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

July 10, 2001

TVA-SQN-TS-01-07 10 CFR 50.90

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) - UNITS 1 AND 2 - TECHNICAL SPECIFICATION (TS) CHANGE NO. 01-07, "ULTIMATE HEAT SINK (UHS)"

References:
1. TVA letter to NRC dated August 21, 2000, "Sequoyah Nuclear Plant (SQN) - TVA Withdrawal of Exigent TS Change Associated With SQN Ultimate Heat Sink (UHS)"
2. TVA letter to NRC dated August 21, 1995, "Sequoyah Nuclear Plant (SQN) - Exigent Technical Specification (TS) Change 95-21, 'Ultimate Heat Sink UHS'"
3. NRC letter to TVA dated September 13, 1995, "Issuance of Amendments (TAC Nos. M93316 and M93317)(TS 95-21)"

In accordance with the provisions of 10 CFR 50.4 and 50.90, TVA is submitting a request for an amendment to SQN's Licenses DPR-77 and 79 to change the TSs for Units 1 and 2. The proposed change revises TS Limiting Condition of Operation (LCO) 3.7.5.c to allow for an increase in SQN's UHS temperature from 84.5 degrees Fahrenheit (°F) to 87°F until September 30, 2002.

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The temporary increase in SQN's UHS is based on evaluations that identify existing margins in SQN's UHS safety analysis. In addition, TVA notes that the proposed change is based on simultaneous failure events assumed in SQN's UHS safety analysis (i.e., loss of downstream dam, loss-of-coolant accident on one unit, seismic event, and loss of offsite power). The low initiating event probability for those accident scenarios, coupled with the short duration of this change, if invoked, further illustrates the conservatism of the analysis.

Note that TVA's proposed change includes procedural implementation of two compensatory actions in the event UHS temperature is equal to or greater than 84.5°F. These compensatory actions include:

(a) control any actions that would impact Essential Raw Cooling Water (ERCW) system flow rates or availability of ERCW pumps to only those needed to maintain operability, and

(b) throttle two ERCW system valves (0-FCV-67-205 and -208) to limit flow from a postulated design basis pipe break to ensure that sufficient flow is provided to SQN's Main Control Room and Electrical Board Room chillers.

TVA requests this TS change as an interim change in order to reduce the risk of power production interruptions due to elevated river temperatures. A permanent change will be submitted before the end of 2002 in order to support operation for the summer of 2003. For calendar year 2001, precipitation and basin runoff has been below normal. Summer meteorological conditions are forecast to be warmer and drier than normal. As a result, the SQN intake temperature could exceed the TS limit. As intake temperatures rise, TVA conducts special off-peak operations at Chickamauga and Watts Bar hydroelectric plants (i.e., increase river flows through specific hydroelectric units). However, it is unknown whether these special operations will be sufficient to keep SQN intake temperature within limits.

TVA predicted high river temperatures in 1995 and 2000 and requested exigent TS changes in anticipation. However, the actual river temperature did not exceed the TS limit in either case. While exigent TS conditions do not exist at this time, TVA considers it prudent to request an amendment until a permanent TS change is in place in order to avoid the need for a "Notice of Enforcement Discretion." However, if severe weather conditions escalate the need for this change, TVA will notify NRC of the circumstances and will modify the amendment accordingly in order to ensure continued dependable power supply in the TVA region.

TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9). The SQN Plant Operations Review Committee and the SQN Nuclear Safety Review Board have previously reviewed this proposed change and determined that operation of SQN Units 1 and 2, in accordance with the proposed change, will not endanger the health and safety of the public. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter to the Tennessee State Department of Public Health.

References 2 and 3 provide TVA's 1995 TS amendment associated with increasing UHS that was approved for SQN on an exigent basis. TVA's Reference 1 letter provides a similar TS request that was withdrawn because changes in environmental conditions alleviated the rise in river temperature. As noted above, TVA has determined that a permanent increase to SQN's analyses for increasing UHS temperature to 87°F is warranted and is continuing to pursue permanent changes to SQN's design basis.

