Channel 2,	Nominal Elev. 780 to 1047 MSL	1 of 2



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20548

May 26, 1989

Docket Nos. 50-327  
and 50-328

Mr. Oliver D. Kingsley, Jr.  
Senior Vice President, Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: CORRECTIONS TO AMENDMENT NOS. 111 AND 101 (TS 88-25) (TAC R00501/  
R00502) - SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

By letter dated April 3, 1989, we issued Amendment No. 111 to Facility Operating License DPR-77 and Amendment No. 101 to Facility Operating License DPR-79, for Sequoyah Nuclear Plant, Units 1 and 2. In these amendments, pages 3/4 4-4a and 3/4 4-4b (Unit 1), and pages 3/4 4-8 and 3/4 4-8a (Unit 2) had errors which did not involve the changes discussed in the amendments. The corrected pages are enclosed. The error was that these pages included surveillance requirement 4.4.3.2.3 which had been deleted from both units in Amendments 105 and 94, dated March 9, 1989, respectively.

In Amendment 109 dated April 3, 1989 to Operating License DPR-77 for Sequoyah, Unit 1, we issued page 3/4 11-14 with an incorrect amendment number on the page. This page was an overleaf page and not part of the changes discussed in the amendment. The corrected page is enclosed.

In Amendment 104, dated May 5, 1989, to Operating License DPR-79 for Sequoyah, Unit 2, we issued Page 3/4 3-4 with the Power Range Neutron Flux Interlock listed as item 22.D, instead of item 22.F as requested by the licensee, in Table 3.3-1. This correction to item 22.F is needed (1) to have the Unit 2 Technical Specifications consistent with the Unit 1 Technical Specifications and (2) to have the licensee's current surveillance instructions correctly identify the interlock in the Unit 2 Technical Specifications. This correction does not affect the safety evaluation issued by the staff to approve Amendment No. 104.

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FDR ADOCK 05000327  
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Mr. Oliver D. Kingsley, Jr.

We apologize for any inconvenience caused by these errors. If you have any questions, please contact Jack Dorshew, Sequoyah Project Manager at 301/492-0704.

Sincerely,

Original signed by Rajender Auluck  
for Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Corrected pages for Sequoyah Unit 1
- 2. Corrected pages for Sequoyah Unit 2

cc w/ enclosures  
See next page

Distribution

~~Docket File~~

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Projects Rdg.  
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ARM/LFMB  
EJordan  
GPA/PA  
DHagan  
THeek (8)  
SQN Rdg.  
LWatson

FC	:HRR:TVA/LA	:HRR:TVA/PH	:TVA:DO/P	:	:	:	:
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ATE	:5/26/89	:5/26/89	:5/22/89	:	:	:	:

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CORRECTED PAGES

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 4-4a  
3/4 4-4b  
3/4 11-14

INSERT

3/4 4-4a.  
3/4 4-4b  
3/4 11-14

2006040101 020724  
PDR ALICE 02000327  
PDR

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

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4.4.3.2.3 (Deleted.)

4.4.3.2.4 In addition to the requirements of Specification 4.0.5 the repair welds and adjoining areas of the pressurizer relief line shall be examined, using improved UT detection and evaluation procedures which have been demonstrated to be effective in detecting IGSCC, prior to entering MODE 4 whenever the plant has been in COLD SHUTDOWN for 72 hours or more if the examination has not been performed in the previous 6 months.

In the event these 6-month period examinations find the piping free of unacceptable indications for 3 successive inspections, the inspection interval shall be extended to 36 month intervals ( $\pm$  12 months to coincide with a scheduled refueling outage).

In the event these 36-month period examinations find the piping free of unacceptable indications for 3 successive inspections, the inspection interval shall be extended to 80-month periods.



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

January 14, 1986

Docket Nos: 50-327  
and 50-328

Mr. H. G. Parris  
Manager of Power and Engineering (Nuclear)  
Tennessee Valley Authority  
6N011 B Missionary Ridge Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Parris:

Subject: Issuance of Amendment No. 42 to Facility Operating License  
No. DPR-77 and Amendment No. 34 to Facility Operating  
License No. DPR-79 - Sequoyah Nuclear Plant, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 42 to Facility Operating License No. DPR-77 and Amendment No. 34 to Facility Operating License No. DPR-79. These amendments are in response to your requests dated October 2 and November 7, 1984. The changes requested in the October 2, 1984, letter which relate to TVA organization will be addressed in a future amendment.

The amendments change the Technical Specifications to delete the table listing Containment Penetration Conductor Overcurrent Protection Devices and to make them meet the intent of the NRC model Radiological Effluent Technical Specifications for PWRs. The amendments are effective as of the date of issuance.

A copy of the related safety evaluation supporting Amendment No. 42 to Facility Operating License DPR-77 and Amendment No. 34 to Facility Operating License DPR-79 is enclosed.

