May 5, 2004

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	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - REVISIONS TO THE TECHNICAL REQUIREMENTS MANUAL (TRM) (REVISIONS 21, 22, 23, 24, 25, 26, AND 27) AND TECHNICAL SPECIFICATION (TS) BASES (UNIT 1 REVISIONS 22, 23, AND 24; UNIT 2 REVISIONS 22 AND 23)

The purpose of this letter is to inform NRC of changes that we have incorporated into the TRM and the TS Bases. Specifically, TRM Revision 21 revised the requirements for missed surveillances to be identical to Amendments 280 and 271 for SQN Units 1 and 2 TSs, respectively.

Revision 22 of the TRM added a TRM 3.0.4 exception to the requirements of TRM 3.7.14 associated with heating, ventilating, and air conditioning maintenance rule equipment. This addition meets the recommendations in Generic Letter 87-09 for specifications that are allowed an exception to the mode change limitations of TRM 3.0.4 because the action allows for indefinite continued power operation.

Revision 23 of the TRM incorporated two changes. The first was the deletion of a temporary addition to administratively control specific reactor coolant system activity at a more restrictive value. This deletion returns the limit to that included in the TSs. The second deletes the definition of "Member(s) of the Public" to be identical to the TS change approved by NRC in Amendments 281 and 272 for SQN Units 1 and 2 TSs, respectively.

TRM Revision 25 implements revisions to applicable TRM specifications that modify the limitations for positive reactivity changes to be tied to activities that could impact the required shutdown margin or boron concentration. These changes are consistent with equivalent changes approved by NRC for the SQN Units 1 and 2 TSs in Amendments 285 and 274, respectively.

TRM Revisions 26 and 27 incorporated two different stages of a modification to correct boric acid tank level instrumentation scaling. The previous scaling did not properly take into account unusable volume at the bottom of the tank along with corrected instrument error factors. The new curve for acceptable boric acid tank concentration and volume has been incorporated for each tank by these TRM revisions.

Unit 1 TS Bases Revision 22 deleted the reference to alternate repair criteria because of the new Unit 1 steam generators. This repair criteria is not applicable because it applies to Alloy 600 tube material and the new generators use Alloy 690.

Unit 1 TS Bases Revision 23 and Unit 2 TS Bases Revision 22 modified the Bases for Surveillance Requirement 4.6.3.5 for containment isolation valves. This change deleted the requirement to verify the correct valve position for containment isolation valves only during a system walkdown. This allows verification of these positions during other plant activities that can satisfy this position verification acceptably.

Unit 1 TS Bases Revision 24 and Unit 2 TS Bases Revision 23 added the technical basis for the voltage overshoot limits during a full-load rejection of the diesel generators. This change does not alter any value and only serves to provide the basis for the TS value.

The enclosure provides the revised TRM and TS 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,

Original signed by:

Pedro Salas
Licensing and Industry Affairs Manager

Enclosure

ENCLOSURE

SEQUOYAH NUCLEAR PLANT (SQN)
REVISED TECHNICAL REQUIREMENTS MANUAL (TRM)
AND TECHNICAL SPECIFICATION (TS) PAGES

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SECTION PAGE

SURVEILLANCE REQUIREMENTS

TR 4.0.1 Surveillance Requirements shall be met during the MODES or other specified conditions in the Applicability for individual Limiting Condition for Operation, unless otherwise stated in the individual Surveillance Requirement. Failure to meet a Surveillance Requirement, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified surveillance interval shall be failure to meet the Limiting Conditions for Operation except as provided in Technical Requirement 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

TR 4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

TR 4.0.3 If it is discovered that a Surveillance was not performed within its specified surveillance interval (including the allowed extension per Technical Requirement 4.0.2), then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified surveillance interval, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

If the Surveillance is not performed within the delay period, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered. When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

TR 4.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the specified surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.