Enclosure 1 to this letter provides the description and evaluation of the proposed change. This includes TVA's determination that the proposed change does not involve a significant hazards consideration, and is exempt from environmental review. Enclosure 2 contains copies of the appropriate TS pages from Units 1 and 2 marked up to show the proposed change. Enclosure 3 contains the revised TS pages. Enclosure 4 contains our commitments.

In accordance with NRC RIS 2001-05, only one paper copy of this document is being sent to the NRC Document Control Desk. If you have any questions about this change, please telephone me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

Sincerely,

Pedro Salas
Licensing and Industry Affairs Manager

Subscribed and sworn to before me
on this 10th day of July

Peggy M. Billingsley
Notary Public

My Commission Expires October 9, 2002

Enclosures
cc: See page 5

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ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2
DOCKET NOS. 327 AND 328

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE 01-07
"ULTIMATE HEAT SINK (UHS)"

DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

I. DESCRIPTION OF THE PROPOSED CHANGE

TVA proposes to modify the SQN Units 1 and 2 TSs to revise TS Limiting Condition for Operation (LCO) 3.7.5.c to allow for an increase in the UHS temperature from 84.5 degrees Fahrenheit (°F) to 87.0°F.

SQN TS LCO 3.7.5.c currently states: "When the water level is above 680 feet mean sea level USGS datum, the average ERCW supply header water temperature may be less than or equal to 84.5°F." TVA's proposed change provides an asterisk after 84.5°F with a footnote that reads, "87.0°F is allowed until September 30, 2002."

II. REASON FOR THE PROPOSED CHANGE

The Tennessee River (Chickamauga reservoir) serves as the UHS for both units at TVA's SQN. SQN TS 3.7.5.c currently limits this UHS temperature to less than or equal to 84.5°F when the water level is above 680 feet. This maximum temperature limit ensures that sufficient cooling capacity is available to either: (1) provide normal cooldown of the facility or (2) to mitigate the effects of accident conditions within acceptable limits. The maximum temperature limitation is based on providing a 30-day (reference Regulatory Guide 1.27) cooling water supply to safety-related equipment without exceeding their design basis temperature. A reservoir elevation of 680 feet is established in TS 3.7.5.c to ensure that sufficient margin exists to remove plant heat loads by way of the essential raw cooling water (ERCW) system concurrent with a design basis accident.

The average water temperature of the Chickamauga reservoir (as measured at SQN's ERCW headers) on June 25, 2001, was 77.7°F. This high temperature is the result of drought induced low flow conditions in the Tennessee River System. The Chickamauga reservoir water level is above the

680-foot elevation and is expected to remain above 680-foot elevation. Continuing high temperature conditions could cause the average ERCW temperature to increase. This increase could cause the average temperature to reach the TS limit of 84.5°F as early as July 24, 2001.

In the event the 84.5°F limit is reached, the TS action would require that both units be placed in hot standby within 6 hours and in cold shutdown within the following 30 hours. TVA is requesting a TS change to allow increasing the maximum UHS temperature to 87°F until September 30, 2002. This TS change proposes to use existing margins in SQN's safety analysis for increasing SQN's UHS temperature limit from 84.5°F to 87°F.

This change is requested to be in place until September 30, 2002, to provide temporary relief through the summer months of 2002. A permanent change is currently being pursued which will provide relief for subsequent summers.

III. SAFETY ANALYSIS

Due to the potential for increased river water temperatures on the Tennessee River (Chickamauga reservoir) during the next 60 days, evaluations were performed to determine the effects of exceeding the present TS UHS limit of 84.5°F at a river level of 680 feet. TVA's Engineering staff has identified existing margins in the UHS safety analysis that would justify increasing the limit from 84.5°F to 87°F.