Notice of issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

B. J. Youngblood, Director  
PWR Project Directorate #4  
Division of PWR Licensing-A

B60122024B B60114  
PDR ADOCK 05000327  
P PDR

Enclosures:

1. Amendment No. 42 to DPR-77
2. Amendment No. 34 to DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

ATTACHMENT TO LICENSE AMENDMENT NO. 42

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following pages of the Appendix "A "Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Amended  
Page

1-4	3/4 11-10	3/4 12-10
1-6	3/4 11-11	3/4 12-11
1-6a	3/4 11-12	B 3/4 11-1
3/4 3-69	3/4 11-13	B 3/4 11-2
3/4 3-71	3/4 11-14	B 3/4 11-3
3/4 3-74	3/4 11-15	B 3/4 11-4
3/4 3-77	3/4 11-16	B 3/4 11-5
3/4 8-15	3/4 11-17	B 3/4 12-1
3/4 8-16	3/4 11-18	5-2
3/4 8-17	3/4 11-19	6-12
3/4 11-1	3/4 11-20	6-15
3/4 11-2	3/4 11-21	6-15a
3/4 11-3	3/4 11-22	6-17
3/4 11-4	3/4 12-1	6-18
3/4 11-5	3/4 12-2	6-19
3/4 11-6	3/4 12-6	6-23
3/4 11-7	3/4 12-7	6-24
3/4 11-8	3/4 12-8	6-25
3/4 11-9	3/4 12-9	

Pages 3/4 8-17 through 3/4 8-33 for Table 3.8-1 are deleted.

**SEQUOYAH, UNIT 2  
SUMMARY OF CHANGES  
OFFICE OF CHIEF INFORMATION OFFICER COPY**

Page Number	Changes Needed
2 (License)	Includes duplicate copies of page 2 to the license. Remove one copy.
Attachment 2 to License	Attachment 2 is missing. Insert Attachment 2, as referenced in item 2.D of the license and modified by letter dated June 7, 2004 (attached).
2-10	Includes page 2-10 from both Amendment Nos. 201 and 214. Remove copy from Amendment No. 201.
3/4 3-27a	Includes page 3-27a from both Amendment Nos. 197 and 209. Remove copy from Amendment No. 197.
3/4 3-27b	Includes page 3-27b from both Amendment Nos. 197 and 209. Remove copy from Amendment No. 197.
3/4 4-8a	Remove page. Page was deleted in a correction letter dated May 26, 1989 (attached).
3/4 8-22 through 8-32	Remove these pages. These pages were deleted in Amendment No. 34 (attached).

June 7, 2004

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2, EXEMPTION FROM THE  
REQUIREMENTS OF 10 CFR PART 50, SECTION 50.68(b)(1)  
(TAC NOS. MC1871 AND MC1872)

Dear Mr. Singer:

The Commission has approved the enclosed exemption from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.68(b)(1) for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. This action is in response to your letter of application dated February 20, 2004, as supplemented by letter dated April 27, 2004, that submitted a request for an exemption from the requirements of 10 CFR 50.68(b)(1) for loading, unloading, and handling of the components of the Holtec HI-STORM 100 dry cask storage system at SQN.

A copy of the exemption has been forwarded to the Office of the *Federal Register* for publication.

Sincerely,

/RA/

Michael L. Marshall, Jr., Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Exemption

cc w/enclosure: See next page

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

As referenced in Item 2.D of the Operating License, insert the following pages as Attachment 2.

REMOVE

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INSERT

1

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**ATTACHMENT 2**  
**Additional Exemptions**

1. An exemption to 10 CFR Part 50, Appendix A General Design Criteria 55, was granted for the reactor coolant pump seal injection lines (Penetrations X-43A, X43B, X-43C, and X-43D) on December 4, 1987 (A02 871210 005).
2. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 56, was granted for the containment vacuum relief lines (Penetration X-111, X- 112, and X113) on December 14, 1987 (A02 871217 008).
3. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 55, was granted for the residual heat removal hot leg injection line (Penetration X-17) on December 14, 1987 (A02 871217 006).
4. An exemption to 10 CFR Part 50, Appendix J, Type C leak rate testing, was granted for the residual heat removal system (Penetration X-17, X-20A, and X-20B), upper head injection system (Penetration X-108 and X-109), and pressure relief valves in the safety injection system, chemical and volume control system, and the containment spray system (Penetration X-24) on January 15, 1988 (A02 880122 005).
5. An exemption to 10 CFR Part 50, Appendix J, Type C leak rate testing, was granted for the containment and residual heat removal spray system check valves (Penetrations 48A, 48B, 49A, and 49B) on September 22, 1988 (A02 880928 019)
6. An exemption to 10 CFR Part 50, Appendix J, was granted for allowing Type A testing to continue on a normal test frequency following two consecutive Type A test failures on August 27, 1990 (A02 900831 004).
7. An exemption to 10 CFR Part 50, Appendix J was granted for permanently uncoupling the third integrated leak rate test during each 10-year service period from the 10-year unit inservice inspection on January 29, 1991 (A02 910131 001).
8. An exemption to 10 CFR 50.60, "Acceptance Criteria for Fracture Prevention for Light Water Nuclear Power Reactors for Normal Operation," was granted to permit the use of safety margins recommended in the American Society of Mechanical Engineers Code Case N-514, "Low Temperature Overpressure Protection," in lieu of the safety margins required by Appendix G to 10 CFR Part 50. The exemption was granted on June 18, 1993 (A02 930625 001).
9. An exemption to 10 CFR Part 50, Appendix J was granted for allowing Type A testing to continue on a normal test frequency following three consecutive Type A failures on July 23, 1993 (W57 930728 001).

