

February 28, 1989

Docket Nos. 50-327/328

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: RESIDUAL HEAT REMOVAL SPRAY LINES (TAC R00432, R00433) (TS 88-22)  
SEQUOYAH NUCLEAR PLANTS, UNITS 1 AND 2

The Commission has issued the enclosed Amendment No. 101 to Facility Operating License No. DPR-77 and Amendment No. 90 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 10, 1988.

The amendments modify the Sequoyah Nuclear Plants Units 1 and 2 Technical Specifications (TS). The changes revise containment system surveillance requirements (SR) 4.6.1.2.g and 4.6.3.2 and Table 3.6-2, "Containment Isolation Valves." The changes provide additional surveillance testing for the residual heat removal (RHR) spray lines (penetrations X-49A and -49B) and the normal charging containment isolation valve.

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

Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 101 to License No. DPR-77
2. Amendment No. 90 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures:  
See next page

DISTRIBUTION:

<del>Docket File</del>	RPierson	JDonohew
NRC PDR	EJordan	OGC
Local PDR	TMeek (8)	GPA/CA
DCrutchfield	Wanda Jones	LFMB
DHagan	EMarinos	MSimms
BDLiaw	GPA/PA	SQN Rdg.
SBlack	ACRS (10)	ADSP Rdg.
SVarga	EButcher	LWatson
JRutberg	Projects Rdg	
PHearn		

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PDR ADOCK 05000327  
P PNU

\*SEE PREVIOUS CONCURRENCE

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*11*  
*CR*  
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OFC	:NRR:TVA/LA*	:NRR:TVA/PM*	:TVA:AD/TP*	:OGC*	:TVA:AD/P	:	:
NAME	:MSimms	:JDonohew:dw	:RPierson	:	:SBlack	:	:
DATE	:02/07/89	:02/08/89	:02/06/89	:02/15/89	:02/24/89	:	:

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SUBJECT: RESIDUAL HEAT REMOVAL SPRAY LINES (TAC R00432, R00433) (TS 88-22)  
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The Commission has issued the enclosed Amendment No. to Facility  
Operating License No. DPR-77 and Amendment No. 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 10, 1988.

The amendments modify the Sequoyah Nuclear Plants Units 1 and 2 Technical  
Specifications (TS). The changes revise containment system surveillance  
requirements (SR) 4.6.1.2.g and 4.6.3.2 and Table 3.6-2, "Containment  
Isolation Valves." The changes provide additional surveillance testing  
for the residual heat removal (RHR) spray lines (penetrations X-49A and -49B)  
and the normal charging containment isolation valve.

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,

Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Special Projects

Enclosures:

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2. Amendment No. to License No. DPR-79
3. Safety Evaluation

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SVarga	EButcher	LWatson
JRutberg	Projects Rdg	
PHearn		

OFC	:NRR:TVA/LA	:NRR:TVA/PM	:TVA:AD/TP	:OGC	:TVA:AD/P	:	:
NAME	:MSimms	:JDonohew	:RPierson	:SBlack	:	:	:
DATE	:02/17/89	:02/18/89	:02/16/89	:02/15/89	:02/1/89	:	:

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. 101, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to te Technical  
Specifications

Date of Issuance: February 28, 1989

Mr. Oliver D. Kingsley, Jr.

-3-

Sequoyah Nuclear Plant

cc:

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Mr. M. Ray  
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Knoxville, Tennessee 37902

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Hamilton County Courthouse  
Chattanooga, Tennessee 37402

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Atlanta, Georgia 30323

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Dr. Henry Myers, Science Advisor  
Committee on Interior  
and Insular Affairs  
U.S. House of Representatives  
Washington, D.C. 20515

Tennessee Valley Authority  
Rockville Office  
11921 Rockville Pike  
Suite 402  
Rockville, Maryland 20852



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

TENNESSEE VALLEY AUTHORITY  
DOCKET NO. 50-327  
SEQUOYAH NUCLEAR PLANT, UNIT 1  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 101  
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 August 10, 1988, 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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ATTACHMENT TO LICENSE AMENDMENT NO. 101

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

3/4 6-3  
3/4 6-4  
3/4 6-18  
3/4 6-23

INSERT

3/4 6-3\*  
3/4 6-4  
3/4 6-18  
3/4 6-23

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4-1972:

- a. Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at  $40 \pm 10$  month intervals during shutdown at  $P_a$  (12 psig) during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.
- b. If any periodic Type A test fails to meet  $0.75 L_a$ , the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet  $0.75 L_a$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet  $0.75 L_a$  at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
  1. Confirms the accuracy of the Type A test by verifying that the difference between supplemental and Type A test data is within  $0.25 L_a$ .
  2. Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.
  3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be equivalent to at least 25 percent of the total measured leakage at  $P_a$  (12 psig).