Background

The SQN UHS safety analysis relies on the Tennessee River to supply water through the ERCW system. The ERCW system and SQN's UHS analysis are described in SQN's Final Safety Analysis Report (FSAR) (Sections 9.2.2 and 9.2.5 respectively). The ERCW system contains eight pumps (design basis requires only two pumps per unit) that deliver water to various plant component heat exchangers, chillers, and area coolers. SQN's UHS analysis is a conservative analysis that includes assumptions for the simultaneous effects from the loss of the downstream dam (Chickamauga Dam), loss of offsite power, a seismic event and an loss-of-coolant accident (LOCA) on one unit. Accordingly, TVA's proposed change to increase SQN's UHS limit for a short period of time during the summer months will have a minimal effect on plant safety since the probability for simultaneous failures described above are unlikely.

The following analysis has been identified as being directly affected by the increased UHS temperature:

Containment Pressure Analysis (SQN Final Safety Analysis Report [FSAR] Chapter 6)

The revision to the SQN containment pressure analysis (i.e., long-term analysis contained in WCAP-12455 Supplement 1, Revision 1) has recently been completed to determine the effects on the overall containment peak accident pressure with increased ERCW temperature and the correction to an identified modeling error associated with the Westinghouse Electric Company LOTIC-1 code. The revised analysis has been performed using an ERCW temperature of 87°F and an ice condenser ice mass of 1.916×10^6 pounds (note that this ice mass value represents an end of cycle value while the beginning of cycle as-left value is 2,225,880 pounds to account for sublimation and instrument uncertainties). The results of this evaluation model show that the maximum calculated peak containment pressure is 11.44 pounds per square inch gauge (psig), which is within SQN's containment vessel design pressure of 12.0 psig. All other acceptance criteria associated with the revised analysis are also met (e.g., time to ice bed meltout, peak containment sump temperature, etc).

Note that the beginning of cycle as-left ice mass value above is a slight increase from SQN's current as-left TS value of 2,082,024 pounds. TVA is preparing to submit a TS change request (TS 01-04) that reflects this increase in the as-left minimum ice mass. TVA will have administrative controls in place to ensure sufficient ice weight is maintained during subsequent refueling outages.

The following table provides an overview of the ice mass values for SQN's revised analysis and includes actual as-left data from SQN's last refueling outage.

Ice Weight Table

	Beginning of cycle ice weight
Current TS requirements (based on current FSAR analysis)	2,082,024 lbs
Revised analysis (prepared to assess margin for UHS temperature change)	2,225,880 lbs
Actual Unit 1 as-left data from last refueling outage	2,671,909 lbs
Actual Unit 2 as-left data from last refueling outage	2,582,761 lbs

As shown in the above table, SQN's as-left ice mass provides margin above the revised value of 2,225,880 pounds. Accordingly, SQN's peak containment accident pressure will not be affected by the proposed increase in the UHS temperature.

The Containment Subcompartment Pressure analysis (i.e., short-term pressure analysis) is not affected by this increase in the UHS temperature. This analysis is for the immediate (first few seconds) response to the double-ended break and does not utilize the UHS as a heat removal source. Likewise, the peak containment temperature analysis is unaffected by the ERCW temperature increase. The peak containment temperature results from a main steam line break and occurs very early in the transient during blowdown from the faulted steam generator and is not governed by ERCW temperature at the time when swap-over to the containment sump is initiated, the containment temperature is well below the calculated maximum.

As for long-term containment cooling capability, it has been previously shown in analyses supporting TS Change 88-21 that any increase in the UHS temperature will decrease the rate of cooldown. The analysis that was utilized to support the TS 88-21 change showed that the correlation between the UHS temperature and the long-term containment temperature was basically one-to-one. Therefore, it can be estimated that the long-term cooling effect of the lower compartment coolers (cooled by ERCW) would increase the long-term containment temperature by 2.5°F. This is an analytical result and does not take into account the actual performance of the ERCW system (flowrates higher than assumed in the analyses, but proven by TS testing). Extending the long-term cooldown rate of containment to account for the 2.5°F increase does not affect the results of this analysis to the point of equipment degradation (i.e., environmental qualification limits). It should also be noted that the long-term definition for these events is 100 days and it is not justifiable to assume that the UHS will be at elevated temperatures during the entire 100 day period. The sensitivity studies performed are based on historical river temperature profiles shifted upward 2.5°F and consider river temperature in excess of 84.5°F for 70 days. Therefore, the long-term containment temperature analysis, the long-term cooling analysis for pipe breaks outside of containment, and the environmental qualification analysis would not be affected by this short-term variance.

