



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

April 17, 2001

10 CFR 50.71(e)

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

**SEQUOYAH NUCLEAR PLANT - REVISION TO THE TECHNICAL  
SPECIFICATION BASES (UNIT 1 REVISIONS BR-14 AND -15 AND UNIT 2  
REVISIONS BR-15 AND -16)**

The purpose of this letter is to provide the NRC with copies of changes to the Sequoyah Technical Specification Bases for Revisions BR-14 and -15 for Unit 1 and Revisions BR-15 and -16 for Unit 2. These changes have been implemented at Sequoyah during the period since Sequoyah's Technical Specification Bases update on June 22, 1999. Sequoyah Technical Specification Bases revisions are provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

The enclosure provides the revised Technical Specification Bases pages affected by these revisions.

Please direct questions concerning this issue to me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,

Pedro Salas  
Licensing and Industry Affairs Manager

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cc: See page 2

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Enclosure

cc: Mr. R. W. Hernan, Project Manager  
Nuclear Regulatory Commission  
One White Flint, North  
11555 Rockville Pike  
Rockville, Maryland 20852-2739

NRC Resident  
Sequoyah Nuclear Plant  
2600 Igou Ferry Road  
Soddy-Daisy, Tennessee 37384-2000

U.S. Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, Georgia 30303-8931

ENCLOSURE

SEQUOYAH NUCLEAR PLANT (SQN)  
REVISION TO THE TECHNICAL SPECIFICATION BASES (TSB)  
(REVISIONS BR-14 and BR-15 Unit 1)  
(REVISIONS BR-15 and BR-16 Unit 2)

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<u>UNIT and Revision</u>	<u>TSB PAGES</u>
Unit 1, TSB BR-14	B 3/4 4-2
Unit 2, TSB BR-15	B 3/4 4-2a
Unit 1, TSB BR-15	B 3/4 0-4
Unit 2, TSB BR-16	B 3/4 0-4

## Technical Specification Bases

Revision BR-14, Unit 1

Revision BR-15, Unit 2

Clarification of Power Operated Relief Valve Operability

## 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.

R137

The OPERABILITY of the power-operated relief valves (PORVs) and block valves is determined on the basis of their being capable of performing the following functions:

- a. Manual control of PORVs to control reactor coolant system pressure. This is a function that is used for a steam generator tube rupture accident.
- b. Maintaining the integrity of the reactor coolant pressure boundary. This is a function that is related to controlling identified leakage and ensuring the ability to detect unidentified reactor coolant pressure boundary leakage.
- c. Manual control of the block valve to: (1) unblock an isolated PORV to allow it to be used for manual control of reactor coolant system pressure (Item A), and (2) isolate a PORV with excessive seat leakage (Item B).
- d. Manual control of a block valve to isolate a stuck-open PORV.

R161

BR14

Surveillance requirements (SR) provide assurance that the PORVs and block valves can perform their functions. The block valves are exempt from the SR

R161

## REACTOR COOLANT SYSTEM

### BASES

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#### 3/4.4.2 and 3/4.4.3 SAFETY AND RELIEF VALVES (Continued)

- d. Manual control of a block valve to isolate a stuck-open PORV.

Surveillance requirements (SR) provide assurance that the PORVs and block valves can perform their functions. The block valves are exempt from the SR to cycle the valves when they have been closed to comply with the ACTION requirements. This precludes the need to cycle the valves with full system differential pressure or when maintenance is being performed to restore an inoperable PORV to operable status.

Testing of PORVs with a steam bubble in the pressurizer is considered to be a representative test for assessing PORV performance under normal operating conditions.

#### 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.

BR15

R147

R229

## Technical Specification Bases

Revision BR-15, Unit 1

Revision BR-16, Unit 2

Removal of Redundant Reporting Requirements

## APPLICABILITY

### BASES

identified that a surveillance has not been performed and not at the time that the allowed surveillance interval was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, was a violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action.

R82

BR15

If the allowable outage time limits of the ACTION requirement are less than 24 hours (the allowable outage time limits are defined as the first timeframe encountered in the ACTION requirement) or a shutdown is required to comply with ACTION requirements, e.g., Specification 3.0.3, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with ACTION requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of MODE changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.4 is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time that the surveillance is terminated.

R82

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.



BASES

4.0.3 (Continued)

allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, was a violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action.

R69

BR16

If the allowable outage time limits of the ACTION requirement are less than 24 hours (the allowable outage time limits are defined as the first timeframe encountered in the ACTION requirement) or a shutdown is required to comply with ACTION requirements, e.g., Specification 3.0.3, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown is required to comply with ACTION requirements or before other remedial measures would be required that may preclude completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of MODE changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.4 is allowed. If a surveillance is not completed within the 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time that the surveillance is terminated.

R69

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.