ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-93-04)

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3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves specified in Table 3.6-2 shall be OPERABLE with isolation times as shown in Table 3.6-2. R16

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-2 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve* secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The isolation valves specified in Table 3.6-2 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time. R16

* INSERT A

INSERT A

With one or more vacuum relief isolation valves inoperable, the associated vacuum relief valves (30-571, -572, or -573) are considered to be deactivated automatic valve(s). However, the inoperable vacuum relief isolation valve(s) must be returned to OPERABLE status within 7 days. In the event the inoperable vacuum relief isolation valve(s) are not returned to OPERABLE status within 7 days, initiate plant shutdown in accordance with Action 3.6.3.d.

TABLE 3.6-2 (Continued)

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	MAXIMUM ISOLATION TIME (Seconds)	
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*	R74
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	R105

*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. R41

#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. R86

*** For an inoperable Vacuum Relief Isolation Valve, refer to Action 3.6.3.b which allows credit for the Vacuum Relief Valves (30-571, -572, and -573) to ensure containment isolation.

3/4.6.1.8 EMERGENCY GAS TREATMENT SYSTEM (EGTS)

The OPERABILITY of the EGTS cleanup subsystem ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the accident analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. ANSI N510-1975 will be used as a procedural guide for surveillance testing. FP R118

3/4.6.1.9 CONTAINMENT VENTILATION SYSTEM

Use of the containment purge lines is restricted to only one pair (one supply line and one exhaust line) of purge system lines at a time to ensure that the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of a loss of coolant accident during purging operations. The analysis of this accident assumed purging through the largest pair of lines (a 24 inch inlet line and a 24 inch outlet line), a pre-existing iodine spike in the reactor coolant and four second valve closure times.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SUBSYSTEMS R154

The OPERABILITY of the containment spray subsystems ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING FANS

The OPERABILITY of the lower containment vent coolers ensures that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for all safety-related equipment required to remain functional. R71

3/4.6.3 CONTAINMENT ISOLATION VALVES

The valves identified in Table 3.6-2 are containment isolation valves as defined per 10 CFR 50. The operability of these containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a loss of coolant accident. R163

Additional valves have been identified as barrier valves, which in addition to the containment isolation valves discussed above, are a part of the accident monitoring instrumentation in Technical Specification 3/4.3.3.7 and are designated as Category 1 in accordance with Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980.

INSERT B

INSERT B

The containment vacuum relief valves (30-571, -572, and -573) are considered to be "deactivated automatic" valves. This consideration is based on the deactivated state of these valves (i.e., valves are not powered from any electrical source and no spurious signal or operator action could initiate opening) and the automatic function of these valves (i.e., valves are designed to actuate without operator action). Due to competing requirements and dual functions associated with the containment vacuum relief isolation valves (FCV-30-46, -47, -48), the air supply and solenoid arrangement is such that upon the unavailability of Train A essential control air, the containment vacuum relief isolation valves are incapable of automatic closure and are therefore considered inoperable without operator action. In addition, a 7-day allowed action time has been established to ensure the prompt return to service of the containment vacuum relief isolation valves such that redundant isolation capability is restored to the containment vacuum relief penetrations.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves specified in Table 3.6-2 shall be OPERABLE with isolation times as shown in Table 3.6-2.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-2 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve* secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or

d Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The isolation valves specified in Table 3.6-2 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test and verification of isolation time.

* INSERT A

INSERT A

With one or more vacuum relief isolation valves inoperable, the associated vacuum relief valves (30-571, -572, or -573) are considered to be deactivated automatic valve(s). However, the inoperable vacuum relief isolation valve(s) must be returned to OPERABLE status within 7 days. In the event the inoperable vacuum relief isolation valve(s) are not returned to OPERABLE status within 7 days, initiate plant shutdown in accordance with Action 3.6.3.d.

TABLE 3.6-2 (Continued)
CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	MAXIMUM ISOLATION TIME (Seconds)
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

R62

R90

*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.

R29

#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.

R73

*** For an inoperable Vacuum Relief Isolation Valve, refer to Action 3.6.3.b which allows credit for the Vacuum Relief Valves (30-571, -572, and -573) to ensure containment isolation.

3/4.6.1.8 EMERGENCY GAS TREATMENT SYSTEM (EGTS)

The OPERABILITY of the EGTS cleanup subsystem ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the accident analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. ANSI N510-1975 will be used as a procedural guide for surveillance testing.

