



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

March 14, 2003

TVA-SQN-TS-02-06

10 CFR 50.90

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Stop: OFWN P1-35  
Washington, D. C. 20555-0001

Gentlemen:

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

**SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2- TECHNICAL SPECIFICATIONS (TS) CHANGE 02-06, "INCREASED CONDENSATE STORAGE TANK (CST) MINIMUM VOLUME" SUPPLEMENT NO. 1 (TAC NO. MB7205 AND MB7206)**

- References:
1. TVA letter to NRC dated November 15, 2002, "Sequoyah Nuclear Plant (SQN) - Units 1 and 2 - Technical Specification (TS) Change 02-06, Increase Condensate Storage Tank (CST) Minimum Volume"
  2. NRC letter to TVA dated February 14, 2003, "Sequoyah Nuclear Plant Units 1 and 2 - Request for Additional Information (RAI) Regarding Technical Specification (TS) Change Request No. 02-06, Increase Condensate Storage Tank (CST) Minimum Volume' (TAC Nos. MB7205 and MB7206)' "

D030

3. TVA letter to NRC dated February 28, 2003, "Sequoyah Nuclear Plant (SQN) - Units 1 and 2 Technical Specification (TS) Change 02-06, Response To Request For Additional Information (RAI) (TAC No. MB7205 AND MB7206)"

TVA submitted TS Change 02-06 to NRC (Reference 1) to propose an increase in the minimum amount of inventory stored in the CST. NRC requested additional information (RAI) regarding the proposed TS change in Reference 2. TVA responded to the NRC RAI in Reference 3.

Upon further review of the proposed TS change, NRC requested during a teleconference between TVA and NRC personnel On March 12, 2003, the language of the limiting condition for operation (LCO) be changed to eliminate ambiguity to the meaning of the contained water volume in the CST. The changes affect the LCO, surveillance requirement, and Bases sections. This letter provides the administrative word changes to better define the protected minimum water inventory of the CST for operability.

These administrative word changes do not alter the original no significant hazards considerations in Reference 1. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Tennessee State Department of Public Health.

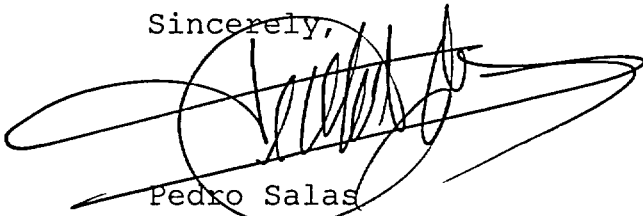
There are no commitments contained in this submittal. This letter is being sent in accordance with NRC RIS 2001-05, "Guidance on Submitting Documents to the NRC by Electronic Information Exchange or on CD-ROM."

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If you have any questions about this change, please contact me at 843-7170 or Jim Smith at 843-6672.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 14 day of March, 2003

Sincerely,

A handwritten signature in black ink, appearing to read 'Pedro Salas', is written over a circular stamp. The signature is stylized and somewhat illegible.

Pedro Salas  
Manager of Licensing  
and Industry Affairs

Enclosures:

1. Revised Proposed Technical Specifications Changes (mark-up)
2. For Information Only Technical Specifications Bases Pages  
- (mark-up)

Enclosures

cc (Enclosures):

Mr. Raj K. Anand, Senior Project Manager  
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Framatome ANP, Inc.  
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Lynchburg, VA 24506-0935  
ATTN: Mr. Frank Masseth

ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY  
SEQUOYAH PLANT NUCLEAR (SQN)  
UNITS 1 AND 2

Revised Proposed Technical Specification Changes (mark-up)

I. AFFECTED PAGE LIST

Unit 1

3/4 7-7

Unit 2

3/4 7-7

II. MARKED PAGES

See attached.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

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3.7.1.3 A condensate storage tank system (CST) shall be OPERABLE with a contained water volume of at least ~~400,000~~ gallons of water.

240,000

level ↑

APPLICABILITY: MODES 1, 2 and 3,  
MODE 4 when steam generator is relied upon for heat removal.

ACTION:

With the condensate storage tank system inoperable, within 4 hours either:

- a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours without reliance on steam generator for heat removal, or
- b. Verify by administrative means OPERABILITY of the Essential Raw Cooling Water System as a backup supply to the auxiliary feedwater pumps\* and restore the condensate storage tank to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours without reliance on steam generator for heat removal.

SURVEILLANCE REQUIREMENTS

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4.7.1.3.1 The condensate storage tank system shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

level ↑

\* OPERABILITY shall be verified once per 12 hours following initial verification.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

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3.7.1.3 The condensate storage tank system (CST) shall be OPERABLE with a contained water volume of at least ~~100,000~~ gallons of water.

APPLICABILITY: MODES 1, 2 and 3,  
MODE 4 when steam generator is relied upon for heat removal.



ACTION:

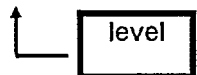
With the condensate storage tank system inoperable, within 4 hours either:

- a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours without reliance on steam generator for heat removal, or
- b. Verify by administrative means OPERABILITY of the Essential Raw Cooling Water System as a backup supply to the auxiliary feedwater pumps\* and restore the condensate storage tank to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours without reliance on steam generator for heat removal.

