



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

Docket Nos. 50-327
and 50-328

March 22, 1990

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: REACTOR COOLANT SYSTEM HEAD VENTS (TAC 75055/75056) (TS 89-40) -
SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

The Commission has issued the enclosed Amendment No. 133 to Facility Operating License No. DPR-77 and Amendment No. 120 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 October 5, 1989.

The amendments modify Section 3/4.4.11, Reactor Coolant System Vents, of the Sequoyah Nuclear Plant, Units 1 and 2, Technical Specifications (TSs). The changes restrict TS 3/4.4.11 to only the reactor coolant system (RCS) head vent path and make corresponding changes to the index and the Bases for TS 3/4.4.11. There are existing specifications in TS 3/4.4.3.2 on the power-operated relief valves (PORVs), which is the other RCS vent path.

In its letter dated June 1, 1989, which originally incorporated TS 3/4.4.11 into the TSs, the staff requested that you provide (1) additional information on postulated missile characteristics from failures of the RCS vessel head vent path components and potential fluid spray effects from such failures and (2) justification for three minor differences from the staff's guidance in Generic Letter (GL) 83-37 on TMI Action Plan technical specifications. You provided this information in the letter dated August 18, 1989. Your response is addressed in the enclosed Safety Evaluation. The staff concluded that the response was acceptable. This closes out the staff's review of the RCS head vent paths which is Item II.B.1 of NUREG-0737 of the TMI Action Plan.

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Mr. Oliver D. Kingsley, Jr.

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March 22, 1990

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.133 to License No. DPR-77
- 2. Amendment No.120 to License No. DPR-79
- 3. Safety Evaluation

cc w/enclosures:
See next page

changes made JMS 3/5/90
Ed w/changes w (hgs).

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DATE	2/28/90	:3/2/90	:3/2/90	:3/1/90	:3/22/90	:	:

AMENDMENT NO.133 FOR SEQUOYAH UNIT NO. 1 - DOCKET NO. 50-327 and
AMENDMENT NO.120 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328
DATED: March 22, 1990

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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. 133
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 October 5, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 133, 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: March 22, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 133

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.

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REACTOR COOLANT SYSTEM

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System Head Vent (RCSHV) path shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With no RCSHV path OPERABLE*, restore at least one path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSHV path shall be demonstrated OPERABLE at least once per 18 months by:

- a.# Verifying that the upstream manual isolation valves are locked in the open position,
- b. Operating each remotely controlled valve through at least one cycle from the control room, and
- c. Verifying flow through each RCSHV path.

*Inoperable paths must be maintained closed with power removed from the valve actuators. If any RCSHV path is declared inoperable while in an applicable MODE, power shall be removed from the valve actuators within one hour.

#The requirement to verify that the upstream manual isolation valves are locked in the open position is waived until the Cycle 4 refueling outage. This waiver is granted on a one-time basis. At the first Mode 5 outage following issuance of the above waiver, a flow verification test will be performed to verify that the manual isolation valves are open.

REACTOR COOLANT SYSTEM

BASES

safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

The power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the PORVs minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. Each PORV has a remotely operated block valve to provide positive shutoff capability should a relief valve become inoperable. The PORVs also function to remove non-condensibles or steam from the pressurizer.

3/4.4.4 PRESSURIZER

The limit on the maximum water volume in the pressurizer assures that the parameter is maintained within the normal steady state envelope of operation assumed in the SAR. The limit is consistent with the initial SAR assumptions. The 12 hour periodic surveillance is sufficient to ensure that the parameter is restored to within its limit following expected transient operation. The maximum water volume also ensures that a steam bubble is formed and thus the RCS is not a hydraulically solid system. The requirement that 150 kw of pressurizer heaters and their associated controls be capable of being supplied electrical power from an emergency bus provides assurance that the plant will be able to control reactor coolant pressure and establish natural circulation conditions.

3/4.4.5 STEAM GENERATORS

The Surveillance Requirements for inspection of the steam generator tubes ensure that the structural integrity of this portion of the RCS will be maintained. The program for inservice inspection of steam generator tubes is based on a modification of Regulatory Guide 1.83, Revision 1. Inservice inspection of steam generator tubing is essential in order to maintain surveillance of the conditions of the tubes in the event that there is evidence of mechanical damage or progressive degradation due to design, manufacturing errors, or inservice conditions that lead to corrosion. Inservice inspection of steam generator tubing also provides a means of characterizing the nature and cause of any tube degradation so that corrective measures can be taken.