3/4.6.1.9 CONTAINMENT VENTILATION SYSTEM

Use of the containment purge lines is restricted to only one pair (one supply line and one exhaust line) of purge system lines at a time to ensure that the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of a loss of coolant accident during purging operations. The analysis of this accident assumed purging through the largest pair of lines (a 24 inch inlet line and a 24 inch outlet line), a pre-existing iodine spike in the reactor coolant and four second valve closure times.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SUBSYSTEMS

R140

The OPERABILITY of the containment spray subsystems ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING FANS

R59

The OPERABILITY of the lower containment vent coolers ensures that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for all safety-related equipment required to remain functional.

3/4.6.3 CONTAINMENT ISOLATION VALVES

R149

The valves identified in Table 3.6-2 are containment isolation valves as defined per 10 CFR 50. The operability of these containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a loss of coolant accident.

Additional valves have been identified as barrier valves, which in addition to the containment isolation valves discussed above, are a part of the accident monitoring instrumentation in Technical Specification 3/4.3.3.7 and are designated as Category 1 in accordance with Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980.

INSERT B

INSERT B

The containment vacuum relief valves (30-571, -572, and -573) are considered to be "deactivated automatic" valves. This consideration is based on the deactivated state of these valves (i.e., valves are not powered from any electrical source and no spurious signal or operator action could initiate opening) and the automatic function of these valves (i.e., valves are designed to actuate without operator action). Due to competing requirements and dual functions associated with the containment vacuum relief isolation valves (FCV-30-46, -47, -48), the air supply and solenoid arrangement is such that upon the unavailability of Train A essential control air, the containment vacuum relief isolation valves are incapable of automatic closure and are therefore considered inoperable without operator action. In addition, a 7-day allowed action time has been established to ensure the prompt return to service of the containment vacuum relief isolation valves such that redundant isolation capability is restored to the containment vacuum relief penetrations.

ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-93-04)

DESCRIPTION AND JUSTIFICATION FOR

ACTION STATEMENT CLARIFICATION FOR CONTAINMENT

VACUUM RELIEF PENETRATIONS

Description of Change

TVA proposes to change an action requirement associated with Sequoyah Nuclear Plant (SQN) technical specification (TS) Limiting Condition for Operation (LCO) 3.6.3, "Containment Isolation Valves." The current ACTION requirements of LCO 3.6.3 state the following:

"With one or more of the isolation valve(s) specified in Table 3.6-2 inoperable, maintain at least one isolation valve OPERABLE in each penetration that is open and either:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

TVA proposes to incorporate an asterisk (*) after the word "valve" in Action b and add a footnote that reads as follows:

"With one or more vacuum relief isolation valves inoperable, the associated vacuum relief valves (30-571, -572, or -573) are considered to be deactivated automatic valve(s). However, the inoperable vacuum relief isolation valve(s) must be returned to OPERABLE status within 7 days. In the event the inoperable vacuum relief isolation valve(s) is not returned to OPERABLE status within 7 days, initiate plant shutdown in accordance with Action 3.6.3.d."

A second footnote has also been added to Table 3.6-2. An asterisk is being incorporated after each vacuum relief isolation valve (FCV-30-46, -47, and -48) in Table 3.6-2. This footnote provides a cross-reference to the Action b requirement in LCO 3.6.3 for the vacuum relief isolation valve(s).

In addition to the proposed changes described above, TVA has added information to Bases 3/4.6.3, "Containment Isolation Valves." The added information provides the basis for considering SQN's vacuum relief valves as deactivated automatic valves.

Reason for Change

On July 28, 1992, TVA discovered that the configuration of the air supplies and solenoids for SQN's containment vacuum relief isolation valves (air-operated butterfly valves) would result in the loss of guaranteed automatic closure capability upon the unavailability of Train A essential control air, rendering the valves inoperable. Since Train A essential control air has been unavailable at times over the operating life of the plant without applying the action provisions of TS 3.6.3 to the vacuum relief isolation valves, it was concluded that the plant has technically operated in a condition prohibited by TSs. This

finding was reported to NRC in Licensee Event Report (LER) 50-327/92015 dated August 27, 1992. Two corrective actions were identified in Section V of the LER. The first action involved establishing an interim compensatory action to maintain operability of the valves during periods when Train A essential control air is unavailable. The second corrective action involved preparing a TS change to clarify the dual design function of SQN's vacuum relief penetrations so that TSs can be satisfied without need for the compensatory action. The enclosed TS change completes the second corrective action.

