ENCLOSURE 1

REVISED TECHNICAL SPECIFICATION (TS) CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-96-01, REVISION 1)

LIST OF AFFECTED PAGES

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Unit 2

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POWER DISTRIBUTION LIMITS

3/4.2.3 NUCLEAR ENTHALPY HOT CHANNEL FACTOR — $F_{\Delta H}(X,Y)$ (RISE)

LIMITING CONDITION FOR OPERATION

3.2.3 The Nuclear Enthalpy Hot Channel Factor, $F^N_{\Delta H}$ shall be limited by the following relationship: R142

$$F^N_{\Delta H} \leq F^{RTP}_{\Delta H} [1.0 + PF_{\Delta H} (1.0-P)]$$

where $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$, R159

$F^{RTP}_{\Delta H}$ = The $F^N_{\Delta H}$ limit at RATED THERMAL POWER (RTP) specified in the COLR, and

$PF_{\Delta H}$ = The power factor multiplier for $F^N_{\Delta H}$ specified in the COLR.

APPLICABILITY: MODE 1

ACTION:

With $F^N_{\Delta H}$ exceeding its limit:

a. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to ≤ 55% of RATED THERMAL POWER within the next 4 hours,

b. Demonstrate thru in-core mapping that $F^N_{\Delta H}$ is within its limit within 24 hours after exceeding the limit or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours, and R142

c. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER above the reduced limit required by a or b. above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ is demonstrated through in-core mapping to be within its limit at a nominal 50% of RATED THERMAL POWER prior to exceeding this THERMAL POWER, at a nominal 75% of RATED THERMAL POWER prior to exceeding this THERMAL POWER and within 24 hours after attaining 95% or greater RATED THERMAL POWER.

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SURVEILLANCE REQUIREMENTS

DELETE

4.2.3.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2 $F^N_{\Delta H}$ shall be determined to be within its limit by using the movable incore detectors to obtain a power distribution map:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and

b. At least once per 31 Effective Full Power Days.

c. The measured $F^N_{\Delta H}$ shall be increased by 4% for measurement uncertainty.

R142

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$F_{\Delta H}(X,Y)$ shall be maintained within the limits specified in the COLR.

APPLICABILITY: MODE 1

ACTION:

With $F_{\Delta H}(X,Y)$ exceeding the limit specified in the COLR:

a. Within 2 hours either:

   1. Restore $F_{\Delta H}(X,Y)$ to within the limit specified in the COLR, or

   2. Reduce the allowable THERMAL POWER from RATED THERMAL POWER at least RRH* % for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit, and

b. Within the next 4 hours either:

   1. Restore $F_{\Delta H}(X,Y)$ to within the limit specified in the COLR, or

   2. Reduce the Power Range Neutron Flux-High Trip Setpoint in Table 2.2-1 at least RRH* % for each 1% that $F_{\Delta H}(X,Y)$ exceeds that limit, and

c. Within 24 hours of initially being outside the limit specified in the COLR, either:

   1. Restore $F_{\Delta H}(X,Y)$ to within the limit specified in the COLR, or

   2. Verify through incore flux mapping that $F_{\Delta H}(X,Y)$ is restored to within the limit for the reduced THERMAL POWER allowed by ACTION a.2 or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

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* RRH is the amount of power reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit provided in the COLR per Specification 6.9.1.14.

ACTION: (Continued)

d. Within 48 hours of initially being outside the limit specified in the COLR, reduce the Overtemperature Delta T K_1 term in Table 2.2-1 by at least TRH** for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit, and

e. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2 and/or b. and/or c. and/or d., above: subsequent POWER OPERATION may proceed provided that $F_{\Delta H}(X,Y)$ is demonstrated, through incore flux mapping, to be within the above limit prior to exceeding the following THERMAL POWER levels:

   1. A nominal 50% of RATED THERMAL POWER,

   2. A nominal 75% of RATED THERMAL POWER, and

   3. Within 24 hours of attaining greater than or equal to 95% of RATED THERMAL POWER.

** TRH is the amount of Overtemperature Delta T K_1 setpoint reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit provided in the COLR per Specification 6.9.1.14.

4.2.3.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2 $F^{M}_{\Delta H}(X,Y)$ shall be evaluated to determine if $F_{\Delta H}(X,Y)$ is within its limit by:

a. Using the movable incore detectors to obtain a power distribution map $F^{M}_{\Delta H}(X,Y)$ * at any THERMAL POWER greater than 5% of RATED THERMAL POWER.

b. Satisfying the following relationship:

$F\Delta HR^{M}(X,Y) \leq BHNOM(X,Y)$

Where:

$$F\Delta HR^{M}(X,Y) = \frac{F^{M}_{\Delta H}(X,Y)}{MAP^{M} / AXIAL(X,Y)}$$

And BHNOM(X,Y)** represents the nominal design increased by an allowance for the expected deviation between the nominal design and the measurement.