**ATTACHMENT 2**  
Additional Exemptions

10. An exemption to 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage," was granted specifically to Subsection (d), "Access Requirements," Item 5, to allow use of a hand geometry biometrics system for site access control such that photograph identification badges may be taken offsite by individuals not employed by TVA.
11. An exception to 10 CFR 50.71(e)(4), "Maintenance of Records, Making of Reports," was granted to permit Sequoyah to update its single unified UFSAR for the two-unit site six months after Unit 2 refueling outages. The exemption was granted on March 9, 1998 (L44 980316 005).
12. An exemption to 10 CFR 70.24, "Criticality Accident Requirements," was granted to permit Sequoyah not to maintain a criticality monitoring system in each area where special nuclear material is handled, used, or stored. This exemption was granted on March 25, 1998 (L44 980331004). This exemption is now considered "ineffective" since the adoption of boron credit in TS-99-17 pursuant to 10 CFR 50.68(b). (PER 03-016826-000)
13. An exception to 10 CFR 50.44, "Standards for Combustible Gas Control in Light-Water-Cooled Power Reactors," 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors," and 10 CFR 50 Part 50, Appendix K, "ECCS Evaluation Models," was granted to allow the use of newly designed fuel cladding and structural material, designated M5, developed by Frametome Cogema Fuels. This exemption was granted on July 29, 2000 (L44 000807 004).
14. An exemption to 10 CFR 50.68, "Criticality Accident Requirements," was granted to permit Sequoyah to load spent fuel assemblies into the HI-STORM 100 Cask System. The exemption has conditional requirements which may preclude its use. The exemption was granted on June 7, 2004 (L44 040610 008).



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20545  
May 26, 1989

Docket Nos. 50-327  
and 50-328

Mr. Oliver D. Kingsley, Jr.  
Senior Vice President, Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: CORRECTIONS TO AMENDMENT NOS. 111 AND 101 (TS 88-25) (TAC R00501/  
R00502) - SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

By letter dated April 3, 1989, we issued Amendment No. 111 to Facility Operating License DPR-77 and Amendment No. 101 to Facility Operating License DPR-79, for Sequoyah Nuclear Plant, Units 1 and 2. In these amendments, pages 3/4 4-4a and 3/4 4-4b (Unit 1), and pages 3/4 4-8 and 3/4 4-8a (Unit 2) had errors which did not involve the changes discussed in the amendments. The corrected pages are enclosed. The error was that these pages included surveillance requirement 4.4.3.2.3 which had been deleted from both units in Amendments 105 and 94, dated March 9, 1989, respectively.

In Amendment 109 dated April 3, 1989 to Operating License DPR-77 for Sequoyah, Unit 1, we issued page 3/4 11-14 with an incorrect amendment number on the page. This page was an overleaf page and not part of the changes discussed in the amendment. The corrected page is enclosed.

In Amendment 104, dated May 5, 1989, to Operating License DPR-79 for Sequoyah, Unit 2, we issued Page 3/4 3-4 with the Power Range Neutron Flux Interlock listed as item 22.D, instead of item 22.F as requested by the licensee, in Table 3.3-1. This correction to item 22.F is needed (1) to have the Unit 2 Technical Specifications consistent with the Unit 1 Technical Specifications and (2) to have the licensee's current surveillance instructions correctly identify the interlock in the Unit 2 Technical Specifications. This correction does not affect the safety evaluation issued by the staff to approve Amendment No. 104.

Dfol  
11

Mr. Oliver D. Kingsley, Jr.

-2-

We apologize for any inconvenience caused by these errors. If you have any questions, please contact Jack Dorshew, Sequoyah Project Manager at 301/492-0704.

Sincerely,

Original signed by Rajender Auluci  
for Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Corrected pages for Sequoyah Unit 1
- 2. Corrected pages for Sequoyah Unit 2

cc w/ enclosures  
See next page

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CORRECTED PAGES

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 3-4  
3/4 4-8  
3/4 4-8a

INSERT

3/4 3-4 ,  
3/4 4-8  
- -



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

January 14, 1986

Docket Nos: 50-327  
and 50-328

Mr. H. G. Parris  
Manager of Power and Engineering (Nuclear)  
Tennessee Valley Authority  
6N011 B Missionary Ridge Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Parris:

Subject: Issuance of Amendment No. 42 to Facility Operating License  
No. DPR-77 and Amendment No. 34 to Facility Operating  
License No. DPR-79 - Sequoyah Nuclear Plant, Units 1 and 2

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 42 to Facility Operating License No. DPR-77 and Amendment No. 34 to Facility Operating License No. DPR-79. These amendments are in response to your requests dated October 2 and November 7, 1984. The changes requested in the October 2, 1984, letter which relate to TVA organization will be addressed in a future amendment.

The amendments change the Technical Specifications to delete the table listing Containment Penetration Conductor Overcurrent Protection Devices and to make them meet the intent of the NRC model Radiological Effluent Technical Specifications for PWRs. The amendments are effective as of the date of issuance.

A copy of the related safety evaluation supporting Amendment No. 42 to Facility Operating License DPR-77 and Amendment No. 34 to Facility Operating License DPR-79 is enclosed.

Notice of issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script that reads "B. J. Youngblood".

B. J. Youngblood, Director  
PWR Project Directorate #4  
Division of PWR Licensing-A

B60122024B B60114  
PDR ADOCK 05000327  
P PDR

Enclosures:

1. Amendment No. 42 to DPR-77
2. Amendment No. 34 to DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

ATTACHMENT TO LICENSE AMENDMENT NO. 34

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace the following pages of the Appendix "A "Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Amended  
Page

1-4	3/4 11-9	3/4 12-10
1-6	3/4 11-10	B 3/4 11-1
1-7	3/4 11-11	B 3/4 11-2
3/4 3-68	3/4 11-12	B 3/4 11-3
3/4 3-71	3/4 11-13	B 3/4 11-4
3/4 3-76	3/4 11-14	B 3/4 11-5
3/4 3-79	3/4 11-15	B 3/4 12-1
3/4 8-16	3/4 11-16	5-2
3/4 8-17	3/4 11-17	6-15
3/4 8-18	3/4 11-18	6-18
3/4 11-1	3/4 11-19	6-19
3/4 11-2	3/4 12-1	6-22
3/4 11-3	3/4 12-2	6-23
3/4 11-4	3/4 12-6	6-24
3/4 11-5	3/4 12-7	6-29
3/4 11-6	3/4 12-8	6-30
3/4 11-8	3/4 12-9	6-31

PAGES 3/4 8-18 through 3 . 8-32  
for Table 3.8-1 are deleted.

