

ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-27 AND 50-328

(TVA-SQN-TS-94-05, Revision 1)

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PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency ventilation systems ^(CREVS) shall be OPERABLE.

R16

APPLICABILITY: ALL MODES

ACTION:

MODES 1, 2, 3 and 4

- a. With one ~~control room emergency ventilation system~~ ^{CREVS} inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

Insert A
MODES 5 and 6

- a. With one ~~control room emergency ventilation system~~ ^{CREVS} inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the control room emergency ventilation system in the recirculation mode.
- b. With both ~~control room emergency air ventilation systems~~ ^{CREVS} inoperable, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- c. ~~The provisions of Specification 3.0.3 are not applicable in MODE 6.~~
- C.d. The provisions of Specification 3.0.4 are not applicable.

R168

SURVEILLANCE REQUIREMENTS

4.7.7 Each ~~control room emergency ventilation system~~ ^{CREVS} shall be demonstrated OPERABLE:

R16

- a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 104°F.
- b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.
- c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

Insert A

- b. With both CREVs inoperable due to actions taken as a result of a tornado warning, restore at least one train to operable status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency ventilation systems ^(CREVS) shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION:

MODES 1, 2, 3 and 4:

- a. With one ~~control room emergency ventilation system~~ ^{CREVS} inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

Insert A
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- b. With both ~~control room emergency air ventilation systems~~ ^{CREVS} inoperable, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

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| R154

SURVEILLANCE REQUIREMENTS

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Insert A

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ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-94-05, REVISION 1)

DESCRIPTION AND JUSTIFICATION

Description of Change

TVA proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 Technical Specifications (TSs) to revise the action statement of TS Limiting Condition for Operation (LCO) 3.7.7. This revision will add a new action statement to LCO 3.7.7 to indicate that the control room emergency ventilation system (CREVS) must be returned to normal configuration upon lifting of a tornado warning. Specifically, a new Action b has been added for Modes 1, 2, 3, and 4 operation that states: "With both CREVS inoperable due to actions taken as a result of a tornado warning, restore at least one train to operable status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

In addition, the 3.0.3 exemption for Mode 6 operation has been removed. Other editorial changes have also been proposed for TS 3.7.7.

Reason for Change

This change is necessary to prevent entry into TS LCO 3.0.3 every time a tornado warning is issued by the National Weather Service. The SQN abnormal operating instructions for a tornado warning require several tornado dampers in the CREVS to be closed. The tornado dampers are in the pressurizing air supply flow path to CREVS. The pressurizing air supply is required to ensure a positive pressure in the control room during accident conditions. Closure of the tornado dampers makes both trains of CREVS inoperable. Therefore, entry into TS LCO 3.0.3, a possible dual-unit shutdown, and a subsequent follow-up licensee event report are required as a result of a tornado warning.

Also, an exemption to TS 3.0.3 is not needed for Mode 6 (or Mode 5) operation because actions are already prescribed for loss of both CREVS trains.

Justification for Change

SQN's design basis for CREVS is to ensure the control room environment will support the activities required of Operations' personnel during accident conditions. When activated, CREVS provides a mixed flow of outside and recirculated air through devices for temperature, humidity, and air cleanup control. In this mode, the control room is maintained greater than 1/8-inch water gauge positive pressure to outside atmosphere and slight positive pressure to adjacent areas. CREVS has sufficient redundancy to ensure a single failure will not prevent the accomplishment of these safety functions (reference the Updated Final Safety Analysis Report [UFSAR], Sections 6.4.1 and 9.4.1).