The peak post-LOCA long-term sump water temperature is analyzed to be less than 160°F (WCAP-12455, Supplement 1, Revision 1). Therefore, based on an assumed maximum of

87°F river water temperature, sufficient margin exists to meet net positive suction head requirements for the residual heat removal (RHR) and containment spray pumps.

It should also be noted that other analytical variables outside of heat sink temperature (i.e., core decay heat, emergency core cooling system (ECCS) flow capability, and containment spray heat exchanger tube plugging criteria) are also within conservative margins with respect to actual plant conditions. Although no changes to these parameters were made in the above analyses and sensitivity studies, TVA evaluated these variables to further show that the proposed variance is conservative with respect to SQN's safety analyses.

The following analyses have been identified as not being affected by the increased ERCW temperatures since they do not depend upon heat removal via the UHS for mitigation of the consequences of the event:

- Major or minor secondary system ruptures
- Complete loss of forced reactor coolant system (RCS) flow or single reactor coolant pump locked rotor
- Rod cluster withdrawal at full power
- Rod cluster control assembly ejection
- Fuel handling accident
- Waste gas decay tank rupture
- Inadvertent loading of a fuel assembly into an improper location

The consequences of a steam generator tube rupture will not be altered by the proposed change. However, the last mitigative action item listed for the operator in the FSAR analysis for this event is initiation of RHR for cooldown. The RHR heat exchanger does transfer its heat load to the UHS via the component cooling system (CCS). Therefore, cooldown of the RCS may be minimally extended. The extended cooldown does not represent any unacceptable consequences.

The ECCS analysis is unaffected since the 10 CFR 50.46 limits and Appendix K requirements are met in the short-term accident mitigation period. As previously discussed, the swapover to containment inventory occurs after these analyzed peaks.

Sequoyah Engineering staff performed sensitivity studies using a hydraulic model of the ERCW system (model is based on the latest ERCW flow balance data) to support the temporary increase in SQN's UHS temperature from 84.5°F to 87°F. These sensitivity studies were performed as a result

of a recent plant modification that replaced degraded temperature control valves (TCVs). The new TCVs control flow to SQN's Main Control Room and Electrical Board Room chillers and affect the ERCW system flow balance and the flow margins associated with these chillers. Additional flow must be provided to these chillers to support the proposed increase in UHS temperature. Consequently, TVA is introducing a compensatory measure to ensure additional flow is provided to these chillers. No other components are affected by this proposal. A description of the compensatory measure is provided below.

Compensatory Measure

SQN's design basis configuration assumes a break occurs in the ERCW piping at the wall between the Auxiliary Building and the Turbine Building (i.e., this portion of piping is not seismically qualified). The resultant pressure loss from this pipe break creates a reduction in ERCW flow to the chillers. In order to prevent any potential loss of flow to these chillers, TVA is introducing a compensatory measure to temporarily throttle two flow control valves (FCVs) in the ERCW system (0-FCV-67-205 and -208). These valves supply ERCW to the Control Air system compressors in the Turbine Building. Existing flow margins for supplying ERCW flow to these compressors have been evaluated and is sufficient to allow throttling of the ERCW valves. The compensatory measure would become effective in the event the average ERCW supply header water temperature exceeds the TS UHS limit of 84.5°F. The throttling of these valves during this temporary condition of elevated river temperature will limit any flow from a postulated break and ensure that sufficient flow is provided to these chillers. Procedural controls will ensure that the compensatory measure is followed.

Qualification of Piping, Supports, and Components

An evaluation was performed for the affected ERCW piping and CCS piping. Engineering calculations show that the analyzed temperature ranges for the affected piping envelopes the 2.5°F temperature increase. Accordingly, the piping, supports, and components remain qualified to the design basis and continues to meet code allowables with the proposed temperature increase to 87°F.