**SEQUOYAH, UNIT 1  
SUMMARY OF CHANGES  
OFFICE OF NUCLEAR REACTOR REGULATION COPY**

Page Number	Changes Needed
9 (License)	Replace with page 9 of Amendment No. 24 (attached).
9a (License)	Remove page (this was deleted with Amendment 24)
Attachment 1 to License	Attachment 1 missing. Insert Attachment 1, as referenced in item 2.D of the License and modified by letter dated June 7, 2004 (attached).
2-11	Inadvertently included TS page from Unit 2. Replace with Unit 1 TS page from Amendment No. 213 (attached).
2-11a	Includes duplicate copies of page 2-11a. Remove one copy.
3/4 3-27a	Includes page 3-27a from both Amendment Nos. 207 and 219. Remove page from Amendment No. 207.
3/4 3-27b	Includes page 3-27b from both Amendment Nos. 207 and 219. Remove page from Amendment No. 207.
3/4 4-4b	Replace with page 4-4b from correction letter dated May 26, 1989 (attached).
3/4 6-16b	Missing page. Insert page 6-16b from Amendment No. 69 (attached).
3/4 6-25b	Remove page. While the licensee's application clearly indicates that page 6-25b is to be deleted, the corresponding Amendment No. 12 is silent on this issue (both Amendment 12 and licensee's letter attached).

December 29, 1982

Docket No. 50-327

Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower II  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

Subject: Issuance of Amendment No. 24 to Facility Operating License  
No. DPR-77 - Sequoyah Nuclear Plant, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 24 to Facility Operating License No. DPR-77.

This amendment changes the license condition related to hydrogen control measures and also changes the Technical Specifications to reflect the installation of a permanent hydrogen mitigation system (DHMS).

The Commission approved on December 15, 1982, the PHMS as adequate with the conditions that four additional igniters be installed in the upper containment and that additional tests be performed to demonstrate that the igniters initiate combustion under spray conditions. We request that, by January 28, 1983, you submit a proposed test program and schedule for performing these tests in a facility which would meet the license condition.

One aspect of your proposed surveillance Technical Specifications of September 17, 1982, was not acceptable. The basis for rejection was that the proposed visual inspection for cleanliness would not ensure operability. Your letter of December 23, 1982, however, agreed with the staff that each igniter would be verified to be a minimum of 1700°F (for startup as well as every 18 months). We recognize that the additional igniter tests could substantiate a lower minimum temperature and will consider a subsequent change to this Technical Specification upon completion of this test program.

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P PDR

OFFICE	.....	.....	.....	.....	.....	.....	.....
SURNAME	.....	.....	.....	.....	.....	.....	.....
DATE	.....	.....	.....	.....	.....	.....	.....

Mr. H. G. Parris

- 2 -

December 29, 1982

A copy of the related safety evaluation supporting Amendment No. 24 to Facility Operating License DPR-77 is enclosed. Also enclosed is a copy of the Federal Register Notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosures:

- 1. Amendment No. 24 to DPR-77
- 2. Safety Evaluation
- 3. Federal Register Notice

cc w/enclosures:  
See next page

OFFICE	LA:DL:LB..#4.	DL:LB..#4.....	DL:LB..#4.....	.....	.....	.....	.....
SURNAME	MDuncan/lmc.	CSE/AMe	EAdensam	.....	.....	.....	.....
DATE	12/17/82.....	12/17/82.....	12/29/82.....	.....	.....	.....	.....

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 24  
License No. DPR-77.

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to the Sequoyah Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-77 filed by the Tennessee Valley Authority (licensee), dated September 17, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the license, as amended, 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, Facility Operating License No. DPR-77 is amended by the following change:
  - A. Change paragraph 2.C.(22)D. to read as follows:
    - D. Hydrogen Control Measures (Section 22.2.11.D.7)
      - (1) Four additional igniter units shall be installed in the containment upper containment compartment in locations acceptable to the NRC staff prior to startup following the second refueling outage.

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(2) Additional tests shall be performed on the Tayco igniter to demonstrate that the igniters will initiate combustion in a spray environment such as that expected in the upper compartment of the ice condenser containment.

H. The license is further amended by page changes to the Appendix A Technical Specifications as indicated in the attachments 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 Appendix A, as revised through Amendment No. 24, are hereby incorporated into 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.

FOR THE NUCLEAR REGULATORY COMMISSION

*DK*  
*/s/ R. Purple*

Darrell G. Eisenhut, Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Date of Issuance: December 29, 1982

*to be kept in file*  
*12/29/82*

OFFICE	LA:DL:LB #4	DL:LB #4	OELD	DL:LB #4	AD:DL	DIB/MA	
SURNAME	M Duncan/lmc	C. Stone	R. Purple	K. Adams	T. Novak	D. Eisenhut	
DATE	12/1/82	12/1/82	12/12/82	12/27/82	12/27/82	12/28/82	

ATTACHMENT TO LICENSE AMENDMENT NO. 24

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following page of the Operating License with the attached page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

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9a

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D. Hydrogen Control Measures (Section 22.2, II.B.7)

- (1) Four additional igniter units shall be installed in the containment upper containment compartment in locations acceptable to the NRC staff prior to startup following the second refueling outage.
- (2) Additional tests shall be performed on the Tayco igniter to demonstrate that the igniters will initiate combustion in a spray environment such as that expected in the upper compartment of the ice condenser containment.