REACTOR COOLANT SYSTEM

BASES

3/4.4.10 STRUCTURAL INTEGRITY

The inservice inspection and testing programs for ASME Code Class 1, 2 and 3 components ensure that the structural integrity and operational readiness of these components will be maintained at an acceptable level throughout the life of the plant. These programs are in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50.55a(g) except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50.55a (g)(6)(i).

Components of the reactor coolant system were designed prior to issuance of Section XI of the ASME Boiler and Pressure Vessel Code. These components will be tested to the extent practical within the limitations of the original plant design, geometry, and materials of construction of the components.

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

The function of the RCS head vents is to remove non-condensables or steam from the reactor vessel head. This system is designed to mitigate a possible condition of inadequate core cooling, inadequate natural circulation, or inability to depressurize the RHR System initiated conditions resulting from the accumulation of non-condensable gases in the Reactor Coolant System. The reactor vessel head vent is designed with redundant safety grade vent paths.



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. 120
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 October 5, 1989, 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. 120, 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: March 22, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 120

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.

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REACTOR COOLANT SYSTEM

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System Head Vent (RCSHV) path shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With no RCSHV path OPERABLE*, restore at least one path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSHV path shall be demonstrated OPERABLE at least once per 18 months by:

- a.# Verifying that the upstream manual isolation valves are locked in the open position,
- b. Operating each remotely controlled valve through at least one cycle from the control room, and
- c. Verifying flow through each RCSHV path.

*Inoperable paths must be maintained closed with power removed from the valve actuators. If any RCSHV path is declared inoperable while in an applicable MODE, power shall be removed from the valve actuators within one hour.

#The requirement to verify that the upstream manual isolation valves are locked in the open position is waived until the Cycle 4 refueling outage. This waiver is granted on a one-time basis. At the first Mode 5 outage following issuance of the above waiver, a flow verification test will be performed to verify that the manual isolation valves are open.

REACTOR COOLANT SYSTEM

BASES

3/4.4.2 and 3/4.4.3 SAFETY AND RELIEF VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2735 psig. Each safety valve is designed to relieve 420,000 lbs per hour of saturated steam at the valve set point. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating RHR loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2735 psig. The combined relief capacity of all of these valves is greater than the maximum surge rate resulting from a complete loss of load assuming no reactor trip until the first Reactor Protective System trip set point is reached (i.e., no credit is taken for a direct reactor trip on the loss of load) and also assuming no operation of the power operated relief valves or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

The power operated relief valves (PORVs) and steam bubble function to relieve RCS pressure during all design transients up to and including the design step load decrease with steam dump. Operation of the PORVs minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. Each PORV has a remotely operated block valve to provide positive shutoff capability should a relief valve become inoperable. The PORVs also function to remove non-condensibles or steam from the pressurizer.

3/4.4.4 PRESSURIZER

The limit on the maximum water volume in the pressurizer assures that the parameter is maintained within the normal steady state envelope of operation assumed in the SAR. The limit is consistent with the initial SAR assumptions. The 12 hour periodic surveillance is sufficient to ensure that the parameter is restored to within its limit following expected transient operation. The maximum water volume also ensures that a steam bubble is formed and thus the RCS is not a hydraulically solid system. The requirement that 150 kw of pressurizer heaters and their associated controls be capable of being supplied electrical power from an emergency bus provides assurance that the plant will be able to control reactor coolant pressure and establish natural circulation conditions.

REACTOR COOLANT SYSTEM

BASES

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

The function of the RCS head vents is to remove non-condensables or steam from the reactor vessel head. This system is designed to mitigate a possible condition of inadequate core cooling, inadequate natural circulation, or inability to depressurize the RHR System initiated conditions resulting from the accumulation of non-condensable gases in the Reactor Coolant System. The reactor vessel head vent is designed with redundant safety grade vent paths.



