ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-95-11)

LIST OF AFFECTED PAGES

Unit 1

2-7
2-8
2-9
2-10
6-21

Unit 2

2-9
2-10
2-11
6-22

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES	
21. Turbine Impulse Chamber Pressure - (P-13) Input to Low Power Reactor Trips Block P-7	$\leq$ 10% Turbine Impulse Pressure Equivalent	$\leq$ 12.4% Turbine Impulse Pressure Equivalent	R145
22. Power Range Neutron Flux - (P-8) Low Reactor Coolant Loop Flow, and Reactor Trip	$\leq$ 35% of RATED THERMAL POWER	$\leq$ 37.4% of RATED THERMAL POWER	R145
23. Power Range Neutron Flux - (P-10) - Enable Block of Source, Intermediate, and Power Range (low setpoint) Reactor Trips	$\geq$ 10% of RATED THERMAL POWER	$\geq$ 7.6% of RATED THERMAL POWER	R145
24. Reactor Trip P-4	Not Applicable	Not Applicable	
25. Power Range Neutron Flux - (P-9) - Blocks Reactor Trip for Turbine Trip Below 50% Rated Power	$\leq$ 50% of RATED THERMAL POWER	$\leq$ 52.4% of RATED THERMAL POWER	R145

NOTATION

NOTE 1: Overtemperature ΔT $\left(\frac{1+\tau_4 S}{1+\tau_5 S}\right)\left(\frac{1}{1+\tau_6 S}\right) \leq \Delta T_o \{K_1 - K_2 \left(\frac{1+\tau_1 S}{1+\tau_2 S}\right)\left(\frac{1}{1+\tau_7 S}\right)[T-T'] + K_3(P-P') - f_1(\Delta I)\}$ R145

Where: $\frac{1+\tau_4 S}{1+\tau_5 S}$ = Lead-lag compensator on measured ΔT

τ_4, τ_5 = Time constants utilized in the lead-lag controller for ΔT, ~~τ_4 = 12 secs, τ_5 = 3 sec.~~ AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

ΔT_o = Indicated ΔT at RATED THERMAL POWER

K_1 = ~~$\leq$ 1.15~~ OVERTEMPERATURE ΔT REACTOR TRIP SETPOINT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

K_2 = ~~0.011~~ OVERTEMPERATURE ΔT REACTOR TRIP HEATUP SETPOINT PENALTY COEFFICIENT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

$\frac{1}{1+\tau_6 S}$ = LAG COMPENSATOR ON MEASURED ΔT.

τ_6 = TIME CONSTANT UTILIZED IN THE LAG COMPENSATOR FOR ΔT, AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

Amendment No. 19, 114, 141
MAY 16 1990

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 1: (Continued)

$\frac{1 + \tau_1 S}{1 + \tau_2 S}$ = The function generated by the lead-lag controller for T_{avg} dynamic compensation

τ_1, & τ_2 = Time constants utilized in the lead-lag controller for T_{avg}, ~~τ_1 = 33 secs.~~ AS PRESENTED IN THE ~~τ_2 = 4 secs.~~ CORE OPERATING LIMITS REPORT. R145

T = Average temperature °F

T' ≤ 578.2°F (Nominal T_{avg} at RATED THERMAL POWER) R145

K_3 = ~~0.00055~~ OVERTEMPERATURE ΔT REACTOR TRIP DEPRESSURIZATION SETPOINT PENALTY COEFFICIENT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

P = Pressurizer pressure, psig

P' = 2235 psig (Nominal RCS operating pressure)

S = Laplace transform operator (sec^{-1})

and $f_1(\Delta I)$ is a function of the indicated difference between top and bottom detectors of the power-range nuclear ion chambers; with gains to be selected based on measured instrument response during plant startup tests such that:

(i) for $q_t - q_b$ between - 29 percent and + 5 percent $f_1(\Delta I) = 0$ (where q_t and q_b are percent RATED THERMAL POWER in the top and bottom halves of the core respectively, and $q_t + q_b$ is total THERMAL POWER in percent of RATED THERMAL POWER).

$\frac{1}{1 + \tau_7 S}$ = LAG COMPENSATOR ON MEASURED T_{AVG}.