E. Auxiliary Feedwater (Section 22.2, II.E.1.1)

Prior to exceeding five percent power, auxiliary feedwater pump endurance tests will be completed and a report shall be submitted to NRC within 30 days after all tests are completed.

F. Radiation Monitors (Section 22.2.II.E.4.2)

TVA will install Radiation Monitors for isolation of fluid lines carrying potential radioactivity outside of containment at the earliest practical date consistent with scheduled or forced plant outages but prior to operation following the first refueling.

G. Emergency Preparedness Plan (Section 22.2.III.A.1.1 And Appendix E)

- (a) TVA shall maintain in effect an emergency plan that meets the regulatory requirement of 10 CFR Part 50, Appendix E, and the operator Planning Objectives of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Preparedness in Support of Nuclear Power Plants," January 1980.
- (b) No later than 90 days from the date of issuance of this license, TVA shall report to the NRC the status of any items related to emergency preparedness identified by FEMA or the NRC as requiring further action.

NOTE: Page 9a was deleted and items E, F, and G were added to this page.

June 7, 2004

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2, EXEMPTION FROM THE  
REQUIREMENTS OF 10 CFR PART 50, SECTION 50.68(b)(1)  
(TAC NOS. MC1871 AND MC1872)

Dear Mr. Singer:

The Commission has approved the enclosed exemption from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.68(b)(1) for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. This action is in response to your letter of application dated February 20, 2004, as supplemented by letter dated April 27, 2004, that submitted a request for an exemption from the requirements of 10 CFR 50.68(b)(1) for loading, unloading, and handling of the components of the Holtec HI-STORM 100 dry cask storage system at SQN.

A copy of the exemption has been forwarded to the Office of the *Federal Register* for publication.

Sincerely,

*/RA/*

Michael L. Marshall, Jr., Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Exemption

cc w/enclosure: See next page

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

As referenced in item 2.D of the Operating License, insert the following pages as Attachment 1.

REMOVE

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INSERT

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## ATTACHMENT 1

### Additional Exemptions

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**ATTACHMENT 1**  
**Additional Exemptions**

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October 4, 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 TECHNICAL SPECIFICATION AMENDMENTS FOR THE SEQUOYAH  
NUCLEAR PLANT, UNITS 1 AND 2 (TAC NOS. M93244 AND M93245) (TS 95-12)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 213 to Facility Operating License No. DPR-77 and Amendment No. 203 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 August 7, 1995.

The amendments correct various editorial errors in the text of the technical specifications and remove provisions that have expired or are no longer applicable.

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 Nos. 50-327 and 50-328

- Enclosures: 1. Amendment No. 213 to License No. DPR-77
- 2. Amendment No. 203 to License No. DPR-79
- 3. Safety Evaluation

cc w/enclosures: See next page

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ATTACHMENT 2 TO LICENSE AMENDMENT NO. 213

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

Index Page VIII  
Index Page X  
2-11  
3/4 1-17  
3/4 2-1  
3/4 3-5  
3/4 3-8  
3/4 3-22  
3/4 3-45  
3/4 3-46  
3/4 3-56a  
3/4 4-28  
3/4 4-29  
3/4 6-25a  
3/4 7-21  
3/4 7-21b  
3/4 8-6  
3/4 8-12  
3/4 8-13  
3/4 9-8a

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Index Page VIII  
Index Page X  
2-11  
3/4 1-17  
3/4 2-1  
3/4 3-5  
3/4 3-8  
3/4 3-22  
3/4 3-45  
3/4 3-46  
3/4 3-56a  
3/4 4-28  
3/4 4-29  
3/4 6-25a  
3/4 7-21  
3/4 7-21b  
3/4 8-6  
3/4 8-12  
3/4 8-13  
3/4 9-8a

TABLE 2.2-1 (Continued)  
REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 5: Trip Time Delay - Steam Generator Water Level -- Low-Low

$$T_s = \{(-0.00583)(P)^3 + (0.735)(P)^2 - (33.560)(P) + 649.5\} \quad 0.99 \text{ secs.}$$

$$T_m = \{(-0.00532)(P)^3 + (0.678)(P)^2 - (31.340)(P) + 589.5\} \quad 0.99 \text{ secs.}$$

Where:

P = RCS Loop  $\Delta T$  Equivalent to Power (% RTP),  $P \leq 50\%$  RTP

$T_s$  = Time delay for Steam Generator Water level -- Low-Low  
Reactor Trip, one Steam Generator affected. (Secs.)

$T_m$  = Time delay for Steam Generator Water Level -- Low-Low  
Reactor Trip, two or more Steam Generators affected. (Secs.)



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
May 26, 1989

Docket Nos. 50-327  
and 50-328

Mr. Oliver D. Kingsley, Jr.  
Senior Vice President, Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: CORRECTIONS TO AMENDMENT NOS. 111 AND 101 (TS 88-25) (TAC R00501/  
R00502) - SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

By letter dated April 3, 1989, we issued Amendment No. 111 to Facility Operating License DPR-77 and Amendment No. 101 to Facility Operating License DPR-79, for Sequoyah Nuclear Plant, Units 1 and 2. In these amendments, pages 3/4 4-4a and 3/4 4-4b (Unit 1), and pages 3/4 4-8 and 3/4 4-8a (Unit 2) had errors which did not involve the changes discussed in the amendments. The corrected pages are enclosed. The error was that these pages included surveillance requirement 4.4.3.2.3 which had been deleted from both units in Amendments 105 and 94, dated March 9, 1989, respectively.