TR 4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be as follows:

Inservice Inspection Program

This program provides controls for inservice inspection of ASME Code Class 1, 2, and 3 components, including applicable supports. The program shall include the following:

a. Provisions that inservice testing of ASME Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;

b. The provisions of Technical Requirement 4.0.2 are applicable to the frequencies for performing inservice inspection activities;

REACTIVITY CONTROL SYSTEMS

TR 3/4.1.2 BORATION SYSTEMS

FLOW PATHS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

TR 3.1.2.1 As a minimum, one of the following boron injection flow paths shall be OPERABLE:

a. A flow path from the boric acid tank via a boric acid transfer pump and charging pump to the Reactor Coolant System if only the boric acid storage tank in TR 3.1.2.5a is OPERABLE, or

b. The flow path from the refueling water storage tank via a charging pump to the Reactor Coolant System if only the refueling water storage tank in TR 3.1.2.5b is OPERABLE.

APPLICABILITY: MODES 4, 5 and 6.

ACTION:

MODE 4 - With none of the above flow paths OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of Technical Specification LCO 3.1.1.1 and restore one flow path as soon as possible.

MODE 5 - With none of the above flow paths OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of Technical Specification LCO 3.1.1.2.

MODE 6 - With none of the above flow paths OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet Technical Specification LCO 3.9.1.

SURVEILLANCE REQUIREMENTS

TR 4.1.2.1 At least one of the above required flow paths shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that the temperature of the areas containing flow path components from the boric acid tanks to the blending tee is greater than or equal to 63°F when it is a required water source.

b. Whenever the area temperature(s) is (are) less than 63°F and the boric acid tank is a required water source, the solution temperature in the flow path components from the boric acid tank must be measured to be greater than or equal to 63°F within 6 hours and every 24 hours thereafter until the area temperature(s) has(have) returned to greater than or equal to 63°F.

c. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

REACTIVITY CONTROL SYSTEMS

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

TR 3.1.2.3 One charging pump in the boron injection flow path required by TR 3.1.2.1 shall be OPERABLE and capable of being powered from an OPERABLE shutdown board.

APPLICABILITY: MODES 4, 5 and 6.

ACTION:

MODE 4 - With no charging pump OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of Technical Specification LCO 3.1.1.1 and restore one changing pump as soon as possible.

MODE 5 - With no charging pump OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of Technical Specification LCO 3.1.1.2.

MODE 6 - With no charging pump OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet Technical Specification LCO 3.9.1.

SURVEILLANCE REQUIREMENTS

TR 4.1.2.3 The above required charging pump shall be demonstrated OPERABLE by verifying, that on recirculation flow, the pump develops a discharge pressure of greater than or equal to 2400 psig when tested pursuant to TR 4.0.5.

REACTIVITY CONTROL SYSTEMS

BORATED WATER SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

TR 3.1.2.5 As a minimum, one of the following borated water sources shall be OPERABLE:

a. A boric acid storage system with:

1. A minimum contained borated water volume of 5000 gallons,

2. Between 6120 and 6990 ppm of boron, and

3. A minimum solution temperature of 63°F.

b. The refueling water storage tank with:

1. A minimum contained borated water volume of 55,000 gallons,

2. A minimum boron concentration of 2500 ppm, and

3. A minimum solution temperature of 60°F.

APPLICABILITY: MODES 4, 5 and 6.

ACTION:

MODE 4 - With no borated water source OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of Technical Specification LCO 3.1.1.1.

MODE 5 - With no borated water source OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of Technical Specification LCO 3.1.1.2.

MODE 6 - With no borated water source OPERABLE, suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet Technical Specification LCO 3.9.1.

SURVEILLANCE REQUIREMENTS

TR 4.1.2.5 The above required borated water source shall be demonstrated OPERABLE:

a. For the boric acid storage system, when it is the source of borated water by:

1. Verifying the boron concentration at least once per 7 days,

2. Verifying the borated water volume at least once per 7 days, and

3. Verifying the boric acid storage tank solution temperature is greater than or equal to 63°F at least once per 7 days by verifying the area temperature to be greater than or equal to 63°F, or

4. When the boric acid tank area temperature is less than 63°F and the boric acid storage system being used as the source of borated water, within 6 hours and every 24 hours thereafter, verify the boric acid tank solution temperature to be greater than or equal to 63°F until the boric acid tank area temperature has returned to greater than or equal to 63°F.