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- d. Type B and C tests shall be conducted with gas at  $P_a$  (12 psig) at intervals no greater than 24 months except for tests involving:
  - 1. Air locks,
  - 2. Penetrations using continuous leakage monitoring systems, and
  - 3. Valves pressurized with fluid from a seal system.
- e. The combined bypass leakage rate to the auxiliary building shall be determined to be less than or equal to  $0.25 L_a$  by applicable Type B and C tests at least once per 24 months except for penetrations which are not individually testable; penetrations not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized to  $P_a$  (12 psig) during each Type A test.
- f. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- g. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least  $1.10 P_a$  (13.2 psig) and the seal system capacity is adequate to maintain system pressure (or fluid head for the containment spray system and RHR spray system valves at penetrations 48A, 48B, 49A and 49B) for at least 30 days.
- h. Type B tests for penetrations employing a continuous leakage monitoring system shall be conducted at  $P_a$  (12 psig) at intervals no greater than once per 3 years.
- i. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
- j. The provisions of Specification 4.0.2 are not applicable.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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4.6.3.2 Each isolation valve specified in Table 3.6-2 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
- b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
- c. Verifying that on a Containment Ventilation isolation test signal, each Containment Ventilation Isolation valve actuates to its isolation position.
- d. Verifying that on a high containment pressure isolation test signal, each Containment Vacuum Relief Valve actuates to its isolation position.
- e. Verifying that on a Safety Injection test signal that the Normal Charging Isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power operated or automatic valve of Table 3.6-2 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.4 Each Containment Purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measure leakage rate of these valves is added to the leakage rates determined pursuant to Specification 4.6.1.2.d for all other Type B and C penetrations, the combined leakage rate is  $\leq 0.60 L_a$ .

TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	
C. PHASE "A" CONTAINMENT VENT ISOLATION (Cont.)			
13.	FCV-30-50	Upper Compt Purge Air Exh	4*
14.	FCV-30-51	Upper Compt Purge Air Exh	4*
15.	FCV-30-52	Upper Compt Purge Air Exh	4*
16.	FCV-30-53	Upper Compt Purge Air Exh	4*
17.	FCV-30-56	Lower Compt Purge Air Exh	4*
18.	FCV-30-57	Lower Compt Purge Air Exh	4*
19.	FCV-30-58	Inst Room Purge Air Exh	4*
20.	FCV-30-59	Inst Room Purge Air Exh	4*
21.	FCV-90-107	Cntmt Bldg LWR Compt Air Mon	5*
22.	FCV-90-108	Cntmt Bldg LWR Compt Air Mon	5*
23.	FCV-90-109	Cntmt Bldg LWR Compt Air Mon	5*
24.	FCV-90-110	Cntmt Bldg LWR Compt Air Mon	5*
25.	FCV-90-111	Cntmt Bldg LWR Compt Air Mon	5*
26.	FCV-90-113	Cntmt Bldg UPR Compt Air Mon	5*
27.	FCV-90-114	Cntmt Bldg UPR Compt Air Mon	5*
28.	FCV-90-115	Cntmt Bldg UPR Compt Air Mon	5*
29.	FCV-90-116	Cntmt Bldg UPR Compt Air Mon	5*
30.	FCV-90-117	Cntmt Bldg UPR Compt Air Mon	5*
D. OTHER			
1.	FCV-30-46	Vacuum Relief Isolation Valve	25
2.	FCV-30-47	Vacuum Relief Isolation Valve	25
3.	FCV-30-48	Vacuum Relief Isolation Valve	25
4.	FCV-62-90	Normal Charging Isolation Valve	12

\*Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and leakage limits of Surveillance Requirement 4.6.3.4 are satisfied.

#Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and either FCV-62-73 or FCV-62-74 is maintained operable.

\*\*This valve is required after completion of the associated modification.



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

TENNESSEE VALLEY AUTHORITY  
DOCKET NO. 50-328  
SEQUOYAH NUCLEAR PLANT, UNIT 2  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 90  
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 August 10, 1988, 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. 90, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director  
for Projects  
TVA Projects Division  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: February 28, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 90