In Amendment 109 dated April 3, 1989 to Operating License DPR-77 for Sequoyah, Unit 1, we issued page 3/4 11-14 with an incorrect amendment number on the page. This page was an overleaf page and not part of the changes discussed in the amendment. The corrected page is enclosed.

In Amendment 104, dated May 5, 1989, to Operating License DPR-79 for Sequoyah, Unit 2, we issued Page 3/4 3-4 with the Power Range Neutron Flux Interlock listed as item 22.D, instead of item 22.F as requested by the licensee, in Table 3.3-1. This correction to item 22.F is needed (1) to have the Unit 2 Technical Specifications consistent with the Unit 1 Technical Specifications and (2) to have the licensee's current surveillance instructions correctly identify the interlock in the Unit 2 Technical Specifications. This correction does not affect the safety evaluation issued by the staff to approve Amendment No. 104.

Dfol  
11

8906060036 890526  
FDR ADOCK 03000327  
P PDC

Hr. Oliver D. Kingsley, Jr.

-2-

We apologize for any inconvenience caused by these errors. If you have any questions, please contact Jack Dorjehew, Sequoyah Project Manager at 301/492-0704.

Sincerely,

Original signed by Rajender Auluci  
for Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Corrected pages for Sequoyah Unit 1
- 2. Corrected pages for Sequoyah Unit 2

cc w/ enclosures  
See next page

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<del>Docket File</del>	GPA/CA	ARM/LFMB
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CORRECTED PAGES

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 4-4a  
3/4 4-4b  
3/4 11-14

INSERT

3/4 4-4a.  
3/4 4-4b  
3/4 11-14

ORIGINAL COPY  
FILED IN 50-327  
R

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4.4.3.2.3 (Deleted.)

4.4.3.2.4 In addition to the requirements of Specification 4.0.5 the repair welds and adjoining areas of the pressurizer relief line shall be examined, using improved UT detection and evaluation procedures which have been demonstrated to be effective in detecting IGSCC, prior to entering MODE 4 whenever the plant has been in COLD SHUTDOWN for 72 hours or more if the examination has not been performed in the previous 6 months.

In the event these 6-month period examinations find the piping free of unacceptable indications for 3 successive inspections, the inspection interval shall be extended to 36 month intervals ( $\pm 12$  months to coincide with a scheduled refueling outage).

In the event these 36-month period examinations find the piping free of unacceptable indications for 3 successive inspections, the inspection interval shall be extended to 80-month periods.

April 4, 1988

Mr. S. A. White  
Manager of Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: TECHNICAL SPECIFICATION FOR RESIDUAL HEAT REMOVAL SPRAY  
(TAC 0044, 0045) (TS 87-03)

Re: Sequoyah Nuclear Plant, Units 1 and 2

The Commission has issued the enclosed Amendment No. 69 to Facility Operating License No. DPR-77 and Amendment No. 61 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 April 8, 1987.

The amendments revise the Technical Specifications to separately define the operability and surveillance requirements for the residual heat removal spray trains.

As discussed in the safety evaluation, the staff believes that the operating procedures associated with the residual heat removal spray need to be clarified to address flow balancing when only one residual heat removal pump is operating.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original Signed by Rajender Auluck for

8804140081 880404  
PDR ADDCK 05000327  
P PDR

Gary G. Zech, Assistant Director  
for Projects  
TVA Projects Division  
Office of Special Projects

Enclosures:

1. Amendment No. 69 to License No. DPR-77
2. Amendment No. 61 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

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GGZech  
2/14/88

ATTACHMENT TO LICENSE AMENDMENT NO. 69 . .

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. Overleaf pages\* are provided to maintain document completeness.

REMOVE

INSERT

VII

VII

VIII

VIII\*

3/4 6-15

3/4 6-15\*

3/4 6-16

3/4 6-16

3/4 6-16a

3/4 6-16a

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3/4 6-16b

## CONTAINMENT SYSTEMS

### 3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

#### LOWER CONTAINMENT VENT COOLERS

#### LIMITING CONDITION FOR OPERATION

---

3.6.2.2 Two independent trains of lower containment vent coolers shall be OPERABLE with two coolers to each train.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With one of the above required lower containment vent coolers inoperable, restore to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two lower containment vent coolers of the same train inoperable, restore to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

---

4.6.2.2 Each lower containment vent cooler shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each fan operates for at least 15 minutes.
- b. At least once per 18 months by:
  1. Verifying from the control room that each fan starts.
  2. Verifying a cooling water flow rate of greater than or equal to 200 gpm to each cooler.

March 25, 1982

Docket No. 50-327

Mr. H. G. Parris  
Manager of Power  
Tennessee Valley Authority  
500A Chestnut Street, Tower I  
Chattanooga, Tennessee 37401

Dear Mr. Parris:

Subject: Issuance of Amendment No. 12 to Facility Operating License  
No. DPR-77 - Sequoyah Nuclear Plant, Unit 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 12 to Facility Operating License No. DPR-77.

This amendment is in response to your letter dated December 15, 1981. This amendment updates the Technical Specifications to make them consistent with the Sequoyah Unit 2 Technical Specifications.