b. For the refueling water storage tank by:

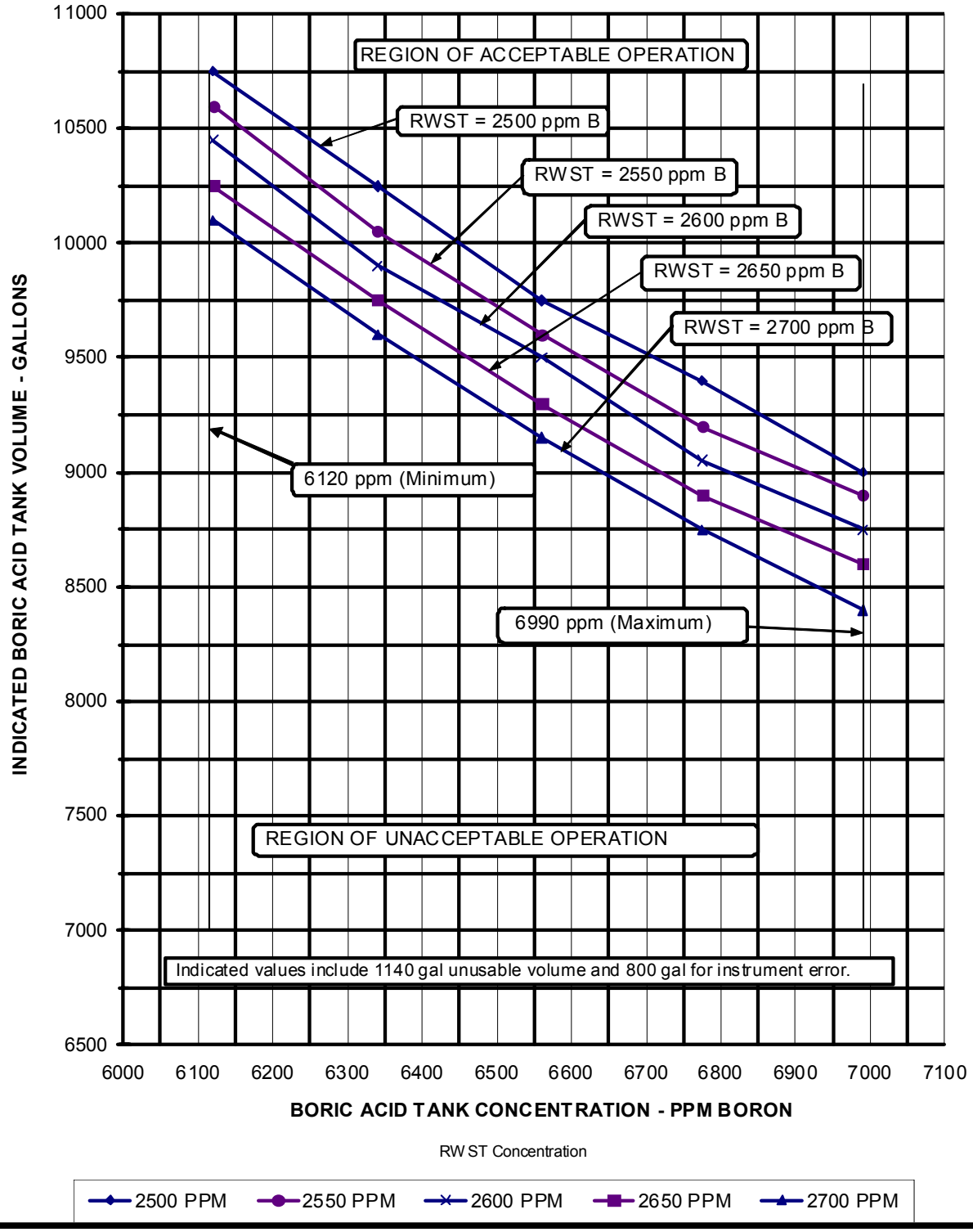
1. Verifying the boron concentration at least once per 7 days,

2. Verifying the borated water volume at least once per 7 days, and

3. Verifying the solution temperature at least once per 24 hours while in Mode 4 or while in Modes 5 or 6 when it is the source of borated water.

