December 1, 2008

10 CFR 50.71

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 (TVA)	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - REVISIONS TO THE TECHNICAL REQUIREMENTS MANUAL (TRM) AND TECHNICAL SPECIFICATION (TS) BASES (UNIT 1 REVISIONS 31, 32, AND 33; UNIT 2 REVISIONS 30, 31 AND 32)

Reference: TVA Letter to NRC dated May 15, 2007, "SQN - Revisions to the Technical Requirements Manual (TRM) (Revisions 36, 37, 38, 39, 40, 41, 42, 43, And 44) and Technical Specification (TS) Bases (Unit 1 Revisions 29 and 30; Unit 2 Revisions 28 and 29)"

The purpose of this letter is to provide NRC updates, which have been incorporated into the TRM and TS Bases, in accordance with the requirements of their respective Administrative Control Section. No changes have been made to the TRM since last reported in the Referenced Letter.

TS Bases revisions 31 and 30, for Units 1 and 2 respectively, were approved on December 12, 2007. The revisions corrected information regarding the power range negative rate reactor protection trip function in Bases Section 2.2.1, "Reactor Trip System - Power Range, Neutron Flux, High Rates." The correction provided consistency between the updated final safety analysis report (UFSAR), event analysis for a rod cluster control assembly misalignment, and the bases in regards to the protective function for differing degrees of reactivity insertion.

Bases revisions 32 and 31, for Units 1 and 2 respectively, revised the discussion for protective and engineering safety features instrumentation associated with an auxiliary feedwater start signal as a result of a main feedwater pump trip. These changes dated August 29, 2008, were associated with Unit 1 Amendment No. 319 and Unit 2 Amendment No. 312 which revised the operability requirements for the start signal channel; consequently, providing operational allowances for placing in to and securing from service a main feedwater pump.

Bases revisions 33 and 32, for Units 1 and 2 respectively, were approved on August 28, 2008. The revisions expanded the bases of Specification 3.6.5.9, "Divider Barrier Seal," to clarify the individual components of the specification surveillance requirements. The expansion clarified how the surveillance requirements work together to determine operability of the seal. The change also provided clarification to the minimum bypass of steam flow information and references to UFSAR sections where the divider barrier seal is discussed.

Please direct questions concerning this issue to me at (423) 843-7170.

Sincerely,

Original signed by

James D. Smith
Manager, Site Licensing and
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ENCLOSURE

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

REVISIONS TO THE TECHNICAL REQUIREMENTS MANUAL (TRM) AND TECHNICAL SPECIFICATION (TS) BASES (UNIT 1 REVISIONS 31, 32, AND 33; UNIT 2 REVISIONS 30, 31 AND 32)

TS BASES PAGES - UNIT 1	TS BASES PAGES - UNIT 2
B2-3	B2-3
B3/4 3-2a	B3/4 3-2a
B3/4 6-6	B3/4 6-6

Manual Reactor Trip

The Manual Reactor Trip is a redundant channel to the automatic protective instrumentation channels and provides manual reactor trip capability.

Power Range, Neutron Flux

The Power Range, Neutron Flux channel high setpoint provides reactor core protection against reactivity excursions which are too rapid to be protected by temperature and pressure protective circuitry. The low set point provides redundant protection in the power range for a power excursion beginning from low power. The trip associated with the low setpoint may be manually bypassed when P-10 is active (two of the four power range channels indicate a power level of above approximately 10 percent of RATED THERMAL POWER) and is automatically reinstated when P-10 becomes inactive (three of the four channels indicate a power level below approximately 9 percent of RATED THERMAL POWER).

Power Range, Neutron Flux, High Rates

The Power Range Positive Rate trip provides protection against rapid flux increases which are characteristic of rod ejection events from any power level. Specifically, this trip complements the Power Range Neutron Flux High and Low trips to ensure that the criteria are met for rod ejection from partial power.

The Power Range Negative Rate trip provides protection to ensure that the minimum DNBR is maintained above the safety analysis DNBR limit for control rod drop accidents. At high power a single or multiple rod drop accident could cause local flux peaking which, when in conjunction with nuclear power being maintained equivalent to turbine power by action of the automatic rod control system, could cause an unconservative local DNBR to exist. The Power Range Negative Rate trip will prevent this from occurring by tripping the reactor for all single dropped rods with a reactivity insertion of greater than 500 pcm or multiple dropped rods.