A copy of the related safety evaluation supporting Amendment No. 12 to Facility Operating License DPR-77 is enclosed. Also enclosed is a copy of the Federal Register Notice which has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original Signed By:

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosures:

1. Amendment No. 12
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosures:  
See next page

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OFFICE	LA:DL:LB.#4	DL:LB.#4	DL:LB.#4				
SURNAME	MDuncan'hmc	CStahle	EAdensam				
DATE	3/16/82	3/16/82	3/17/82				

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Attachment to License Amendment No. 12

Facility Operating License No. DPR-77

Docket No. 50-327

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

<u>Amended Page</u>	<u>Overleaf Page</u>
1-1	
1-2	
1-3	
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1-5	
1-6	
1-7	1-8
2-2	2-1
2-4	2-3
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3/4 1-8	3/4 1-7
3/4 2-2	3/4 2-1
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3/4 2-9	
3/4 2-10	
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3/4 3-10	3/4 3-9
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3/4 3-35	3/4 3-36
3/4 3-37	
3/4 3-38	
3/4 3-40	3/4 3-39

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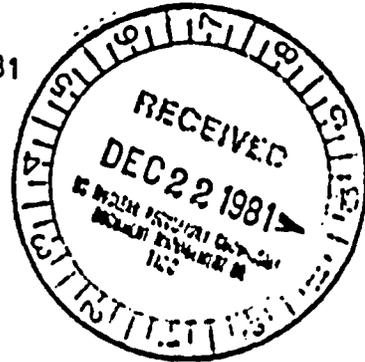
3/4 3-41	
3/4 3-42	
3/4 3-43	3/4 3-44
3/4 3-45	
3/4 3-46	
3/4 3-55	
3/4 3-56	
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3/4 3-65	3/4 3-65
3/4 3-73	3/4 3-74
3/4 3-80	3/4 3-79
3/4 4-1a	3/4 4-1
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DATE ▶	.....	.....	.....	.....	.....	.....	.....

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

December 15, 1981



TVA-SNP-TS-25

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Denton:

In the Matter of  
Tennessee Valley Authority

) Docket No. 50-327  
)

In accordance with 10 CFR Part 50.59, we are enclosing 40 copies of a requested amendment to operating license DPR-77 to change the technical specifications for Sequoyah Nuclear Plant (Enclosure 1). The proposed amendment involves updating the unit 1 technical specifications to be consistent with the unit 2 technical specifications. All the proposed changes have been approved for unit 2 with the issuance of the unit 2 operating license.

In accordance with the requirements of 10 CFR Part 170.22, we have determined the proposed amendment to be Class I. This classification is based on the fact that the technical specifications as proposed are already in force on an identical unit. However, no fees are being submitted because the amendment is to clarify the technical specifications and is being submitted at the request of the NRC.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*M. R. Wisenburg*  
M. R. Wisenburg  
Nuclear Engineer

Sworn to and subscribed before me  
this 15<sup>th</sup> day of December 1981

Paulette H. White  
Notary Public  
My Commission Expires 9-5-84

A001  
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1/40

Enclosure (40)

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SEQUOYAH - UNIT 1

3/4 6-25b

SEQUOYAH, UNIT 2  
SUMMARY OF CHANGES  
OFFICE OF NUCLEAR REACTOR REGULATION COPY

Page Number	Changes Needed
Attachment 2 to License	Attachment 2 is missing. Insert Attachment 2, as referenced in item 2.D of the license and modified by letter dated June 7, 2004 (attached).
3/4 3-27a	Includes page 3-27a from both Amendment Nos. 197 and 209. Remove copy from Amendment No. 197.
3/4 3-27b	Includes page 3-27b from both Amendment Nos. 197 and 209. Remove copy from Amendment No. 197.
3/4 6-16B	Missing page. Replace with page 6-16b from Amendment No. 61 (attached).

June 7, 2004

Mr. Karl W. Singer  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2, EXEMPTION FROM THE  
REQUIREMENTS OF 10 CFR PART 50, SECTION 50.68(b)(1)  
(TAC NOS. MC1871 AND MC1872)

Dear Mr. Singer:

The Commission has approved the enclosed exemption from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.68(b)(1) for the Sequoyah Nuclear Plant (SQN), Units 1 and 2. This action is in response to your letter of application dated February 20, 2004, as supplemented by letter dated April 27, 2004, that submitted a request for an exemption from the requirements of 10 CFR 50.68(b)(1) for loading, unloading, and handling of the components of the Holtec HI-STORM 100 dry cask storage system at SQN.

A copy of the exemption has been forwarded to the Office of the *Federal Register* for publication.

Sincerely,

*/RA/*

Michael L. Marshall, Jr., Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-327 and 50-328

Enclosure: Exemption

cc w/enclosure: See next page

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

As referenced in Item 2.D of the Operating License, insert the following pages as Attachment 2.