τ_7 = TIME CONSTANT UTILIZED IN THE MEASURED T_{AVG} LAG COMPENSATOR, AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 1: (Continued)

(ii) for each percent that the magnitude of $(q_t - q_b)$ exceeds -29 percent, the ΔT trip setpoint shall be automatically reduced by 1.50 percent of its value at RATED THERMAL POWER.

(iii) for each percent that the magnitude of $(q_t - q_b)$ exceeds +5 percent, the ΔT trip setpoint shall be automatically reduced by 0.86 percent of its value at RATED THERMAL POWER. R23

NOTE 2: Overpower $\Delta T \left(\frac{1 + \tau_4 S}{1 + \tau_5 S}\right)\left(\frac{1}{1+\tau_6 S}\right) \leq \Delta T_o \{K_4 - K_5 \left(\frac{\tau_3 S}{1 + \tau_3 S}\right)\left(\frac{1}{1+\tau_7 S}\right) T - K_6(T\left(\frac{1}{1+\tau_7 S}\right) - T'') - f_2(\Delta I)\}$ R145

Where:

$\frac{1 + \tau_4 S}{1 + \tau_5 S}$ = as defined in Note 1

τ_4, τ_5 = as defined in Note 1

ΔT_o = as defined in Note 1

$\frac{1}{1+\tau_6 S}$ = AS DEFINED IN NOTE 1.

τ_6 = AS DEFINED IN NOTE 1.

K_4 = ~~≤ 1.087~~ OVERPOWER ΔT REACTOR TRIP SETPOINT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT. R118

K_5 = ~~0.02/°F for increasing average temperature and 0 for decreasing average temperature~~ OVERPOWER ΔT REACTOR TRIP SETPOINT PENALTY COEFFICIENT FOR CHANGE IN $T_{AVG.}$, AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

$\frac{\tau_3 S}{1 + \tau_3 S}$ = The function generated by the rate-lag controller for T_{avg} dynamic compensation R145

Amendment No. 19, 114, 141
May 16, 1990

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 2: (Continued)

τ_3 = Time constant utilized in the rate-lag controller for T_{avg}, ~~τ_3 = 10 secs.~~ AS PRESENTED IN THE CORE OPERATING LIMITS REPORT. R145

K_6 = ~~0.0011 for T > T" and K_6 = 0 for T < T"~~ OVERPOWER ΔT REACTOR TRIP HEATUP SETPOINT PENALTY COEFFICIENT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

T = as defined in Note 1

T" = Indicated T_{avg} at RATED THERMAL POWER (Calibration temperature for ΔT instrumentation, $\leq$ 578.2°F)

S = as defined in Note 1

$f_2(\Delta I)$ = 0 for all ΔI

$\frac{1}{1+\tau_7 S}$ = AS DEFINED IN NOTE 1.

τ_7 = AS DEFINED IN NOTE 1.

NOTE 3: The channel's maximum trip setpoint shall not exceed its computed trip point by more than 1.9 percent ΔT span.

NOTE 4: The channel's maximum trip setpoint shall not exceed its computed trip point by more than 1.7 percent ΔT span. R145

MONTHLY REACTOR OPERATING REPORT

6.9.1.10 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the PORVs or Safety Valves, shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report. R76

CORE OPERATING LIMITS REPORT

6.9.1.14 Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:

1. Moderator Temperature Coefficient BOL and EOL limits and 300 ppm surveillance limit for Specification 3/4.1.1.3, R159
2. Shutdown Bank Insertion Limit for Specification 3/4.1.3.5,
3. Control Bank Insertion Limits for Specification 3/4.1.3.6,
4. Axial Flux Difference Limits for Specification 3/4.2.1,
5. Heat Flux Hot Channel Factor, K(z), and W(z) for Specification 3/4.2.2, and
6. Nuclear Enthalpy Hot Channel Factor and Power Factor Multiplier for ~~Specification 3/4.2.3.~~
7. OVERTEMPERATURE AND OVERPOWER DELTA T SETPOINT PARAMETER VALUES FOR SPECIFICATION 2.2.1.