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

3/4 6-4  
3/4 6-18  
3/4 6-23

INSERT

3/4 6-4  
3/4 6-18  
3/4 6-23

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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3. Valves pressurized with fluid from a seal system.
- e. The combined bypass leakage rate to the auxiliary building shall be determined to be less than or equal to  $0.25 L_a$  by applicable Type B and C tests at least once per 24 months except for penetrations which are not individually testable; penetrations not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized to  $P_a$ , 12 psig, during each Type A test.
  - f. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1 3.
  - g. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least  $1.10 P_a$ , 13.2 psig, and the seal system capacity is adequate to maintain system pressure (or fluid head for the containment spray system and RHR spray system valves at penetrations 48A, 48B, 49A and 49B) for at least 30 days.
  - h. Type B tests for penetrations employing a continuous leakage monitoring system shall be conducted at  $P_a$ , 12 psig, at intervals no greater than once per 3 years.
  - i. All test leakage rates shall be calculated using observed data converted to absolute values. Error analyses shall be performed to select a balanced integrated leakage measurement system.
  - j. The provisions of Specification 4.0.2 are not applicable.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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4.6.3.2 Each isolation valve specified in Table 3.6-2 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
- b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
- c. Verifying that on a Containment Ventilation isolation test signal, each Containment Ventilation valve actuates to its isolation position.
- d. Verifying that on a high containment pressure isolation test signal, each Containment Vacuum Relief Valve actuates to its isolation position.
- e. Verifying that on a Safety Injection test signal that the Normal Charging Isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power operated or automatic valve of Table 3.6-2 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.4 Each containment purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than or equal to  $0.60 L_a$ .

TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
C. PHASE "A" CONTAINMENT VENT ISOLATION (Cont.)		
13. FCV-30-50	Upper Compt Purge Air Exh	4*
14. FCV-30-51	Upper Compt Purge Air Exh	4*
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23. FCV-90-109	Cntmt Bldg LWR Compt Air Mon	5*
24. FCV-90-110	Cntmt Bldg LWR Compt Air Mon	5*
25. FCV-90-111	Cntmt Bldg LWR Compt Air Mon	5*
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30. FCV-90-117	Cntmt Bldg UPR Compt Air Mon	5*
D. OTHER		
1. FCV-30-46	Vacuum Relief Isolation Valve	25
2. FCV-30-47	Vacuum Relief Isolation Valve	25
3. FCV-30-48	Vacuum Relief Isolation Valve	25
4. FCV-62-90	Normal Charging Isolation Valve	12

\*Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and leakage limits of Surveillance Requirement 4.6.3.4 are satisfied.

#Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and either FCV-62-73 or FCV-62-74 is maintained operable.

\*\*The valve is required after completion of the associated modification.



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

ENCLOSURE 3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 101 TO FACILITY OPERATING LICENSE NO. DPR-77  
AND AMENDMENT NO. 90 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 letter dated August 10, 1988, the Tennessee Valley Authority (TVA) proposed change 88-22 to the Technical Specifications (TS) for Sequoyah Units 1 and 2. The proposed changes would add requirements for certain containment isolation valves to exclude them from the Appendix J Type C Testing Requirements. The changes would revise containment system surveillance requirements (SR) 4.6.1.2.g and 4.6.3.2 and Table 3.6-2, "Containment Isolation Valves," to provide additional surveillance testing for the residual heat removal (RHR) spray lines (penetrations X-49A and X-49B) and the normal charging containment isolation valve.

2.0 EVALUATION

According to Appendix J of 10 CFR Part 50, the leakage rate Type C tests of containment isolation valves shall be performed to demonstrate the leak-tight integrity of the valves. There are, however, isolation designs, whereby the leak-tight integrity of isolation valves can be demonstrated without a Type C test. Containment isolation valves that use a water seal for containment isolation are, in accordance with Appendix J, an acceptable isolation barrier without the Type C test when the following conditions are met:

- a. It has been demonstrated that the water leakage rate of the valve that maintains the water seal does not exceed those specified in the TS or associated basis; and
- b. The valve seal water system water inventory is sufficient to assure the sealing function for at least 30 days at a pressure of 1.10 Pa.

TVA has designated the available remote-manual valve on each of the two RHR spray lines for each unit as outboard containment isolation valves. The inboard containment isolation valves are check valves. This designation ensures the containment isolation design of penetrations X-49A and X-49B are in compliance with General Design Criterion (GDC) 56, Primary Containment Isolation, of Appendix A to 10 CFR Part 50. TVA stated in its submittal that a water leg is maintained under normal plant operation in the risers for the RHR spray lines between the remote-manual valves and the containment.

These RHR spray system outboard containment isolation valves have a water seal system and are not Type C tested. TVA proposed that the motor-operated remote-manual valves be leak tested with water to verify there is sufficient fluid inventory in the risers to maintain a water seal on the valves for 30 days even after shutoff of an RHR pump. This should ensure there will be no leakage of containment atmosphere to the environment for 30 days after an accident through these penetrations until the pressure in containment is down to zero gauge pressure. The proposed changes meet the requirements in Appendix J; therefore, the staff concludes that the proposed changes are acceptable.