In general, TVA used "Design by Rule" methodology (ASME Section III, Class 2 & 3; MSS-SP-66, or ANSI B16.5) for ERCW components. The 87°F temperature is well within the pressure-temperature limits established by "Design by Rule."

In conclusion, ERCW piping, pipe supports, and components will remain operable for the increase in river temperature to 87°F.

IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

TVA has concluded that operation of SQN Units 1 and 2, in accordance with the proposed change to the technical specifications (TSs) [or operating license(s)], does not involve a significant hazards consideration. TVA's conclusion is based on its evaluation, in accordance with 10 CFR 50.91(a)(1), of the three standards set forth in 10 CFR 50.92(c).

The Tennessee River (Chickamauga reservoir) serves as the ultimate heat sink (UHS) for both units at TVA's SQN. SQN TS 3.7.5.c currently limits this UHS temperature to less than or equal to 84.5°F when the water level is above 680 feet. This maximum temperature limit ensures that sufficient cooling capacity is available to either: (1) provide normal cooldown of the facility, or (2) to mitigate the effects of accident conditions within acceptable limits. The maximum temperature limitation is based on providing a 30-day (reference Regulatory Guide 1.27) cooling water supply to safety-related equipment without exceeding their design basis temperature. A reservoir elevation of 680 feet is established in TS 3.7.5.c to ensure that sufficient margin exists to remove plant heat loads by way of the essential raw cooling water (ERCW) system concurrent with a design basis accident.

TVA proposes to modify the SQN Units 1 and 2 TSs to revise TS Limiting Condition for Operation (LCO) 3.7.5.c to allow for an increase in the UHS temperature from 84.5 degrees Fahrenheit (°F) to 87.0°F.

SQN TS LCO 3.7.5.c currently states: "When the water level is above 680 feet mean sea level USGS datum, the average ERCW supply header water temperature may be less than or equal to 84.5°F."

TVA's proposed change provides an asterisk after 84.5°F with a footnote that reads, "87.0°F is allowed until September 30, 2002."

A. <u>The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.</u>

The probability of occurrence or the consequences of an accident are not increased as presently analyzed in the safety analyses since the objective of the event

mitigation is not changed. No changes in event classification as discussed in Final Safety Analysis Report Chapter 15 will occur due to the increased river water temperature (with respect to both containment integrity and safety-system heat removal). Therefore, the probability of an accident or malfunction of equipment presently evaluated in the safety analyses will not be increased. The containment design pressure is not challenged by allowing an increase in the river water temperature above that allowed by the TSs, thereby ensuring that the potential for increasing offsite dose limits above those presently analyzed at the containment design pressure of 12.0 pounds per square inch is not a concern. In addition, ERCW and component cooling system (CCS) piping and pipe supports remain qualified to the design basis and code allowables. Therefore, the proposed variance to TS 3.7.5.c will not significantly increase the probability or consequences of an accident previously evaluated.

B. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The possibility of a new or different accident situation occurring as a result of this condition is not created. The ERCW system is not an initiator of any accident and only serves as a heat sink for normal and upset plant conditions. By allowing this change in operating temperatures, only the assumptions in the containment pressure analysis are changed. The variance in the ERCW temperature results in minimal increase in peak containment accident pressure. As for the net positive suction head requirements relative to the essential core cooling system and containment spray system, it has been demonstrated that this operational variance will not challenge the present design requirements. In addition, increased river temperatures will not significantly affect the design basis analysis of ERCW or CCS piping, pipe supports, and components. Therefore, the potential for creating a new or unanalyzed condition is not created.

C. The proposed amendment does not involve a significant reduction in a margin of safety.

The margin of safety as reported in the basis for the TSs is also not reduced. The design pressure for the containment and all supporting equipment and components for worse-case accident condition is 12.0 pounds per square inch gauge (psig). This variance in river water temperature will not challenge the design condition of

containment. Further, 12.0 psig design limit is not the failure point of containment, which would lead to the loss of containment integrity. TVA's compensatory measures will ensure the design basis margins remain available and does not introduce any reduction in margin of safety. In addition, analysis of the margins associated with ERCW and CCS piping, pipe supports, and components indicate these remain enveloped by the proposed increase in river temperature. Therefore, a significant reduction in the margin to safety is not created by this variance.