6.9.1.14.a The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by NRC in:

1. WCAP-9272-P-A, "WESTINGHOUSE RELOAD SAFETY EVALUATION METHODOLOGY", July 1985 (W Proprietary).
   (Methodology for Specifications 3.1.1.3 - Moderator Temperature Coefficient, 3.1.3.5 - Shutdown Bank Insertion Limit, 3.1.3.6 -Control Bank Insertion Limits, 3.2.1 - Axial Flux Difference, 3.2.2 - Heat Flux Hot Channel Factor, and 3.2.3 - Nuclear Enthalpy Hot Channel Factor.)
2. WCAP-10216-P-A, "RELAXATION OF CONSTANT AXIAL OFFSET CONTROL F_Q SURVEILLANCE TECHNICAL SPECIFICATION", JUNE 1983 (W Proprietary).
   (Methodology for Specification 3.2.1 - Axial Flux Difference (Relaxed Axial Offset Control) and 3.2.2 - Heat Flux Hot Channel Factor (W(z) surveillance requirements for F_Q Methodology).)
3. WCAP-10266-P-A Rev. 2, "THE 1981 REVISION OF WESTINGHOUSE EVALUATION MODEL USING BASH CODE", March 1987, (W Proprietary).
   (Methodology for Specification 3.2.2 - Heat Flux Hot Channel Factor).
4. WCAP-13631-P-A, "SAFETY EVALUATION SUPPORTING A MORE NEGATIVE EOL MODERATOR TEMPERATURE COEFFICIENT TECHNICAL SPECIFICATION FOR THE SEQUOYAH NUCLEAR PLANTS," MARCH 1993 (W Proprietary). R175
   (Methodology for ~~Specification 3.1.1.3 - Moderator Temperature Coefficient)~~
5. WCAP-8745-P-A, "DESIGN BASES FOR THE THERMAL OVERPOWER ΔT AND THERMAL OVERTEMPERATURE ΔT TRIP FUNCTIONS", SEPTEMBER 1986 (W PROPRIETARY).
   (METHODOLOGY FOR SPECIFICATION 2.2.1 - REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS)

$\frac{1}{1+\tau_6 S}$ = LAG COMPENSATOR ON MEASURED ΔT.

τ_6 = TIME CONSTANT UTILIZED IN THE LAG COMPENSATOR FOR ΔT, AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION

NOTE 1: Overtemperature $\Delta T \left(\frac{1 + \tau_4 S}{1 + \tau_5 S}\right)\left(\frac{1}{1+\tau_6 S}\right) \leq \Delta T_o \{K_1 - K_2 \left(\frac{1 + \tau_1 S}{1 + \tau_2 S}\right)[T\left(\frac{1}{1+\tau_7 S}\right) - T'] + K_3(P-P') - f_1(\Delta I)\}$ R132

where: $\frac{1 + \tau_4 S}{1 + \tau_5 S}$ = LEAD-Lag compensator on measured ΔT

τ_4, τ_5 = Time constants utilized in the lead-lag controller for ΔT, ~~τ_4 = 12 secs, τ_5 = 3 secs~~ AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

ΔT_o = Indicated ΔT at RATED THERMAL POWER

K_1 = ~~≤ 1.15~~ OVERTEMPERATURE ΔT REACTOR TRIP SETPOINT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT. R21

K_2 = ~~0.011~~ OVERTEMPERATURE ΔT REACTOR TRIP HEATUP SETPOINT PENALTY COEFFICIENT LAG COMPENSATOR ON MEASURED ΔT.

$\frac{1 + \tau_1 S}{1 + \tau_2 S}$ = The function generated by the lead-lag controller for T_{avg} dynamic compensation R132

τ_1, & τ_2 = Time constants utilized in the lead-lag controller for T_{avg}, ~~τ_1 = 33 secs., τ_2 = 4 secs.~~ AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

T = Average temperature °F

T' ≤ 578.2°F (Nominal T_{avg} at RATED THERMAL POWER) R132

K_3 = ~~0.00055~~ OVERTEMPERATURE ΔT REACTOR TRIP DEPRESSURIZATION SETPOINT PENALTY COEFFICIENT AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

P = Pressurizer pressure, psig

P' = 2235 psig (Nominal RCS operating pressure)

$\frac{1}{1+\tau_7 S}$ = LAG COMPENSATOR ON MEASURED T_{AVG}.

τ_7 = TIME CONSTANT UTILIZED IN THE MEASURED T_{AVG} COMPENSATOR, AS PRESENTED IN THE CORE OPERATING LIMITS REPORT.