TRM FIGURE 3.1.2.6 (Units 1 & 2)

BORIC ACID TANK LIMITS
BASED ON RWST BORON CONCENTRATION



TR 3/4.7.14 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC) MAINTENANCE RULE EQUIPMENT

LIMITING CONDITION FOR OPERATION

TR 3.7.14 The HVAC components shown in Table 3.7.14-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.7.14-1.

ACTION:

With any of the HVAC components on Table 3.7.14-1 inoperable, enter the associated LCO in the Operation narrative logs and LCO tracking logs for Maintenance Rule Unavailability tracking. The provisions of TRM 3.0.4 do not apply.

SURVEILLANCE REQUIREMENTS

None

TRB 3.0.6 LCO TR 3.0.6 establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Requirement is to provide an exception to LCOs TR 3.0.1 and TR 3.0.2 (e.g., to not comply with the applicable Required Action[s]) to allow the performance of SRs to demonstrate:

a. The OPERABILITY of the equipment being returned to service; or

b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the allowed SRs. This Requirement does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the SRs.

An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of an SR on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of an SR on another channel in the same trip system.

TRB 4.0.1 TR 4.0.1 establishes the requirement that surveillances must be met during the OPERATIONAL MODES or other specified conditions in the Applicability for which the requirements of the Limiting Condition for Operation apply, unless otherwise specified in the individual Surveillance Requirement. The purposes of this Specification is to ensure that Surveillances are performed to verify the operational status of systems and components and that variables are within specified limits to ensure safe operation of the facility when the plant is in a MODE or other specified condition for which associated Limiting Condition for Operation are applicable. Failure to meet a Surveillance Requirement within the specified surveillance interval, in accordance with TR 4.0.2, constitutes a failure to meet a Limiting Condition for Operation.

Systems and components are assumed to be OPERABLE when the associated Surveillance Requirements have been met. Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when:

a. The systems or components are known to be inoperable, although still meeting the Surveillance Requirements; or

b. The requirements of the Surveillance(s) are known not to be met between required Surveillance performances.

Surveillances do not have to be performed when the unit is in an OPERATIONAL MODE for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

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 the inoperable equipment has been restored to OPERABLE status.

Upon completion of maintenance, appropriate post maintenance testing is required to declare equipment OPERABLE. This includes ensuring applicable Surveillances are not failed and their most recent performance is in accordance with TR 4.0.2. Post maintenance testing may not be possible in the current OPERATIONAL MODE or other specified conditions in the Applicability due to the necessary unit parameters not having been established. In these situations, the equipment may be considered OPERABLE provided testing has been satisfactorily completed to the extent possible and the equipment is not otherwise believed to be incapable of performing its function. This will allow operation to proceed to an OPERATIONAL MODE or other specified condition where other necessary post maintenance tests can be completed.

Some examples of this process are:

a. Auxiliary feedwater (AFW) pump turbine maintenance during refueling that requires testing at steam pressures > 800 psi. However, if other appropriate testing is satisfactorily completed, the AFW System can be considered OPERABLE. This allows startup and other necessary testing to proceed until the plant reaches the steam pressure required to perform the testing.

b. High pressure safety injection (HPI) maintenance during shutdown that requires system functional tests at a specified pressure. Provided other appropriate testing is satisfactorily completed, startup can proceed with HPI considered OPERABLE. This allows operation to reach the specified pressure to complete the necessary post maintenance testing.

TRB 4.0.2 Requirement TR 4.0.2 established the limit for which the specified time interval for Surveillance Requirements may be extended. It permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. It also provides flexibility to accommodate the length of a fuel cycle for surveillances that are performed at each refueling outage and are specified with an 18-month surveillance interval. It is not intended that this provision be used repeatedly as a convenience to extend surveillance intervals beyond that specified for surveillances that are not performed during refueling outages. The limitation of TR 4.0.2 is based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. This provision is sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

TRB 4.0.3 TR 4.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limit when a Surveillance has not been completed within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified surveillance interval, whichever is greater, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with TR 4.0.2, and not at the time that the specified surveillance interval was not met.