The frequency of testing the RHR spray system outboard containment isolation valves was discussed with the licensee by telephone conference calls on December 12 and 21, 1988. These valves are leak-rate tested once every two years. This is in accordance with the schedule for Type C testing for containment isolation valves in Appendix J. The column of water on these valves is pressure checked when the valves are stroked in accordance with Section XI of the ASME Code. Because these valves are interlocked with the RHR recirculation valves for the containment sump, these valves are stroke tested once a quarter when the plant is in Mode 5. The valves may not be opened or stroked in Modes 1 to 4, which results in long intervals between the water column verification test for the 30 day water seal. In order to prevent the loss of the water seal the licensee has designed the RHR system to pressurize any potential leakage path through the outboard isolation valve with the RHR pump or the static head of the refueling water storage tank (RWST). If the RHR system is operating, the RHR pumps seal the valve by pressurizing the valve boundary to a pressure that far exceeds the containment accident pressure; thereby, preventing any outleakage from the containment. If the RHR system is not operating, any leakage path outward from the valve would be sealed due to static head the RWST exerts on the RHR system. The static pressure head due to the difference in elevation between the RWST and the outboard isolation valve easily exceeds the containment design pressure of 12 psig. Since the outboard isolation valve and its water seal are pressurized by pressure sources that exceed the containment design pressure, the staff concludes that the frequency of testing the RHR outboard containment isolation valves is acceptable.

TVA also designated one of the outboard automatic isolation valves (FCV-62-90) as the outboard containment isolation barrier for the normal charging line (penetration X-16). This designation ensures the containment isolation design for this penetration is in compliance with GDC 55, Reactor Coolant Pressure Boundary Penetrating Containment. This valve is not subject to Type C testing because a water seal is provided on this penetration after an accident with a guaranteed 30-day water supply and an injection pressure greater than 1.1 Pa as a result of the continuous operation of the centrifugal charging pump, even with consideration of a single active failure. The staff concluded in Section 3.6.1.2 of the Safety Evaluation Report dated May 18, 1988 for TVA's Sequoyah Nuclear Performance Plan (NUREG-1232, Volume 2) that the new designation of FCV-62-90 as a containment isolation valve, subject to appropriate operability, surveillance, and testing requirements, renders the isolation design for this penetration acceptable and in compliance with the requirements of GDC 55. TVA stated that the proposed addition of surveillance

requirement 4.6.3.2.e and the addition of FCV-62-90 to Table 3.6-2 will provide long-term assurance that operability and surveillance testing requirements are maintained.

The current SRs 4.6.3.2.a, b, c, and d require testing of each containment isolation valve listed in Table 3.6-2, Containment Isolation Valves, by verifying that the appropriate isolation test signal actuates the containment isolation valve to its isolation position. TVA has proposed (1) adding the requirement to verify the Normal Charging Isolation valve actuates to its closed position on a safety injection test signal and (2) adding the valve to Table 3.6-2 under the group "other." Table 3.6.2 is organized into Phase "A," Isolation Valves, Phase "B" Isolation Valves, Phase "A" Containment Vent Isolation Valves and Other Valves. The Normal Charging Isolation valve is actuated by the safety injection signal; therefore, the appropriate place for the valve in Table 3.6-2 is under the group "other" as proposed by TVA.

By telephone conference call on December 7, 1988, TVA stated that the Sequoyah Final Safety Analysis Report (FSAR) does not (1) list valve FCV-62-90 as the outboard containment isolation for penetration X-16, (2) state that the safety injection signal actuates the valve, or (3) state that the valve closes in 12 seconds for both units. TVA stated that this information will be included in the next update of the FSAR.

TVA's proposal will require a containment isolation functional test of the Normal Charging Isolation valve by the appropriate test signal. This will assure that the valves are operable when needed. The frequency of the tests is consistent with that for testing the other containment isolation valves. The maximum isolation time for the valve is a fast closing time for valves of this class which do not connect between the containment atmosphere and the environment. This valve connects between the RCS and a closed system outside containment.

Therefore, based on the above, the staff finds the proposed changes for the Normal Charging Isolation valve acceptable, and concludes that proposed TS change 88-22 is acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. 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 nor environmental assessment need be prepared in connection with the issuance of these amendments.

#### 4.0 CONCLUSION

The Commission has made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (53 FR 34614) on September 7, 1988. The Commission also consulted with the State of Tennessee. No public comments were received in response to the notice in the Federal Register and the State of Tennessee did not have any comments.

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendments will not be inimical to the common defense and security nor to the health and safety of the public.

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Dated: February 28, 1989