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 1: (Continued)

S = Laplace transform operator. sec^{-1}

and $f_1(\Delta I)$ is a function of the indicated difference between top and bottom detectors of the power-range nuclear ion chambers; with gains to be selected based on measured instrument response during plant startup tests such that:

(i) for $q_t - q_b$ between - 29 percent and + 5 percent $f_1(\Delta I) = 0$ (where q_t and q_b are percent RATED THERMAL POWER in the top and bottom halves of the core respectively, and $q_t + q_b$ is total THERMAL POWER in percent of RATED THERMAL POWER). R21

(ii) for each percent that the magnitude of $(q_t - q_b)$ exceeds -29 percent, the ΔT trip setpoint shall be automatically reduced by 1.50 percent of its value at RATED THERMAL POWER.

(iii) for each percent that the magnitude of $(q_t - q_b)$ exceeds +5 percent, the ΔT trip setpoint shall be automatically reduced by 0.86 percent of its value at RATED THERMAL POWER.

NOTE 2: Overpower $\Delta T \left(\frac{1 + \tau_4 S}{1 + \tau_5 S}\right) \leq \Delta T_o \{K_4 - K_5 \left(\frac{\tau_3 S}{1 + \tau_3 S}\right) T - K_6[T - T''] - f_2(\Delta I)\}$ R132

$\left(\frac{1}{1+\tau_6 S}\right)$ $\left(\frac{1}{1+\tau_7 S}\right)$ $\left(\frac{1}{1+\tau_7 S}\right)$

where: $\frac{1 + \tau_4 S}{1 + \tau_5 S}$ = as defined in Note 1

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

NOTATION (Continued)

NOTE 2: (Continued)

$\frac{1}{1+\tau_6 S}$ = As Defined In Note 1

τ_6 = As Defined In Note 1

τ_4, τ_5 = as defined in Note 1 R132

ΔT_o = as defined in Note 1

K_4 = ~~≤ 1.087~~ Overpower ΔT Reactor Trip Setpoint As Presented In The Core Operating Limits Report. R104

K_5 = ~~0.02/°F for increasing average temperature and 0 for decreasing average temperature~~ Overpower ΔT Reactor Trip Setpoint Penalty Coefficient For Change In $T_{AVG.}$, As Presented In The Core Operating Limits Report.

$\frac{\tau_3 S}{1 + \tau_3 S}$ = The function generated by the rate-lag controller for T_{avg} dynamic compensation R132

τ_3 = Time constant utilized in the rate-lag controller for T_{avg}, ~~τ_3 = 10 secs.~~ As Presented In The Core Operating Limits Report.

K_6 = ~~0.0011 for T > T" and K_6 = 0 for T ≤ T"~~ Overpower ΔT Reactor Trip Heatup Setpoint Penalty Coefficient As Presented In The Core Operating Limits Report. R21

T = as defined in Note 1

T" = Indicated T_{avg} at RATED THERMAL POWER (Calibration temperature for ΔT instrumentation, ≤ 578.2°F)

S = as defined in Note 1

$f_2(\Delta I)$ = 0 for all ΔI

$\frac{1}{1+\tau_7 S}$ = As Defined In Note 1

τ_7 = As Defined In Note 1.

OCT [illegible]

MONTHLY REACTOR OPERATING REPORT

6.9.1.10 Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the PORVs or Safety Valves, shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report. R64

CORE OPERATING LIMITS REPORT

6.9.1.14 Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT before each reload cycle or any remaining part of a reload cycle for the following:

R146

1. Moderator Temperature Coefficient BOL and EOL limits and 300 ppm surveillance limit for Specification 3/4.1.1.3.
2. Shutdown Bank Insertion Limit for Specification 3/4.1.3.5,
3. Control Bank Insertion Limits for Specification 3/4.1.3.6,
4. Axial Flux Difference Limits for Specification 3/4.2.1,
5. Heat Flux Hot Channel Factor, K(z), and W(z) for Specification 3/4.2.2, and
6. Nuclear Enthalpy Hot Channel Factor and Power Factor Multiplier for Specification 3/4.2.3.
7. OVERTEMPERATURE AND OVERPOWER DELTA T SETPOINT PARAMETER VALUES FOR SPECIFICATION 2.2.1

6.9.1.14.a The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by NRC in:

1. WCAP-9272-P-A, "WESTINGHOUSE RELOAD SAFETY EVALUATION METHODOLOGY", July 1985 (W Proprietary).
   (Methodology for Specifications 3.1.1.3 - Moderator Temperature Coefficient, 3.1.3.5 - Shutdown Bank Insertion Limit, 3.1.3.6 -Control Bank Insertion Limits, 3.2.1 - Axial Flux Difference, 3.2.2 - Heat Flux Hot Channel Factor, and 3.2.3 - Nuclear Enthalpy Hot Channel Factor.)
2. WCAP-10216-P-A, "RELAXATION OF CONSTANT AXIAL OFFSET CONTROL F_Q SURVEILLANCE TECHNICAL SPECIFICATION", JUNE 1983 (W Proprietary).
   (Methodology for Specification 3.2.1 - Axial Flux Difference (Relaxed Axial Offset Control) and 3.2.2 - Heat Flux Hot Channel Factor (W(z) surveillance requirements for F_Q Methodology).)
3. WCAP-10266-P-A Rev. 2, "THE 1981 REVISION OF WESTINGHOUSE EVALUATION MODEL USING BASH CODE", March 1987, (W Proprietary).
   (Methodology for Specification 3.2.2 - Heat Flux Hot Channel Factor).
4. WCAP-13631-P-A, "SAFETY EVALUATION SUPPORTING A MORE NEGATIVE EOL MODERATOR TEMPERATURE COEFFICIENT TECHNICAL SPECIFICATION FOR THE SEQUOYAH NUCLEAR PLANTS," MARCH 1993 (W Proprietary). R161
   (Methodology for Specification 3.1.1.3 - Moderator Temperature Coefficient)

~~6.9.1.14.b The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.~~ R146

5. WCAP-8745-P-A, "DESIGN BASES FOR THE THERMAL OVERPOWER ΔT AND THERMAL OVERTEMPERATURE ΔT TRIP FUNCTIONS," SEPTEMBER 1986 (W PROPRIETARY)
   (METHODOLOGY FOR SPECIFICATION 2.2.1- REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS)

ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-95-11)

DESCRIPTION AND JUSTIFICATION FOR

RELOCATION OF OVERTEMPERATURE AND OVERPOWER

DELTA TEMPERATURE EQUATION CONSTANTS TO

THE CORE OPERATING LIMITS REPORT

Description of Change

TVA proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 technical specifications (TSs) to relocate the overtemperature delta temperature (OTΔT) and overpower delta temperature (OPΔT) τ and K constant numerical values to the core operating limits report (COLR). This will be implemented by revising notes 1 and 2 in TS Table 2.2-1 to state that these values are presented in the COLR. The proposed revision will not change these values. The required contents of the COLR, described in TS Section 6.9.1.14, will be revised to include the τ and K constant numerical values. Lag compensation terms will be added to the measured ΔT and average temperature values. The τ values associated with these compensators are not changed by this revision and are zero such that the affect on the equations continue to be null.

Reason for Change

The existing equations in the SQN TSs for OTΔT and OPΔT in notes 1 and 2 of Table 2.2-1 include the numerical values for the equation constants of τ and K. The relocation of these constant numerical values to the COLR will allow revisions to the specific values without requiring a license amendment revision. Changes to these values could be required based on specific core load requirements and future analysis revisions. The proposed revision will allow these changes to be performed in accordance with 10 CFR 50.59 requirements. The addition of the lag compensation functions to the equations provides consistency with standard TS (NUREG 1431) and will allow the use of these lag functions if future analysis requires.

SQN has also experienced OPΔT turbine runback alarms on individual channels resulting in partial runback signals. During functional testing at power, as required by TSs, these occurrences could result in turbine runbacks or reactor trips because the tested channel is placed in the trip condition completing the required logic for actuation. The τ and K constant numerical values could be reanalyzed to provide additional margin to these setpoints and minimize the potential for turbine runbacks, that could result in a reactor trip, and direct reactor trip signals. With the proposed revision, the changes to the τ and K values and use of the lag compensators could be implemented in a more timely manner under the requirements of 10 CFR 50.59.

Justification for Changes

The OTΔT trip provides core protection to prevent departure from nucleate boiling for all combinations of pressure, power, coolant temperature, and axial power distribution, provided that the transient is slow with respect to transit, thermowell, and resistance temperature device (RTD) response time delays from the core to the temperature detectors, and pressure is within the range between the high and low pressure reactor trips. This setpoint includes corrections for axial power distribution, changes in density and heat capacity of water with temperature and dynamic compensation for transport, thermowell, and RTD response time delays from the core to the RTD output indication. With normal axial power distribution, this reactor trip limit is always below the core safety limit. If axial peaks are greater than design, as indicated by the difference between top and bottom power range nuclear detectors, the reactor trip setpoint is automatically reduced.