This delay period provides adequate time to complete Surveillances that have been missed. This delay period permits the completion of a Surveillance before complying with ACTION requirements or other remedial measures that might preclude completion of the Surveillance.

The basis for this delay period includes consideration of the unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

When a Surveillance with a surveillance frequency based not on time intervals, but upon specified unit conditions, operating situations, or requirements of regulations (e.g., prior to entering MODE 1 after each fuel loading, or in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions, etc.) is discovered to not have been performed when specified, TR 4.0.3 allows for the full delay period of up to the specified surveillance interval to perform the Surveillance. However, since there is not a time interval specified, the missed Surveillance should be performed at the first reasonable opportunity.

TR 4.0.3 provides a time limit for, and allowances for the performance of, Surveillances that become applicable as a consequence of MODE changes imposed by required ACTIONS.

Failure to comply with the specified surveillance interval for the technical requirement is expected to be an infrequent occurrence. Use of the delay period established by Surveillance Requirement 4.0.3 is a flexibility which is not intended to be used as an operational convenience to extend Surveillance intervals.

While up to 24 hours or the limit of the specified surveillance interval is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specification limits and the entry into the ACTION requirements for the applicable Limiting Conditions for Operation begins immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the entry into the ACTION requirements or the applicable Limiting Conditions for Operation begins immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this technical requirement, or within the Allowed Outage Time of the ACTIONS, restores compliance with Technical Requirement 4.0.1.

TRB 4.0.4 This Requirement establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL MODE or other condition of operation specified in the Applicability statement. The purpose of this Requirement is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into a MODE or condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL MODES or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this Requirement, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operations are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of TR 4.0.4 do not apply because this would delay placing the facility in a lower MODE of operation.

TRB 4.0.5 This Requirement ensures that inservice inspection of ASME Code Class l, 2, and 3 components and inservice testing of ASME Code Class l, 2, and 3 pumps and valves will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by l0 CFR 50.55a.

This Requirement includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Requirements and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

TRB 3/4.1.2 BORATION SYSTEMS

The boron injection system ensures that negative reactivity control is available during each mode of facility operation. The components required to perform this function include 1) borated water sources, 2) charging pumps, 3) separate flow paths, 4) boric acid transfer pumps, and 5) an emergency power supply from OPERABLE diesel generators.

With the RCS average temperature above 350°F, a minimum of two boron injection flow paths are required to ensure single functional capability in the event an assumed failure renders one of the flow paths inoperable. The boration capability of either flow path is sufficient to provide a SHUTDOWN MARGIN from expected operating conditions of 1.6% delta k/k after xenon decay and cooldown to 200°F. The maximum expected boration capability requirement occurs at near EOL from full power peak xenon conditions and requires borated water from a boric acid tank in accordance with Figure 3.1.2.6, and additional makeup from either: (1) the common boric acid tank and/or batching, or (2) a minimum of 26,000 gallons of 2500 ppm borated water from the refueling water storage tank. With the refueling water storage tank as the only borated water source, a minimum of 57,000 gallons of 2500 ppm borated water is required.

The boric acid tanks, pumps, valves, and piping contain a boric acid solution concentration of between 3.5% and 4.0% by weight. To ensure that the boric acid remains in solution, the air temperature is monitored in strategic locations. By ensuring the air temperature remains at 63°F or above, a 5°F margin is provided to ensure the boron will not precipitate out. To provide operational flexibility, if the area temperature should fall below the required value, the solution temperature (as determined by the pipe or tank wall temperature) will be monitored at an increased frequency to compensate for the lack of solution temperature alarm in the main control room.

With the RCS temperature below 350°F, one injection system is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the additional restrictions prohibiting CORE ALTERATIONS and that could result in loss of required SDM (Modes 4 or 5) or boron concentration (Mode 6) in the event the single injection system becomes inoperable. Suspending positive reactivity additions that could result in failure to meet minimum SDM or boron concentration limit is required to assure continued safe operation. Introduction of coolant inventory must be from sources that have a boron concentration greater than or equal to that required in the RCS for minimum SDM or refueling boron concentration. This may result in an overall reduction in RCS boron concentration but provides acceptable margin to maintaining subcritical operation. Introduction of temperature changes including temperature increases when operating with a positive MTC must also be evaluated to ensure they do not result in a loss of required SDM.