MAP^{M} is the maximum Allowable Peak** obtained from the measured power distribution.

AXIAL(X,Y) is the axial shape for $F_{\Delta H}(X,Y)$.

c. If the above relationship is not satisfied, then

1. For the location, calculate the % margin to the maximum allowable design as follows:

$$\% F_{\Delta H} \text{ Margin} = \left(1 - \frac{F\Delta HR^{M}(X,Y)}{BHDES(X,Y)}\right) \times 100\%$$

$$\% f_1(\Delta I) \text{ MARGIN} = \left[1 - \frac{F\Delta HR^{M}(X,Y)}{BRDES(X,Y)}\right] \times 100\%$$

where BHDES(X,Y)** represents the maximum allowable design peaking factors which insures that the licensing criteria will be preserved for operation within the LCO limits, and includes allowances for calculational and measurement uncertainties.

AND BRDES (X,Y)

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* No additional uncertainties are required in the following equations for $F^{M}_{\Delta H}(X,Y)$ x AND $F\Delta HR^{M}(X,Y)$, because the limits include uncertainties.

** BHNOM(X,Y) and BHDES(X,Y) MAP^M AND BRDES(X,Y) data bases are provided for input to the plant power distribution analysis computer codes on a cycle specific basis and are determined using the methodology for core limit generation described in the references in Specification 6.9.1.14.

2. Find the minimum margin of all locations examined in 4.2.3.2.c.1 above.
   THE $F_{\Delta H}$ MIN
3. If any margin in 4.2.3.2.c.2 above is < 0, reduce the allowable THERMAL POWER from RATED THERMAL POWER by RRH* % x most negative margin from 4.2.3.2 c.2 and maintain the requirements of Specification 3.2.3; otherwise the Action statements for 3.2.3 apply.
   THEN WITHIN 2 HOURS

d. With two measurements extrapolated to 31 EFPD beyond the most recent measurement yielding

$F\Delta HR^{M}(X,Y) > BHNOM(X,Y)$

either of the following actions shall be taken:

1. $F^{M}_{\Delta H}(X,Y)$ shall be increased over that specified in 4.2.3.2.a by the appropriate factor specified in the COLR, and 4.2.3.2.c.1 repeated, or

2. $F^{M}_{\Delta H}(X,Y)$ shall be evaluated according to 4.2.3.2 at or before the time when the margin is projected to result in the action specified in 4.2.3.2.c.3 OR 4.2.3.2.c.4.

4.2.3.3 $F^{M}_{\Delta H}(X,Y)$ shall be determined to be within its limit by using the incore detectors to obtain a power distribution map:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and

b. At least once per 31 EFPD.

4. IF THE $f_1(\Delta I)$ MIN MARGIN IN 4.2.3.2.c.2 ABOVE IS < 0, THEN WITHIN 48 HOURS REDUCE THE OVERTEMPERATURE DELTA T K_1 TERM IN TABLE 2.2-1 BY AT LEAST TRH** % x MOST NEGATIVE MARGIN FROM 4.2.3.2.c.2 AND MAINTAIN THE REQUIREMENTS OF SPECIFICATION 3.2.3; OTHERWISE THE ACTION STATEMENTS FOR 3.2.3 APPLY.

* RRH is the amount of power reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit provided in the COLR per Specification 6.9.1.14.

** TRH IS THE AMOUNT OF OVERTEMPERATURE DELTA T K_1 SETPOINT REDUCTION REQUIRED TO COMPENSATE FOR EACH 1% THAT $F_{\Delta H}(X,Y)$ EXCEEDS THE LIMIT PROVIDED IN THE COLR PER SPECIFICATION 6.9.1.14.

$F_{\Delta H}$ MIN MARGIN = MINIMUM % MARGIN VALUE OF ALL LOCATIONS EXAMINED.
$f_1(\Delta I)$ MIN MARGIN = MINIMUM % MARGIN VALUE OF ALL LOCATIONS EXAMINED.