SURVEILLANCE REQUIREMENTS

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4.7.1.3.1 The condensate storage tank system shall be demonstrated OPERABLE at least once per 12 hours by verifying the ~~contained water volume~~ is within its limits when the system is the supply source for the auxiliary feedwater pumps.



\* OPERABILITY shall be verified once per 12 hours following initial verification.

**ENCLOSURE 2**

**TENNESSEE VALLEY AUTHORITY  
SEQUOYAH PLANT NUCLEAR (SQN)  
UNITS 1 AND 2**

For Information Only  
Technical Specifications Bases Pages - (mark-up)

**I. AFFECTED PAGE LIST**

Unit 1

B 3/4 7-2b

Unit 2

B 3/4 7-2b

**II. MARKED PAGES**

See attached.

PLANT SYSTEMS

BASES

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which are designated as Train A, receive A-train air, and provide flow to the same steam generators that are supplied by the B-train motor-driven auxiliary feedwater pump. The remaining two LCVs are designated as Train B, receive B-train air, and provide flow to the same steam generators that are supplied by the A-train motor-driven pump. This design provides the required redundancy to ensure that at least two steam generators receive the necessary flow assuming any single failure. It can be seen from the description provided above that the loss of a single train of air (A or B) will not prevent the auxiliary feedwater system from performing its intended safety function and is no more severe than the loss of a single auxiliary feedwater pump. Therefore, the loss of a single train of auxiliary air only affects the capability of a single motor-driven auxiliary feedwater pump because the turbine-driven pump is still capable of providing flow to two steam generators that are separate from the other motor-driven pump

Two redundant steam sources are required to be operable to ensure that at least one source is available for the steam-driven auxiliary feedwater (AFW) pump operation following a feedwater or main steam line break. This requirement ensures that the plant remains within its design basis (i.e., AFW to two intact steam generators) given the event of a loss of the No. 1 steam generator because of a main steam line or feedwater line break and a single failure of the B-train motor driven AFW pump. The two redundant sources must be aligned such that No. 1 steam generator source is open and operable and the No. 4 steam generator source is closed and operable.

For instances where one train of emergency raw cooling water (ERCW) is declared inoperable in accordance with technical specifications, the AFW turbine-driven pump is considered operable since it is supplied by both trains of ERCW. Similarly, the AFW turbine-driven pump is considered operable when one train of the AFW loss of power start function is declared inoperable in accordance with Technical Specifications because both 6.9 kilovolt shutdown board logic trains supply this function. This position is consistent with American National Standards Institute/ANS 58.9 requirements (i.e., postulation of the failure of the opposite train is not required while relying on the TS limiting condition for operation)

3/4 7.1.3 CONDENSATE STORAGE TANK

~~The OPERABILITY of the condensate storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 2 hours with steam discharge to the atmosphere concurrent with total loss of off-site power. The contained water volume limit includes an allowance for water not useable because of tank discharge line location or other physical characteristics.~~

**SENTENCE INSERT**

The CST level required is equivalent to a usable volume of at least 240,000 gallons, which is based on holding the unit in MODE 3 for 2 hours, followed by a cooldown to RHR entry conditions within 6 hours.



## PLANT SYSTEMS

### BASES

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train air, and provide flow to the same steam generators that are supplied by the A-train motor-driven pump. This design provides the required redundancy to ensure that at least two steam generators receive the necessary flow assuming any single failure. It can be seen from the description provided above that the loss of a single train of air (A or B) will not prevent the auxiliary feedwater system from performing its intended safety function and is no more severe than the loss of a single auxiliary feedwater pump. Therefore, the loss of a single train of auxiliary air only affects the capability of a single motor-driven auxiliary feedwater pump because the turbine-driven pump is still capable of providing flow to two steam generators that are separate from the other motor-driven pump.

Two redundant steam sources are required to be operable to ensure that at least one source is available for the steam-driven auxiliary feedwater (AFW) pump operation following a feedwater or main steam line break. This requirement ensures that the plant remains within its design basis (i.e., AFW to two intact steam generators) given the event of a loss of the No. 1 steam generator because of a main steam line or feedwater line break and a single failure of the B-train motor driven AFW pump. The two redundant sources must be aligned such that No. 1 steam generator source is open and operable and the No. 4 steam generator source is closed and operable.

For instances where one train of emergency raw cooling water (ERCW) is declared inoperable in accordance with technical specifications, the AFW turbine-driven pump is considered operable since it is supplied by both trains of ERCW. Similarly, the AFW turbine-driven pump is considered operable when one train of the AFW loss of power start function is declared inoperable in accordance with technical specifications because both 6.9 kilovolt shutdown board logic trains supply this function. Similarly, the AFW turbine-driven pump is considered operable when one train of the AFW loss of power start function is declared inoperable in accordance with Technical Specifications because both 6.9 kilovolt shutdown board logic trains supply this function. This position is consistent with American National Standards Institute/ANS 58.9 requirements (i.e., postulation of the failure of the opposite train is not required while relying on the TS limiting condition for operation).

### 3/4 7 1 3 CONDENSATE STORAGE TANK

~~The OPERABILITY of the condensate storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 2 hours with steam discharge to the atmosphere concurrent with total loss of off-site power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.~~

#### **SENTENCE INSERT**

The CST level required is equivalent to a usable volume of at least 240,000 gallons, which is based on holding the unit in MODE 3 for 2 hours, followed by a cooldown to RHR entry conditions within 6 hours.