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

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 133 TO FACILITY OPERATING LICENSE NO. DPR-77
AND AMENDMENT NO. 120 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 October 5, 1989, the Tennessee Valley Authority (TVA) requested changes to Section 3/4.4.11, Reactor Coolant System Vents, of the Sequoyah Nuclear Plant, Units 1 and 2, Technical Specifications (TSs). The proposed changes restrict TS 3/4.4.11 to the reactor coolant system (RCS) head vent path and make corresponding changes to the index and the Bases for TS 3/4.4.11. There are existing specifications in TS 3/4.4.3.2 on the power-operated relief valves (PORVs), which is the other RCS vent path. This is TVA TS change request 89-40.

In its letter dated August 18, 1989, TVA provided the following information that the staff had previously requested on the RCS head vent path: (1) postulated missile characteristics from component failures and (2) potential fluid spray effects from such failures. This information had been requested by the staff in its June 1, 1989 letter which originally approved TS 3/4.4.11 for the TSs. In this letter the staff also requested TVA to address three minor differences between TS 3/4.4.11 and the guidance in Generic Letter (GL) 83-37. TVA also addressed these three differences in its letter dated August 18, 1989.

2.0 BACKGROUND

The reactor coolant system vents (RCSVs) are Item II.B.1 of the TMI Action Plan in NUREG-0737, "Clarifications of TMI Action Plan Requirements", dated November 1980. The purpose of these vents is to vent non-condensable gases from the RCS to maintain adequate core cooling. These gases may inhibit core cooling during natural circulation, as during post-accident conditions. These vents are required by 10 CFR 50.44(c)(3)(iii). The requirements on these vents are in NUREG-0737 and in Standard Review Plan (SRP) 5.4.12, "Reactor Coolant System High Point Vents." Technical Specifications for these vents are in GL 83-37 and the Standard Technical Specifications for Westinghouse Pressurized Water Reactors (WPWRSTS), Revision 4a. Sequoyah is a 4-loop Westinghouse pressurized water reactor plant.

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The RCSV paths provided by TVA are the following: (1) the two reactor coolant system head vents (RCSHV) on the reactor vessel head and (2) the pressurizer PORVs and associated block valves. The purpose of the RCSHV is to remove non-condensable gases from the reactor vessel head. The RCSHV does not vent the hot leg because the hot leg on a Westinghouse pressurized water reactor, such as the Sequoyah Plant, is not a high point and, therefore, venting is not required.

The staff addressed the RCSVs in Supplement 2, dated August 1980, of the Safety Evaluation Report (S2SER), NUREG-0011, which licensed Sequoyah. In Section II.B.1 of Supplement 2, page 22.2-20, the staff stated that TVA had submitted its conceptual design for the RCS vents. The staff concluded from its preliminary review of the information that the design (1) adequately addressed the requirements in the staff's letter dated November 9, 1979 on these vents and (2) was acceptable for full power operation in accordance with NUREG-0694. These vents were not installed when the units began commercial operation. The staff required, as a license condition, that the vent system be installed on the units at the first outage of sufficient duration but no later than startup from the first refueling outage for Unit 2 and the second refueling outage for Unit 1. These vents were installed to meet the license conditions.

3.0 EVALUATION

The staff evaluated the RCSVs and the proposed TSs for the RCSVs in the Safety Evaluation (SE) enclosed with its letter dated June 1, 1989. In its letter, the staff requested additional information on the RCSHVs and the proposed RCSV paths TSs. TVA responded in its letter dated August 18, 1989, as discussed above.

3.1 RCSHV Design

In its letter dated June 1, 1989, the staff requested TVA to address the following on the design of the RCSHV: (1) postulated missile characteristics from component failures and (2) potential fluid spray effects from such failures. In its letter dated August 18, 1989, TVA submitted a letter dated July 31, 1989 from Westinghouse Electric Corporation (Westinghouse) on the two RCSHV design issues. The RCSHV path consists of two parallel flow paths with redundant isolation valves in each flow path. Both flow paths must be inoperable for the RCSHV path to be inoperable. The active portion of each flow path is two one-inch open/close solenoid operated isolation valves with integral stem backstops. TVA and Westinghouse stated that there are no credible missiles and no potential fluid spray effects considered for the RCSHV. The staff agrees with the conclusions of TVA and Westinghouse because, as explained in the staff SE dated June 1, 1989 on the RCSHV, the piping, valves, and supports were installed Seismic Category 1 and Safety Class 1 or 2. This concludes the staff review of the design of the RCSHV.