The first proposed footnote (footnote for Action Statement 3.6.3.b) provides a clarification to the TS action statement for a condition when one or more vacuum relief isolation valves (air-operated butterfly valves) are rendered inoperable. The proposed footnote will denote that SQN's vacuum relief valves (spring-loaded check valves) are considered to be deactivated automatic valves. A seven-day allowed action time is provided for returning the inoperable vacuum relief isolation valve(s) to operable status. The seven-day timeframe ensures that redundant isolation capability is restored in a reasonable amount of time such that reliance upon a single vacuum relief valve does not exist for an indefinite period of time. This action time is considered a matter of prudence only as no design basis limitations exist.

The second proposed footnote (footnote for vacuum relief isolation valves in Table 3.6-2) provides the necessary correlation between the vacuum relief isolation valves and the vacuum relief valves. The footnote is needed to ensure that Action Requirement 3.6.3.b is properly referenced and applied for the case when a vacuum relief isolation valve is determined to be inoperable.

The proposed change to add information to Bases 3/4.6.3 provides pertinent background information for considering SQN's vacuum relief valves as deactivated automatic valves.

Justification for Change

The SQN vacuum-relief (VR) system is designed to protect the free-standing steel containment vessel from excessive external force in the event an overcooling or depressurization transient occurs inside containment. The system is sized to ensure that the external pressure differential on the containment vessel does not exceed 0.5 pounds per square inch differential (psid).

System Description:

The VR system consists of three identical vacuum relief flow paths, each comprised of a self-actuating vacuum relief valve, a pneumatically operated isolation valve, associated piping, and instrumentation and controls.

The three VR lines are located in the annulus between the primary steel containment vessel and the shield building. The containment penetration numbers associated with these units are X-111, -112, and -113. The vacuum relief valve is located outboard of the isolation valve as shown on Final Safety Analysis Report (FSAR), Figure 6.2.4-17.

Each vacuum relief valve is a 24-inch, spring-loaded, swing-disc (check) valve with an elastomer seat. The valve is normally closed and is equipped with limit switches that provide fully open and fully closed indication in the main control room (MCR). This instrumentation is designed in accordance with Regulatory Guide (RG) 1.97. The opening of any of these valves is also annunciated in the MCR. The vacuum relief valve is designed to start opening at a differential pressure of 0.1 psid and to be fully open for a vacuum relief system design basis event.

Each vacuum relief isolation valve is an air-operated butterfly valve with an elastomer seat. Two separate trains of control air are provided to the two separate solenoid valves that control the air supply power to the isolation valve. The isolation valves are normally open, fail-open, and close when the containment pressure increases to the high set pressure of 1.5 pounds per square inch gauge (psig). This isolation signal is developed from either of two independent sets of three pressure sensors and is completely independent of other containment isolation signals. Fully open and fully closed positions are indicated in the MCR; and if the isolation valve is not in the fully open position, an alarm is annunciated in the MCR.

A complete description of the design function for this system is provided in the SQN FSAR, Section 6.2.6.

Design Bases:

The SQN VR system is designed to mitigate the following abnormal operational occurrences:

1. Inadvertent containment spray actuation
2. Inadvertent containment air return fan operation
3. Simultaneous occurrence of inadvertent spray and air return fan operation

Two of the three penetration flow paths are required to mitigate the limiting external differential pressure event (inadvertent spray actuation).

The VR system is not required to actively mitigate a loss-of-coolant accident (LOCA) or any other accident scenario that might result in the release of radioactivity inside containment. As an extension of the primary containment boundary, the VR system provides a barrier against leakage of airborne fission products from the containment atmosphere under normal and accident conditions. The outboard

isolation valves are designed to isolate automatically to provide positive containment isolation upon sensing containment pressure greater than or equal to 1.5 psig. The outboard self-actuating check valves are normally closed.

The system is designed to withstand a safe-shutdown earthquake without failure.

Justification:

As discussed in NUREG-1232, Volume 2, page 3-57, the greater safety function of the vacuum relief penetrations and associated isolation valves is to protect the containment vessel from collapse (depressurization relative to the annulus) and hence, total loss of containment integrity. Based on NRC's evaluation, an exemption to 10 CFR 50, General Design Criteria 56 was granted for this unique dual-purpose system. The basic conclusion is that the vacuum relief penetrations are designed to ensure containment integrity from both an external and internal pressurization event, and the end result is the assurance of containment integrity for all postulated events. As stated in NUREG-1232, "The staff concludes that for Sequoyah, due in part to its low capability to sustain reverse differential pressures, the fail-open position of the butterfly isolation valves is acceptable."