The flow path for pressurizing air to CREVS has the ability to be isolated during conditions when tornadoes are likely in the SQN site area. This provision ensures that the effect of a tornado will not damage critical equipment in the CREVS as well as other control building equipment. When these tornado dampers are closed, the fresh air portion of the normal control room ventilation system and CREVS are not available. This requires the systems to run in a recirculation mode that does not provide control room pressurization. During normal operation conditions, this has no impact because temperature, humidity, and air cleanup control are still maintained in the recirculation mode. For accident conditions, the same control functions are maintained, but the pressurization feature is not available. This would increase the potential for inleakage of contaminated air to the control room. However, the occurrence of an accident creating a contaminated air condition concurrent with a tornado is not postulated for SQN (reference UFSAR Sections 3.1.1, 3.3.2.2, and 6.4.1.2). This is based on the unlikely potential for both to occur simultaneously and the facility design to withstand the effects of a tornado without creating a design basis accident.

Therefore, the only impact to isolating the tornado dampers is the loss of pressurizing air for the control room, which will not impact control room habitability. In the event of a tornado warning, the 1,000 cubic feet per minute (cfm) of outside filtered air would be eliminated from the main control room (MCR) air supply. This condition would terminate the 1/8-inch water gauge positive pressure in the MCR habitability zone relative to the outside environment. Even if a design-basis accident (DBA) were assumed coincident with the tornado warning configuration, the MCR operator dose would not exceed 10 CFR 50, Appendix A, GDC 19 dose criteria. An investigation was performed to determine the inleakage from various air-supply panels, ducts, fans, doors, and dampers into the MCR during normal plant operation (MCR depressurized). The inleakage was determined to be 51 cfm. SQN analysis assumes this leakage is present during accident conditions even though the MCR is pressurized to 1/8-inch water gauge positive pressure. Realistically, the 51 cfm would decrease during accident conditions when the MCR becomes pressurized. This conservative assumption bounds the scenario in question. The operator dose would not exceed the doses provided in FSAR Table 15.5.3-7.

The eight-hour limit to restore the CREVS to operable status is based upon past occurrences in which the normal configuration has been returned within three to four hours plus a four-hour margin. The tornado warning entry and exit is facilitated by Operations being directly notified by the TVA Power Service Control Center of the entry and exit to the tornado warning. In addition, a National Oceanic and Atmospheric Administration weather radio is available in the MCR to inform operators of the existing weather conditions. Thus, CREVS may be returned to normal configuration promptly following the lifting of the tornado warning. Normal configuration can be returned well within one hour, which places the plant in a standby condition should a subsequent accident occur, which requires control room habitability.

Note that the number of occurrences of a tornado in a year results in a probability of $1.65\text{E}-4$ occurrences. Converting this figure to occurrences per hour gives a probability of $1.87\text{E}-8$ occurrences per hour. Therefore, for an eight-hour period, the probability of occurrence is $1.49\text{E}-7$.

The fuel handling accident (FHA) is the most probable DBA that challenges the need for MCR habitability. The probability of an FHA is $7.39\text{E}-3$. This value is conservative because it assumes any FHA results in release. The probability of an FHA coincident with a tornado in an eight-hour period is $1.10\text{E}-9$. Thus, the postulation of an FHA in conjunction with a tornado warning is not a credible event.

The original proposed TS change provided an exemption to TS 3.0.3 for Mode 5 operation during a tornado warning. Further conversations with the NRC staff have indicated that not only is an exemption to TS 3.0.3 not needed for Mode 5 when in a tornado warning, but that the current exemption for Mode 6 operation is not needed. The justification for deletion of the TS 3.0.3 exemption is based upon the actions of Modes 5 and 6 operation providing contingencies for one or both trains of CREVS being inoperable.

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 the staff'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-94-05)

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.

The control room emergency ventilation system (CREVS) was designed to ensure control room habitability during accident conditions. The design basis of SQN does not include an accident creating a contaminated air condition concurrent with a tornado. The ability of the CREVS to perform its design function has not been affected by this change. The proposed change will not increase the possibility or consequences of an accident.

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

An accident involving a contaminated air condition and a tornado have been analyzed as part of the SQN design basis. Both accidents are assumed to occur independently. This change does not create a new or different accident not previously analyzed.

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

The design basis of the CREVS is not impacted by this TS change. There is no change in any assumptions made in the Final Safety Analysis Report. Therefore, there is no reduction in the margin of safety as a result of this change.