Intermediate and Source Range, Nuclear Flux

The Intermediate and Source Range, Nuclear Flux trips provide reactor core protection during reactor startup. These trips provide redundant protection to the low setpoint trip of the Power Range, Neutron Flux channels. The Source Range Channels will initiate a reactor trip at about 10^{+5} counts per second unless manually blocked when P-6 becomes active. The Intermediate

The placing of a channel in the trip condition provides the safety function of the channel. If the channel is tripped for testing and no other condition would have indicated inoperability, the channel should not be declared inoperable.

The Auxiliary Feedwater (AFW) Suction Pressure-Low function must be OPERABLE in MODES 1, 2, and 3 to ensure a safety grade supply of water for the AFW System to maintain the steam generators as the heat sink for the reactor. This function does not have to be OPERABLE in MODES 5 and 6 because heat being generated in the reactor is removed via the Residual Heat Removal (RHR) System and does not require the steam generators as a heat sink. In MODE 4, AFW automatic suction transfer does not need to be OPERABLE because RHR will already be in operation, or sufficient time is available to place RHR in operation to remove decay heat.

Relative to TS Table 3.3-3 Functional Unit 6.f, the footnote (a) to the Minimum Channels Operable column will allow a channel to be inoperable for a period of 4 hours and is consistent with the modifying Notes to LCOs associated ECCS and LTOP system of the NUREG-1431. The time to return to service of four hours is reasonable, based on operating experience that this activity can be accomplished in this time period, and the credited accident mitigation functions are still available.

Relative to TS Table 3.3-3 Functional Unit 6.f, the footnote (b) to Applicable Modes column modifies the need for the auto-start of the AFW pumps in Mode 2 without a MFW pump running as the motor-driven AFW pumps are already operating and supplying feedwater to the SGs to provide the heat sink.

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

Relative to the control room instrumentation isolation function, one set of process radiation monitors acts to automatically initiate control room isolation. The actuation instrumentation consists of redundant radiation monitors. A high radiation signal from the detector will initiate its associated train of the Control Room Emergency Ventilation System (CREVS). The CREVS is also automatically actuated by a safety injection (SI) signal from either unit. The SI function is discussed in LCO 3.3.2, “Engineered Safety Feature Actuation System (ESFAS) Instrumentation.” In addition, the control room operator can manually initiate CREVS.

3/4.3.3.2 MOVABLE INCORE DETECTORS

This specification is deleted.

3/4.6.5.6 CONTAINMENT AIR RETURN FANS

The OPERABILITY of the containment air return fans ensures that following a LOCA 1) the containment atmosphere is circulated for cooling by the spray system and 2) the accumulation of hydrogen in localized portions of the containment structure is minimized.

3/4.6.5.7 and 3/4.6.5.8 FLOOR AND REFUELING CANAL DRAINS

The OPERABILITY of the ice condenser floor and refueling canal drains ensures that following a LOCA, the water from the melted ice and containment spray system has access for drainage back to the containment lower compartment and subsequently to the sump. This condition ensures the availability of the water for long term cooling of the reactor during the post accident phase.

3/4.6.5.9 DIVIDER BARRIER SEAL

The requirement for the divider barrier seal to be OPERABLE ensures that a minimum bypass steam flow will occur from the lower to the upper containment compartments during a LOCA. This condition ensures a diversion of steam through the ice condenser bays that is consistent with the LOCA analyses.

This LCO establishes the minimum equipment requirements to ensure that the Divider Barrier Seal performs its safety function to minimize bypassing of the ice condenser by the hot steam and air mixture released into the lower compartment during a Design Basis Accident (DBA). This ensures that most of the gases pass through the ice bed, which condenses the steam and limits pressure and temperature during the accident transient. Limiting the pressure and temperature reduces the release of fission product radioactivity from containment to the environment in the event of a DBA.

Divider barrier integrity ensures that the high energy fluids released during a DBA would be directed through the ice condenser and that the ice condenser would function as designed if called upon to act as a passive heat sink following a DBA. The limiting DBAs considered relative to containment temperature and pressure are the loss-of-coolant accident (LOCA) and the main steam line break (MSLB). The total allowable Divider Barrier leakage flow area is approximately 5 square feet (includes divider barrier seal). A bypass leakage of 5 square feet, or less, will have no affect upon the ability of the Ice Condenser to perform its design function. (Ref. FSAR Sections 3.8.3 and 6.2.1.)

Conducting periodic physical property tests on the Divider Barrier Seal test coupons provides assurance that the seal material has not degraded in the containment environment, including effects of radiation, age and chemical attack.

The visual inspection of the Divider barrier Seal around the perimeter provides assurance that the seal is properly secured in place and no visual evidence of deterioration due to holes, ruptures, chemical attack, abrasion, radiation damage, or changes in physical appearances due to time related exposure to the containment environment.

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REACTOR TRIP SYSTEM AND ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION (Continued)

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