REMOVE

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INSERT

1

2

ATTACHMENT 2  
Additional Exemptions

1. An exemption to 10 CFR Part 50, Appendix A General Design Criteria 55, was granted for the reactor coolant pump seal injection lines (Penetrations X-43A, X43B, X-43C, and X-43D) on December 4, 1987 (A02 871210 005).
2. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 56, was granted for the containment vacuum relief lines (Penetration X-111, X- 112, and X113) on December 14, 1987 (A02 871217 008).
3. An exemption to 10 CFR Part 50, Appendix A, General Design Criteria 55, was granted for the residual heat removal hot leg injection line (Penetration X-17) on December 14, 1987 (A02 871217 006).
4. An exemption to 10 CFR Part 50, Appendix J, Type C leak rate testing, was granted for the residual heat removal system (Penetration X-17, X-20A, and X-20B), upper head injection system (Penetration X-108 and X-109), and pressure relief valves in the safety injection system, chemical and volume control system, and the containment spray system (Penetration X-24) on January 15, 1988 (A02 880122 005).
5. An exemption to 10 CFR Part 50, Appendix J, Type C leak rate testing, was granted for the containment and residual heat removal spray system check valves (Penetrations 48A, 48B, 49A, and 49B) on September 22, 1988 (A02 880928 019).
6. An exemption to 10 CFR Part 50, Appendix J, was granted for allowing Type A testing to continue on a normal test frequency following two consecutive Type A test failures on August 27, 1990 (A02 900831 004).
7. An exemption to 10 CFR Part 50, Appendix J was granted for permanently uncoupling the third integrated leak rate test during each 10-year service period from the 10-year unit inservice inspection on January 29, 1991 (A02 910131 001).
8. An exemption to 10 CFR 50.60, "Acceptance Criteria for Fracture Prevention for Light Water Nuclear Power Reactors for Normal Operation," was granted to permit the use of safety margins recommended in the American Society of Mechanical Engineers Code Case N-514, "Low Temperature Overpressure Protection," in lieu of the safety margins required by Appendix G to 10 CFR Part 50. The exemption was granted on June 18, 1993 (A02 930625 001).
9. An exemption to 10 CFR Part 50, Appendix J was granted for allowing Type A testing to continue on a normal test frequency following three consecutive Type A failures on July 23, 1993 (W57 930728 001).

ATTACHMENT 2  
Additional Exemptions

10. An exemption to 10 CFR 73.55, "Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage," was granted specifically to Subsection (d), "Access Requirements," Item 5, to allow use of a hand geometry biometrics system for site access control such that photograph identification badges may be taken offsite by individuals not employed by TVA.
11. An exception to 10 CFR 50.71(e)(4), "Maintenance of Records, Making of Reports," was granted to permit Sequoyah to update its single unified UFSAR for the two-unit site six months after Unit 2 refueling outages. The exemption was granted on March 9, 1998 (L44 980316 005).
12. An exemption to 10 CFR 70.24, "Criticality Accident Requirements," was granted to permit Sequoyah not to maintain a criticality monitoring system in each area where special nuclear material is handled, used, or stored. This exemption was granted on March 25, 1998 (L44 980331004). This exemption is now considered "ineffective" since the adoption of boron credit in TS-99-17 pursuant to 10 CFR 50.68(b). (PER 03-016826-000)
13. An exception to 10 CFR 50.44, "Standards for Combustible Gas Control in Light-Water-Cooled Power Reactors," 10 CFR 50.46, "Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors," and 10 CFR 50 Part 50, Appendix K, "ECCS Evaluation Models," was granted to allow the use of newly designed fuel cladding and structural material, designated M5, developed by Frametome Cogema Fuels. This exemption was granted on July 29, 2000 (L44 000807 004).
14. An exemption to 10 CFR 50.68, "Criticality Accident Requirements," was granted to permit Sequoyah to load spent fuel assemblies into the HI-STORM 100 Cask System. The exemption has conditional requirements which may preclude its use. The exemption was granted on June 7, 2004 (L44 040610 008).

April 4, 1988

Mr. S. A. White  
Manager of Nuclear Power  
Tennessee Valley Authority  
6N 38A Lookout Place  
1101 Market Street  
Chattanooga, Tennessee 37402-2801

Dear Mr. White:

SUBJECT: TECHNICAL SPECIFICATION FOR RESIDUAL HEAT REMOVAL SPRAY  
(TAC 0044, 0045) (TS 87-03)

Re: Sequoyah Nuclear Plant, Units 1 and 2

The Commission has issued the enclosed Amendment No. 69 to Facility Operating License No. DPR-77 and Amendment No. 61 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 April 8, 1987.

The amendments revise the Technical Specifications to separately define the operability and surveillance requirements for the residual heat removal spray trains.

As discussed in the safety evaluation, the staff believes that the operating procedures associated with the residual heat removal spray need to be clarified to address flow balancing when only one residual heat removal pump is operating.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original Signed by Rajender Auluck for

8804140081 880404  
PDR ADOCK 05000327  
P PDR

Gary G. Zech, Assistant Director  
for Projects  
TVA Projects Division  
Office of Special Projects

Enclosures:

1. Amendment No. 69 to License No. DPR-77
2. Amendment No. 61 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

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OSP/TVA/1A

OSP/TVA/1A

CGC-Rockville

TVA AD/TP

TVA AD/P

ATTACHMENT TO LICENSE AMENDMENT NO. 61

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. Overleaf pages\* are provided to maintain document completeness.

REMOVE

- VII
- VIII
- 3/4 6-15
- 3/4 6-16
- 3/4 6-16a
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INSERT

- VII
- VIII\*
- 3/4 6-15\*
- 3/4 6-16
- 3/4 6-16a
- 3/4 6-16b

## CONTAINMENT SYSTEMS

### 3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

#### LOWER CONTAINMENT VENT COOLERS

#### LIMITING CONDITION FOR OPERATION.

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3.6.2.2 Two independent trains of lower containment vent coolers shall be OPERABLE with two coolers to each train.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With one of the above required lower containment vent coolers inoperable, restore to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two lower containment vent coolers of the same train inoperable, restore to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

---

---

4.6.2.2 Each lower containment vent cooler shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each fan operates for at least 15 minutes.
- b. At least once per 18 months by:
  1. Verifying from the control room that each fan starts.
  2. Verifying a cooling water flow rate of greater than or equal to 200 gpm to each cooler.