The loss of Train A essential control air to the air-operated butterfly isolation valves, as described in LER 50-327/92015, does not result in the loss of containment integrity. The butterfly valves are designed to fail-open from loss of air. Without Train A air, the butterfly isolation valves (air to close) remain in their fail-safe design position (fully open) to fulfill the primary function of vacuum relief for the containment vessel. The loss of Train A air results in the butterfly isolation valves remaining fully open (with or without Train A single failure). Assuming a single failure occurs to the Train B air supply, the butterfly isolation valves would continue to remain in their fail-safe design position (fully open) since Train B air would not be available to close the valve. With the butterfly valves open, the normally closed spring-loaded vacuum relief check valves would serve as the barrier for containment isolation in the event of an accident.

It is important to note that these vacuum relief check valves are designed to provide a qualified containment boundary against leakage of airborne fission products from the containment atmosphere under normal and accident conditions. Each check valve is leak tested in accordance with 10 CFR 50, Appendix J (Type C test), to ensure the total combined leakage rate from all containment penetrations remains within the maximum allowable leakage rate (0.60 L_a). The containment leak rate assumed in the worst-case design basis accident analysis (LOCA) bounds the 0.60 L_a leakage limit. In addition, positive valve position indication and annunciation are provided in the MCR. The valves are not powered from any electrical source; therefore, no

spurious signal or inadvertent operator action could initiate opening these valves. The valves are held closed by a spring force during periods of normal containment pressure and would experience additional closing force from a pressurization event inside containment.

With regard to the current TS Action Statement 3.6.3.b, it is apparent that the condition described in LER 50-327/92015 (loss of Train A air) would require the affected vacuum relief penetration(s) to be isolated within four hours or begin unit shutdown. The current TS action requirement would involve closing the affected air-operated butterfly isolation valve(s) and removing electrical power from the valve(s) to fulfill the isolation requirement for the affected penetration "by use of at least one deactivated automatic valve secured in the isolation position." This action to isolate would be in conflict with SQN TS 3/4.6.6 that requires operability of SQN's vacuum relief system. To appropriately address provisions for continued operation for the subject penetrations, TVA proposes to add a footnote to Action Statement 3.6.3.b. The proposed footnote considers SQN's vacuum relief valves (spring-loaded check valves) to be equivalent to a "deactivated automatic" valve. This clarifies the containment isolation function that these valves serve in the event the air-operated butterfly isolation valves loose automatic-closure capability.

Because SQN's vacuum relief valves are qualified to provide a containment isolation boundary, the vacuum relief valves would serve to provide isolation protection equivalent to a deactivated automatic valve. This approach is consistent with the guidance provided in the recently approved standard TSs for Westinghouse Electric Corporation plants (NUREG-1431). The bases of NUREG-1431 (Section 3.6.3) consider check valves or other automatic valves that are designed to close without operator action following an accident as "automatic" devices. SQN's vacuum relief valves are designed to activate without operator action at all times. Accordingly, TVA considers SQN's vacuum relief valves as automatic valves relative to the NUREG-1431 position. This position is also consistent with SQN's design for postaccident monitoring (i.e., RG 1.97) in that SQN's vacuum relief valves were provided with position indication (i.e., not considered to be simple check valves). Since these relief valves are not powered from any electrical source and no spurious signal or operator action could initiate opening these valves, the valves could be considered equivalent to a "deactivated" valve.

A seven-day timeframe for returning an inoperable vacuum relief isolation valve to operable status is provided and is consistent with other action requirements in TSs that are applicable upon unavailability of SQN's control air system (i.e., reference TS 3/4.7.8, "Auxiliary Building Gas Treatment System"; TS 3.6.1.8, "Emergency Gas Treatment System"; and TS 3/4.7.7, "Control Room Emergency Ventilation System").

In conclusion, TVA's proposed change provides a TS improvement that eliminates the potential for conflicts between TSs and the potential for misinterpretation regarding the isolation requirement in Action 3.6.3.b for SQN's vacuum relief penetrations.

Environmental Impact Evaluation

The proposed change request does not involve an unreviewed environmental question because operation of SQN Units 1 and 2 in accordance with this change would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by NRC's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or decisions of the Atomic Safety and Licensing Board.