POWER DISTRIBUTION LIMITS

3/4.2.3 NUCLEAR ENTHALPY HOT CHANNEL FACTOR — $F_{\Delta H}(X,Y)$

LIMITING CONDITION FOR OPERATION

R130

3.2.3 The Nuclear Enthalpy Hot Channel Factor, $F^N_{\Delta H}$ shall be limited by the following relationship:

$$F^N_{\Delta H} \leq F^{RTP}_{\Delta H} [1.0 + PF_{\Delta H} (1.0-P)]$$

where $P = \frac{\text{THERMAL POWER}}{\text{RATED THERMAL POWER}}$,

$F^{RTP}_{\Delta H}$ = The $F^N_{\Delta H}$ limit at RATED THERMAL POWER (RTP) specified in the COLR, and

$PF_{\Delta H}$ = The power factor multiplier for $F^N_{\Delta H}$ specified in the COLR.

R146

APPLICABILITY: MODE 1

ACTION:

With $F^N_{\Delta H}$ exceeding its limit:

a. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to ≤ 55% of RATED THERMAL POWER within the next 4 hours,

b. Demonstrate thru in-core mapping that $F^N_{\Delta H}$ is within its limit within 24 hours after exceeding the limit or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours, and

R130

c. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER above the reduced limit required by a. or b. above; subsequent POWER OPERATION may proceed provided that $F^N_{\Delta H}$ is demonstrated through in-core mapping to be within its limit at a nominal 50% of RATED THERMAL POWER prior to exceeding this THERMAL POWER, at a nominal 75% of RATED THERMAL POWER prior to exceeding this THERMAL POWER and within 24 hours after attaining 95% or greater RATED THERMAL POWER.

SURVEILLANCE REQUIREMENTS

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4.2.3.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2 $F^N_{\Delta H}$ shall be determined to be within its limit by using the movable in-core detectors to obtain a power distribution map:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading,

b. At least once per 31 Effective Full Power Days, and

c. The measured $F^N_{\Delta H}$ shall be increased by 4% for measurement uncertainity.

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$F_{\Delta H}(X,Y)$ shall be maintained within the limits specified in the COLR.

APPLICABILITY: MODE 1

ACTION:

With $F_{\Delta H}(X,Y)$ exceeding the limit specified in the COLR:

a. Within 2 hours either:

1. Restore $F_{\Delta H}(X,Y)$ to within the limit specified in the COLR, or

2. Reduce the allowable THERMAL POWER from RATED THERMAL POWER at least RRH* % for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit, and

b. Within the next 4 hours either:

1. Restore $F_{\Delta H}(X,Y)$ to within the limit specified in the COLR, or

2. Reduce the Power Range Neutron Flux-High Trip Setpoint in Table 2.2-1 at least RRH* % for each 1% that $F_{\Delta H}(X,Y)$ exceeds that limit, and

c. Within 24 hours of initially being outside the limit specified in the COLR, either:

1. Restore $F_{\Delta H}(X,Y)$ to within the limit specified in the COLR, or

2. Verify through incore flux mapping that $F_{\Delta H}(X,Y)$ is restored to within the limit for the reduced THERMAL POWER allowed by ACTION a.2 or reduce THERMAL POWER to less than 5% of RATED THERMAL POWER within the next 2 hours.

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* RRH is the amount of power reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit provided in the COLR per Specification 6.9.1.14.

ACTION: (Continued)

d. Within 48 hours of initially being outside the limit specified in the COLR, reduce the Overtemperature Delta T K_1 term in Table 2.2-1 by at least TRH** for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit, and

e. Identify and correct the cause of the out-of-limit condition prior to increasing THERMAL POWER above the reduced THERMAL POWER limit required by ACTION a.2 and/or b. and/or c. and/or d., above: subsequent POWER OPERATION may proceed provided that $F_{\Delta H}(X,Y)$ is demonstrated, through incore flux mapping, to be within the above limit prior to exceeding the following THERMAL POWER levels:

1. A nominal 50% of RATED THERMAL POWER,

2. A nominal 75% of RATED THERMAL POWER, and

3. Within 24 hours of attaining greater than or equal to 95% of RATED THERMAL POWER.

** TRH is the amount of Overtemperature Delta T K_1 setpoint reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit provided in the COLR per Specification 6.9.1.14.

4.2.3.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2 $F^{M}_{\Delta H}(X,Y)$ shall be evaluated to determine if $F_{\Delta H}(X,Y)$ is within its limit by:

a. Using the movable incore detectors to obtain a power distribution map $F^{M}_{\Delta H}(X,Y)$ * at any THERMAL POWER greater than 5% of RATED THERMAL POWER.

b. Satisfying the following relationship:

$F\Delta HR^{M}(X,Y) \leq BHNOM(X,Y)$

Where:

$$F\Delta HR^{M}(X,Y) = \frac{F^{M}_{\Delta H}(X,Y)}{MAP^{M} / AXIAL(X,Y)}$$

And BHNOM(X,Y)** represents the nominal design increased by an allowance for the expected deviation between the nominal design and the measurement.