3.2 GL 83-37 Differences

In its letter dated June 1, 1989, the staff requested TVA to address the following minor differences in TS 3/4.4.11 from the guidance in GL 83-37: (1) the RCSV paths are not required to be operable in Mode 4, (2) the action statement for both paths being inoperable does not require the inoperable vent paths be maintained closed with power removed from the valve actuators as TVA had proposed for Action Statement "a" for one path being inoperable, and (3) Action Statements "a" and "b" do not require the plant to eventually enter Cold Shutdown (Mode 5). TVA addressed these differences in its letter dated August 18, 1989.

For the first question above concerning RCSV operability in Mode 4, TVA stated the introduction of non-condensable gas or steam into the RCS may be caused by (1) a rapid RCS cooldown under natural circulation resulting in the formation of a steam bubble in the upper head of the reactor vessel and (2) inadequate core cooling resulting in the production of hydrogen gas. For Condition 1, the high cooldown rates and associated RCS depressurization under natural circulation and a potential steam bubble could be expected only in Mode 3 following operation in Modes 1 and 2. In Mode 4, the residual heat removal (RHR) system would be placed in service and this mode of operation can not lead to void formation in the upper head of the RCS because the RCS pressure is controlled by the RHR system, and this is not coupled to the continued RCS cooldown rate. For Condition 2, the event causing the hydrogen formation would occur only during Modes 1 through 3 where post-accident equipment is required to be operable.

The staff has evaluated the response by TVA and agrees with TVA's conclusion that the RCSV do not have to be operable in Mode 4. The TVA justification is consistent with the staff's judgement on Mode 4 operability of the RCSV paths in the staff's SE dated June 1, 1989.

For the second question, TVA stated that it had omitted the action for closing and removing power from the valve actuators for the case when both RCSV paths are inoperable. The addition of this action was submitted in the TVA letter dated October 5, 1989 to revise the TSs for the RCSV paths and is evaluated in Section 3.3 below.

For the third question, TVA stated that because the RCSV paths do not have to be operable in Mode 4, as discussed above, the units should not be required to shutdown to Mode 5 if the paths are inoperable. The staff agrees with this justification and finds it acceptable.

3.3 TS Application 89-40 dated October 5, 1989

In its application, TVA stated that the existing TS 3/4.4.11 contains (1) inconsistencies between the requirements in the limiting condition for operation (LCO) and the Bases of the TSs with respect to the required vent paths, (2) inconsistent action requirements with respect to removing power from the valve actuators on inoperable vent paths, and (3) duplicate and inconsistent

requirements on the PORV vent path with respect to TS 3/4.4.3.2. TVA proposed deleting the requirements for PORV operability from TS 3/4.4.11 to eliminate the duplication of requirements on the PORVs with TS 3/4.4.3.2. TVA stated that the potential for misinterpreting the requirements on the PORV and RCSHV paths will be eliminated by its proposed changes to TS 3/4.4.11. TVA stated that the requirements in TS 3/4.4.3.2 ensure that the PORV vent paths are available, one of which may be used to vent the pressurizer.

The requirements on the PORV vent paths in TS 3/4.4.11 do duplicate and conflict with the requirements on PORVs in TS 3/4.4.3.2. The staff has reviewed the proposed changes to TS 3/4.4.11 to remove the PORV vent path against the requirements in TS 3/4.4.3.2 on the PORVs, which are not being changed by the proposed TS changes. The applicable reactor Modes for PORVs in both TSs are Mode 1, 2 and 3. There are two PORVs on the pressurizer so that both PORVs must be inoperable for the vent path to be inoperable. The action statement in TS 3/4.4.3.2 for two inoperable PORVs which are incapable of RCS pressure control is to restore the PORVs to operable status within one hour or close their associated block valves, remove the power from the block valves, be in Hot Standby in the next six hours and in Cold Shutdown in the next 30 hours. The action statement for one inoperable PORV, allows the unit to operate for 72 hours before shutting down. These action statements are more restrictive than the action statements in TS 3/4.4.11. The surveillance requirements for PORVs in both TSs are the same. Therefore, the staff concludes that TS 3/4.4.11 duplicates the requirements on PORVs in TS 3/4.4.3.2 and that the requirements on PORVs may be deleted from TS 3/4.4.11. This proposed change is, therefore, acceptable and provides assurance that the PORV vent path will be available to remove non-condensibles and steam from the pressurizer when this is needed to be done.