The OPΔT reactor trip provides assurance of fuel integrity, limits the required range for OTΔT protection, and provides a backup to the high neutron flux trip. The setpoint includes corrections for changes in density and heat capacity of water with temperature, dynamic compensation for transport, thermowell, and RTD response time delays from the core to the RTD output indication. The OPΔT provides protection to mitigate the consequences of various size steam breaks.

The proposed revisions do not change the OTΔT and OPΔT functions in TS Table 2.2-1. The relocation of the τ and K constant numerical values to the COLR will not result in a change to these functions or setpoints. Future changes to these parameters will be performed under the 10 CFR 50.59 requirements to ensure the licensing basis of the plant and the accident analysis are properly maintained. In addition, as the numerical values may be cycle specific, relocation of these values to the COLR is consistent with the guidance in Generic Letter 88-16.

The addition of the lag functions to the measured ΔT and average temperature terms will not change the OTΔT and OPΔT functions because these lag functions are presently equivalent to unity in the equations and plant instrumentation settings. Changes to the τ numerical constant values associated with these lag functions will also be performed under the 10 CFR 50.59 requirements if future analysis requires. These lag functions are consistent with NUREG-1431 and have been omitted in the SQN TSs because their effect is presently null. The proposed revisions provide the flexibility to revise cycle specific values in the OTΔT and OPΔT functions and the ability to accommodate revised plant analysis without requiring a license amendment request.

Environmental Impact Evaluation

The proposed change does not involve an unreviewed environmental question because operation of SQN Units 1 and 2 in accordance with this change would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by NRC's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or decisions of the Atomic Safety and Licensing Board.

2. Result in a significant change in effluents or power levels.

3. Result in matters not previously reviewed in the licensing basis for SQN that may have a significant environmental impact.

ENCLOSURE 3

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-95-11)

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Significant Hazards Evaluation

TVA has evaluated the proposed technical specification (TS) change and has determined that it does not represent a significant hazards consideration based on criteria established in 10 CFR 50.92(c). Operation of Sequoyah Nuclear Plant (SQN) in accordance with the proposed amendment will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes will allow changes to the constant numerical values for the overtemperature delta temperature (OTΔT) and overpower delta temperature (OPΔT) equations in accordance with the 10 CFR 50.59 requirements. This revision does not revise these constants, but relocates them to the core operating limits report (COLR) that is governed by the 10 CFR 50.59 requirements. The addition of the lag compensator functions for measured ΔT and average temperature in these equations does not alter the setpoint because this lag function has a value of unity. Therefore, the proposed revision does not alter plant functions or setpoints, but does allow for a more timely revision process for parameters that may require changes due to specific fuel cycle requirements or updated plant analyses. The use of the lag functions and revisions to the constant numerical values will be maintained within the safety analysis for the plant by the 10 CFR 50.59 process requirements. The probability of an accident is not increased because the plant functions are not altered by the proposed revision and future changes will be in accordance with 10 CFR 50.59. Additionally, the consequences of an accident are not increased because the mitigation functions of the OTΔT and OPΔT functions are not changed and revisions to the equations that derive the setpoints will be processed under the requirements of the 10 CFR 50.59 program.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

   The proposed revision will not change plant functions and future revisions will continue to be controlled in accordance with the 10 CFR 50.59 requirements. The addition of the lag functions does not create a new accident potential because these functions have already been considered in the analysis as shown in NUREG 1431. Therefore, the possibility of a new or different kind of an accident is not created by the proposed revision.

3. Involve a significant reduction in a margin of safety.

   Plant parameters are not altered by the proposed revision and the OTΔT and OPΔT functions will not reflect a change in setpoint generation or value. The proposed change will allow revision of the constant numerical values and use of the lag compensator functions in accordance with the 10 CFR 50.59 provisions to ensure the design basis of the plant is maintained. This revision does not result in changes that reduce the margin of safety because the OTΔT and OPΔT functions remain unchanged and future revisions to these functions will be performed in accordance with 10 CFR 50.59.