MAP^{M} is the maximum Allowable Peak** obtained from the measured power distribution.

AXIAL(X,Y) is the axial shape for $F_{\Delta H}(X,Y)$.

c. If the above relationship is not satisfied, then

1. For the location, calculate the % margin to the maximum allowable design as follows:

$$\%\ F_{\Delta H}\ Margin = \left(1 - \frac{F\Delta HR^{M}(X,Y)}{BHDES(X,Y)}\right) \times 100\%$$

$$\%\ F_{\Delta}(\Delta I)\ MARGIN = \left[1 - \frac{F\Delta HR^{M}(X,Y)}{BRDES(X,Y)}\right] \times 100\%$$

where BHDES(X,Y)** represents the maximum allowable design peaking factor which insures that the licensing criteria will be preserved for operation within the LCO limits, and includes allowances for calculational and measurement uncertainties.

AND BRDES (X,Y)

---

* No additional uncertainties are required in the following equations for $F^{M}_{\Delta H}(X,Y)$ x AND $F\Delta HR^{M}(X,Y)$, because the limits include uncertainties.

** BHNOM(X,Y) and MAP^{M}, BHDES(X,Y) AND BRDES(X,Y) data bases are provided for input to the plant power distribution analysis computer codes on a cycle specific basis and are determined using the methodology for core limit generation described in the references in Specification 6.9.1.14.

2. Find the minimum margin of all locations examined in 4.2.3.2.c.1 above.
   THE $F_{\Delta H}$ MIN
3. If any margin in 4.2.3.2.c.2 above is < 0, reduce the allowable THERMAL POWER from RATED THERMAL POWER by RRH* % x most negative margin from 4.2.3.2.c.2 and maintain the requirements of Specification 3.2.3; otherwise the Action statements for 3.2.3 apply.
   THEN WITHIN 2 HOURS

d. With two measurements extrapolated to 31 EFPD beyond the most recent measurement yielding

$F\Delta HR^{M}(X,Y) > BHNOM(X,Y)$

either of the following actions shall be taken:

1. $F^{M}_{\Delta H}(X,Y)$ shall be increased over that specified in 4.2.3.2.a by the appropriate factor specified in the COLR, and 4.2.3.2.c.1 repeated, or

2. $F^{M}_{\Delta H}(X,Y)$ shall be evaluated according to 4.2.3.2 at or before the time when the margin is projected to result in the action specified in 4.2.3.2.c.3 OR 4.2.3.2.c.4.

4.2.3.3 $F^{M}_{\Delta H}(X,Y)$ shall be determined to be within its limit by using the incore detectors to obtain a power distribution map:

a. Prior to operation above 75% of RATED THERMAL POWER after each fuel loading, and

b. At least once per 31 EFPD.

4. IF THE $f_1(\Delta I)$ MIN MARGIN IN 4.2.3.2.c.2 ABOVE IS < 0, THEN WITHIN 48 HOURS REDUCE THE OVERTEMPERATURE DELTA T K_1 TERM IN TABLE 2.2-1 BY AT LEAST TRH** % x MOST NEGITIVE MARGIN FROM 4.2.3.2.c.2 AND MAINTAIN THE REQUIREMENTS OF SPECIFICATION 3.2.3; OTHERWISE THE ACTION STATEMENTS FOR 3.2.3 APPLY.

* RRH is the amount of power reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds the limit provided in the COLR per Specification 6.9.1.14.

** TRH IS THE AMOUNT OF OVERTEMPERATURE DELTA T K_1 SETPOINT REDUCTION REQUIRED TO COMPENSATE FOR EACH 1% THAT $F_{\Delta H}(X,Y)$ EXCEEDS THE LIMIT PROVIDED IN THE COLR PER SPECIFICATION 6.9.1.14.

$F_{\Delta H}$ MIN MARGIN = MINIMUM % MARGIN VALUE OF ALL LOCATIONS EXAMINED.
$f_1(\Delta I)$ MIN MARGIN = MINIMUM % MARGIN VALUE OF ALL LOCATIONS EXAMINED.