TVA has proposed changes to the action statements of TS 3/4.4.11. Because TS 3/4.4.3.2 covers the PORV vent path, TVA has proposed to delete Action Statement "b" which applies for the condition when no RCSV path is operable, including the PORVs. If this condition existed, the two PORVs and their block valves would be inoperable and they would have to be returned to operable status in one hour or the unit shut down. This is more restrictive than the existing Statement "b" which allows 72 hours to return one RCSV path to operable status or shut down the unit. Therefore, the staff concludes that this proposed change is acceptable.

Action Statement "a" for one inoperable RCSV path is being revised by TVA to restrict it to only if the RCSHV path is inoperable. TVA has proposed (1) a footnote that states that "Inoperable paths must be maintained closed with power removed from the valve actuators...If any RCSHV path is declared inoperable while in an applicable Mode, power shall be removed from the valve actuators within one hour" and (2) a revised Action Statement "a" allowing 30 days for the RCSHV path to be inoperable before the unit must be shut down. If the PORV vent path then became inoperable, TS 3/4.4.3.2 would require the PORV path to be restored to operable status within one hour or the unit would then be required to shut down. Proposed Action Statement "a" and footnote continue the same requirements on continued unit power operation that are in the existing Action Statement "a" for the RCSV paths. Therefore, this proposed change is acceptable.

The proposed changes to the surveillance requirements of TS 3/4.4.11 reflect the decision to restrict TS 3/4.4.11 to only the RCSHV path. The proposed changes do not change the existing surveillance requirements on the RCSHV path and the surveillance requirements on the PORV vent path are in TS 3/4.4.3.2. Therefore, the staff concludes that these proposed changes are acceptable.

The proposed changes to the LCO 3.4.11, the index, and the Bases for TS 3/4.4.11 restrict TS 3/4.4.11 to only the RCSHV path. Therefore, because the staff has concluded that the PORVs requirements may be deleted from TS 3/4.4.11, these proposed changes are acceptable.

TVA has also proposed to add an Action Statement "b" to TS 3/4.4.11 for the RCSHV path stating that TS 3.0.4 is not applicable. If TS 3.0.4 applied to TS 3/4.4.11, it would require that the RCSHVs must be operable before the unit may enter an applicable reactor mode. The existing Action Statement "a" states that with only one RCSV path (i.e., PORVs or RCSHV) inoperable, unit startup (Mode 2 or 3) and/or power operation (Mode 1) may continue provided the inoperable path is maintained closed with power removed from the valve actuators. With the TS 3/4.4.11 restricted to only the RCSHV path, the proposed Action Statement "a" would continue the same requirements in the existing Action Statement "a" except the permission to enter Modes 1, 2 or 3 with an inoperable RCSHV path. Adding the proposed Action Statement "b" would continue the permission on the RCSHV path to enter Modes 1, 2, or 3 allowed by the existing Action Statement "a". Because TS 3.0.4 is also not applicable to TS 3/4.4.3.2, restricting the TS 3/4.4.11 to the RCSHV paths does allow entry into Modes 1, 2 or 3 with both RCSV paths (i.e., PORVs and RCSHV) inoperable; however, this is only for one hour, as discussed above for inoperable PORVs. Therefore, this proposed change is acceptable.

The proposed addition to the Bases for TS 3/4.4.3.2 are to explain that "the PORVs also function to remove non-condensibles or steam from the pressurizer." This, as explained in Section 2 above, is correct and, therefore, this proposed change is acceptable.

3.4 Conclusion

The staff reviewed the response from TVA in its letter dated August 18, 1989. The response is evaluated in Section 3.1 and 3.2 above and, based on that, the staff concludes that the response is acceptable. This closes out the staff's review of the RCSV paths and the RCSHV path.

The staff also reviewed the TVA proposed changes to TS 3/4.4.11 submitted in the TVA letter dated October 5, 1989. The proposed changes are evaluated in Section 3.3 above and, based on that, the staff concludes that the proposed changes are acceptable.

4.0 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.

5.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (54 FR 46160) on November 1, 1989 and consulted with the State of Tennessee. No public comments were received 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: March 22, 1990