V. ENVIRONMENTAL IMPACT CONSIDERATION

The proposed change does not involve a significant hazards consideration, a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or a significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

ENCLOSURE 2

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

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE 01-07
MARKED PAGES

I. AFFECTED PAGE LIST

Unit 1

3/4 7-14

Unit 2

3/4 7-14

II. MARKED PAGES

See attached.

PLANT SYSTEMS

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5 The ultimate heat sink shall be OPERABLE with:

a. A minimum water level at or above elevation 670 feet mean sea level USGS datum, and

b. An average ERCW supply header water temperature of less than or equal to 83°F, and

c. When the water level is above 680 feet mean sea level USGS datum, the average ERCW supply header water temperature may be less than or equal to 84.5°F.*

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIRMENTS

4.7.5.1 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average ERCW supply header temperature and water level to be within their limits.

2002

*87°F is allowed until September 30, ~~1995.~~

PLANT SYSTEMS

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5 The ultimate heat sink shall be OPERABLE with:

a. A minimum water level at or above elevation 670 feet mean sea level USGS datum, and

b. An average ERCW supply header water temperature of less than or equal to 83°F, and

c. When the water level is above 680 feet mean sea level USGS datum, the average ERCW supply header water temperature may be less than or equal to 84.5°F.*

APPLICABILITY: Modes 1, 2, 3 and 4.

ACTION:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIRMENTS

4.7.5.1 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average ERCW supply header temperature and water level to be within their limits.

2002

*87°F is allowed until September 30, ~~1995~~

ENCLOSURE 3

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

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE 01-07
REVISED PAGES

I. AFFECTED PAGE LIST

Unit 1

3/4 7-14

Unit 2

3/4 7-14

II. REVISED PAGES

See attached.

PLANT SYSTEMS

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5 The ultimate heat sink shall be OPERABLE with:

a. A minimum water level at or above elevation 670 feet mean sea level USGS datum, and

b. An average ERCW supply header water temperature of less than or equal to 83°F, and

c. When the water level is above 680 feet mean sea level USGS datum, the average ERCW supply header water temperature may be less than or equal to 84.5°F.*

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIRMENTS

4.7.5.1 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average ERCW supply header temperature and water level to be within their limits.

*87°F is allowed until September 30, 2002.

PLANT SYSTEMS

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5 The ultimate heat sink shall be OPERABLE with:

a. A minimum water level at or above elevation 670 feet mean sea level USGS datum, and

b. An average ERCW supply header water temperature of less than or equal to 83°F, and

c. When the water level is above 680 feet mean sea level USGS datum, the average ERCW supply header water temperature may be less than or equal to 84.5°F.*

APPLICABILITY: Modes 1, 2, 3 and 4.

ACTION:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIRMENTS

4.7.5.1 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average ERCW supply header temperature and water level to be within their limits.

*87°F is allowed until September 30, 2002

ENCLOSURE 4

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

TVA COMMITMENTS

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1. The following compensatory actions will be put in place when SQN's Ultimate Heat Sink (UHS) temperature is equal to or greater than 84.5 degrees Fahrenheit:

   a) SQN will control any actions that would impact Essential Raw Cooling Water (ERCW) system flow rates or availability of ERCW pumps to only those needed to maintain operability.

   b) SQN will throttle two ERCW system valves (0-FCV-67-205 and -208) to limit flow from a postulated design basis pipe break to ensure that sufficient flow is provided to the Main Control Room and Electrical Board Room chillers.

2. TVA will submit a permanent TS change to address the current UHS limit before the end of 2002 in order to support plant operation during the summer of 2003.

3. TVA will revise applicable procedures prior to SQN's next refueling outage for both units (Cycle 11) to ensure sufficient ice mass is maintained during subsequent refueling outages.