2. Result in a significant change in effluents or power levels.

3. Result in matters not previously reviewed in the licensing basis for SQN that may have a significant environmental impact.

Enclosure 3

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-93-04)

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Significant Hazards Evaluation

TVA has evaluated the proposed technical specification (TS) change and has determined that it does not represent a significant hazards consideration based on criteria established in 10 CFR 50.92(c). Operation of Sequoyah Nuclear Plant (SQN) in accordance with the proposed amendment will not:

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

   TVA's proposed TS change does not affect any system functions or design functions. The proposed change addresses the acceptability of SQN's vacuum relief valves for containment isolation protection, and utilizing these normally closed valves for TS-required isolation in the event the associated air-operated butterfly isolation valve(s) is incapable of automatic closure. This approach remains consistent with the vacuum relief valve's containment isolation design function.

   SQN's vacuum relief valves (spring-loaded, swing-disk check valves) are designed to provide a qualified containment boundary to limit leakage of airborne fission products from the containment atmosphere during normal operation and during an analyzed pressurization event inside containment. Each valve is leak tested in accordance with 10 CFR 50, Appendix J (Type C test), to ensure that the leakage rate from the valve (when combined with the leakage rate from all other Types B and C containment penetrations) remains within the maximum allowable leakage rate of 0.60 L_a. The containment leak rate assumed in the worst-case design basis accident analysis (loss-of-coolant accident [LOCA]) bounds the 0.60 L_a leakage limit.

   The vacuum relief valves are normally closed valves and are held closed by a spring force during normal plant operation. The valves would experience additional closing force during a pressurization event inside containment (e.g., LOCA). A review of the design basis events involving containment depressurization indicates that there are no postulated scenarios that would open the vacuum relief valves followed by a LOCA or other accident condition requiring containment isolation. This containment isolation function remains consistent with the SQN Final Safety Analysis Report (FSAR) Section 6.2.6, and the exemption to 10 CFR 50, General Design Criteria 56, provided in NUREG-1232.

   A seven-day timeframe for returning an inoperable vacuum relief isolation valve to operable status is provided and is consistent with other TS action requirements that are applicable upon unavailability of SQN's control air system (i.e., reference TS 3/4.7.8, "Auxiliary Building Gas Treatment System"; TS 3.6.1.8, "Emergency Gas Treatment System"; and TS 3/4.7.7, "Control Room Emergency Ventilation System"). The seven-day timeframe ensures that redundant isolation capability is restored in a reasonable amount of time such that reliance upon a single vacuum relief valve does not exist for an indefinite period of time. Accordingly, the proposed TS change does not involve an increase in the probability or consequences of an accident previously evaluated.

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

   No physical modification is being made to any plant hardware, plant operating setpoints, limits, or operating procedures as a result of this change. TVA's proposed change provides a TS improvement that clarifies the configuration and function of SQN's vacuum relief valves as designed. The proposed change removes the potential for creating a conflict between Specification 3/4.6.3, "Containment Isolation Valves," and Specification 3/4.6.6, "Vacuum Relief Valves." SQN's vacuum relief valves provide qualified containment isolation protection that meets the intent of the TS action requirement for containment penetration isolation.

   The proposed change does not alter any accident analysis or any assumptions used to support the accident analyses. The containment leakage assumptions used to determine offsite dose limits for compliance with 10 CFR 100 are not affected.

   A seven-day timeframe for returning an inoperable vacuum relief isolation valve to operable status is provided and is consistent with other TS action requirements that are applicable upon unavailability of SQN's control air system (i.e., reference TS 3/4.7.8, TS 3.6.1.8, and TS 3/4.7.7). The seven-day timeframe ensures that redundant isolation capability is restored in a reasonable amount of time such that reliance upon a single vacuum relief valve does not exist for an indefinite period of time. Consequently, the proposed change does not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in a margin of safety.

   The margin of safety provided by the design of SQN's containment vacuum relief penetrations remains unchanged. TVA's proposed change does not affect the containment isolation function or the allowable containment leakage rate values specified in the TSs. The proposed change ensures that the proper action is taken in the event the automatic closure capability of the butterfly isolation valve is lost for any reason (improper action would be the isolation of a vacuum relief penetration that is required to be operable in accordance with TS 3/4.6.6). Considering SQN's vacuum relief valves as deactivated automatic valves, will ensure that the TS action requirements remain consistent with the design functions. Both vacuum relief and containment isolation requirements will continue to be provided. Accordingly, the proposed change does not involve a reduction in the margin of safety.