The boron capability required below 350°F, is sufficient to provide a SHUTDOWN MARGIN of 1.6% delta k/k after xenon decay and cooldown from 350°F to 200°, and a SHUTDOWN MARGIN of 1% delta k/k after xenon decay and cooldown from 200°F to 140°F. This condition requires either 5000 gallons of 6120 ppm borated water from the boric acid storage tanks or 13,400 gallons of 2500 ppm borated water from the refueling water storage tank.

The contained water volume limits include allowance for water not available because of discharge line location and other physical characteristics. The 55,000 gallon limit in the refueling water storage tank for modes 4, 5, and 6 is based upon 22,182 gallons that is undetectable due to lower tap location, 19,197 gallons for instrument error, 13,400 gallons required for shutdown margin, and an additional 221 gallons due to rounding up.

TRB 3/4.7.14 Heating, Ventilating, and Air Conditioning (HVAC) Maintenance Rule Equipment

Bases

BACKGROUND

The HVAC equipment listed on Table 3.7.14-1 is required to be tracked for unavailability by Sequoyah's implementation of 10CFR50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." This HVAC equipment has been determined to be "Risk Significant" equipment, and the requirements of the Maintenance Rule program requires that the time this equipment is inoperable, be monitored and trended, whether due to an unplanned failure or planned maintenance. The required operability of the HVAC equipment is commensurate with the required operability of the equipment being cooled, and the final Maintenance Rule unavailability time will be determined by Engineering. The equipment listed on Table 3.7.14-1 has no Technical Specification LCO or other associated TRM action for operability. Therefore, this TRM was created to provide indication for the unavailability of this HVAC equipment, and to assist in the tracking and trending of the total unavailability time.

APPLICABLE SAFETY ANALYSES

The design basis of this HVAC equipment is to maintain the temperature of the area, to which the associated equipment provides cooling, below the design basis limits as described in the Environmental Design Criteria SQN-DC-V-21.0.

This TRM is being implemented for tracking purposes only and there is no associated Safety Analysis affected or implemented by this change.

LCO

This TRM is being implemented to track the unavailability time of the associated HVAC equipment. This equipment is considered to be OPERABLE when the individual components necessary to maintain the associated area temperature below the design required limits are OPERABLE. These components include the chiller package, cooling coils, air handling unit, pumps, fan, dampers, instrumentation, and controls as applicable to the various systems.

APPLICABILITY

Cooling for the Electric Board Rooms, 6.9KV Shutdown Board Rooms, 480V Electric Board Rooms and ventilation to the 480V Transformer Rooms is required for all modes due to the commonality of the equipment served, requirements for accident mitigation, and the ability to cross tie the 480V board room cooling between Units 1 & 2. Cooling to the Thermal Barrier Booster Pump & Spent Fuel Pit Pump Area is only required in MODES 1, 2, 3, 4 for the applicable Unit.

(continued)

ACTIONS	With any of the equipment listed in Table 3.7.14-1 inoperable, the corresponding TRM for that Unit and Train of equipment shall be entered into the Operation narrative logs and LCO tracking logs for tracking the unavailability time. The provisions of TRM 3.0.4 are not applicable to this requirement.
SURVEILLANCE REQUIREMENTS	This TRM is for tracking purposes only. There are no Surveillance Requirements associated with this TRM.
REFERENCES	1. SPP-6.6, "Maintenance Rule Performance Indicator Monitoring Trending and Reporting - 10 CFR 50.65." 2. 0-TI-SXX-000-004.0, Maintenance Rule Performance Indicator Monitoring Trending and Reporting - 10 CFR 50.65." Attachment 5, "Heating, Ventilation and Air Conditioning - System 30." 3. SQN-DC-V-21.0, "Sequoyah Nuclear Plant - Environmental Design Criteria."

Primary to secondary leakage is a factor in the dose releases outside containment resulting from a steam line break (SLB) accident. To a lesser extent, other accidents or transients involve secondary steam release to the atmosphere, such as a steam generator tube rupture (SGTR). The leakage contaminates the secondary fluid.

The FSAR (Ref. 3) analysis for SGTR assumes the contaminated secondary fluid is released via safety valves for up to 30 minutes. Operator action is taken to isolate the affected steam generator within this time period. The 1 gpm primary to secondary leakage is relatively inconsequential.

The SLB is more limiting for site radiation releases. The safety analysis for the SLB accident assumes 1 gpm primary to secondary leakage in one generator as an initial condition. The dose consequences resulting from the SLB accident are well within the limits defined in 10 CFR 100 or the staff approved licensing basis (i.e., a small fraction of these limits).

The RCS operational leakage satisfies Criterion 2 of the NRC Policy Statement.

LCO

RCS operational leakage shall be limited to:

a. PRESSURE BOUNDARY LEAKAGE

No PRESSURE BOUNDARY LEAKAGE is allowed, being indicative of material deterioration. Leakage of this type is unacceptable as the leak itself could cause further deterioration, resulting in higher leakage. Violation of this LCO could result in continued degradation of the RCPB. Leakage past seals and gaskets is not PRESSURE BOUNDARY LEAKAGE.

b. UNIDENTIFIED LEAKAGE

One gpm of UNIDENTIFIED LEAKAGE is allowed as a reasonable minimum detectable amount that the containment air monitoring and containment pocket

Surveillance Requirement 4.6.3.5

This SR requires verification that each containment isolation manual valve and blind flange located outside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the containment boundary is within design limits. This SR does not require any testing or valve manipulation. Rather, it involves verification that those containment isolation valves outside containment and capable of being mispositioned are in the correct position. Since verification of valve position for containment isolation valves outside containment is relatively easy, the 31 day Frequency is based on engineering judgment and was chosen to provide added assurance of the correct positions. The SR specifies that containment isolation valves that are open under administrative controls are not required to meet the SR during the time the valves are open. This SR does not apply to valves that are locked, sealed, or otherwise secured in the closed position, since these were verified to be in the correct position upon locking, sealing, or securing.

This Note applies to valves and blind flanges located in high radiation areas and allows these devices to be verified closed by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted during Modes 1, 2, 3, and 4 for ALARA reasons. Therefore, the probability of misalignment of these containment isolation valves, once they have been verified to be in their proper position, is small.

Where the SRs discussed herein specify voltage and frequency tolerances, the following is applicable. 6800 volts is the minimum steady state output voltage and the 10 second transient value. 6800 volts is 98.6% of nominal bus voltage of 6900 volts and is based on the minimum voltage required for the diesel generator supply breaker to close on the 6.9 kV shutdown board. The specified maximum steady state output voltage of 7260 volts is based on the degraded over voltage relay setpoint and is equivalent to 110% of the nameplate rating of the 6600 volt motors. The specified minimum and maximum frequencies of the diesel generator are 58.8 Hz and 61.2 Hz, respectively. These values are equal to $\pm$ 2% of the 60 Hz nominal frequency and are derived from the recommendations given in regulatory Guide 1.9.

Where the SRs discuss maximum transient voltages during load rejection testing, the following is applicable. The maximum transient voltage of 8880 volts represents a conservative limit to ensure the resulting voltage will not exceed a level that will cause component damage. It is based on the manufacturer's recommended high potential test voltage of 60% of the original factory high potential test voltage (14.8 kV). The diesel generator manufacturer has determined that the engine and/or generator controls would not experience detrimental effects for transient voltages < 9000 volts. The maximum transient voltage of 8276 volts is retained from the original technical specifications to ensure that the voltage transient following rejection of the single largest load is within the limits originally considered acceptable. It was based on 114% of 7260 volts, which is the Range B service voltage per ANSI-C84.1.

The Surveillance Requirement for demonstrating the OPERABILITY of the Station batteries are based on the recommendations of Regulatory Guide 1.129 "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage batteries for Generating Stations and Substations."

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