ENCLOSURE 2

REVISED TECHNICAL SPECIFICATION (TS) CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-96-01, REVISION 1)

DESCRIPTION AND JUSTIFICATION FOR

THE CONVERSION FROM WESTINGHOUSE ELECTRIC CORPORATION FUEL

TO FRAMATOME COGEMA FUEL (FCF) (MARK-BW17)

Description of Change

TVA proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 technical specifications (TSs) and to revise the original TS change request. This revision will add a percent $f_1(\Delta I)$ Margin calculation and associated changes to proposed Surveillance Requirement 4.2.3.2.c and includes a revised term from the original submittal. Footnotes associated with Surveillance 4.2.3.2 have been revised as necessary. Surveillance Requirement 4.2.3.2.d has been revised to reference the $f_1(\Delta I)$ Margin actions added to Surveillance 4.2.3.2.c.

Reason for Change

During the TVA review of the core analysis computer codes being used in conjunction with the original TS change request, the need for a revision to provide clarity to the new TS wording was identified. This computer code provides a printout of actions to follow in the event surveillance limits are exceeded. The actions that were indicated for hot channel factors exceeding surveillance limits were not completely consistent with the proposed TS requirements for these conditions. As a result of extensive reviews of code test data, TVA identified areas of the code output that did not match well with the originally proposed TS change. Using SQN specific information, the code outputs were evaluated to ensure appropriate actions were indicated. TVA has coordinated with Framatome Cogema Fuels to determine the appropriate TS surveillance requirements that will match the outputs provided by the core analysis computer code. The code methodology has not changed. This revision to the original TS change requests will ensure consistency in the application of TS requirements when hot channel factor limits are exceeded.

Justification for Changes

These revisions to the original TS change request affect pages associated with the power distribution limits in TS section 3/4.2.3, Nuclear Enthalpy Rise Hot Channel Factor - F-delta H(X,Y). This change provides recognition in the TS requirements that there are two ways in which the core analysis code MONITOR treats the F-delta H hot channel factor to address safety analysis assumptions. The first consideration is DNB for initial conditions at the time of limiting transients such as loss of reactor coolant system flow. The second consideration is DNB during steady-state operations to preserve safety limits for fuel centerline melt requirements. These revisions do not reflect a change in the methodology of the core analysis code but do provide more accurate TS actions associated with hot channel factor limits and the code output. The revised TS actions recognize code outputs that were not included in the original TS change request. The original evaluations for this TS change request continue to be valid because the analysis is unchanged and the impact to the plant is the same as originally described.

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

REVISED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-96-01, REVISION 1)

REVISED DRAFT CORE OPERATING LIMITS REPORT SUPPORTING

THE CONVERSION FROM WESTINGHOUSE ELECTRIC CORPORATION FUEL

TO FRAMATOME COGEMA FUEL

AFFECTED PAGES

Pages 5 and 6 of 12

BQNOM(X,Y,Z), BQDES(X,Y,Z), and BCDES(X,Y,Z) data bases are provided for input to the plant power distribution analysis codes on a cycle specific basis and are determined using the methodology for core limit generation described in the references in Specification 6.9.1.14.

2.5.10 All cycle burnups shall use a 2% increase in $F_Q^M(X,Y,Z)$ margin for compliance with the 4.2.2.2.e Surveillance Requirements.

2.6 Nuclear Enthalpy Rise Hot Channel Factor - $F_{\Delta H}(X,Y)$
(Specification 3/4.2.3)

$F_{\Delta H}(X,Y)$ shall be limited by the following relationship:

$$F_{\Delta H}(X,Y) \leq MAP(X,Y,Z) / AXIAL(X,Y)$$

2.6.1 MAP(X,Y,Z) is provided in Table 1 for Mark-BW fuel and Westinghouse fuel.

AXIAL(X,Y) is the axial peak from the normalized axial power shape.

The following parameters are required for core monitoring per the Surveillence Requirements of Specification 3/4.2.3:

$$F\Delta HR^M(X,Y) \leq BHNOM(X,Y)$$

where $F\Delta HR^M(X,Y) = F_{\Delta H}(X,Y) / MAP^M / AXIAL(X,Y)$

$F_{\Delta H}(X,Y)$ is the measured radial peak at location X,Y.

MAP^M is the value of MAP(X,Y,Z) obtained from Table 1 for the measured peak.

2.6.2 BHNOM(X,Y) = nominal design radial peaking factor, increased by an allowance for the expected deviation between the nominal design power distribution and the measurement.

2.6.3 BHDES(X,Y) = maximum allowable design radial peaking factor which ensures that the $F_{\Delta H}(X,Y)$ limit will be preserved for operation within the LCO limits, including allowances for calculational and measurement uncertainties.

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BHNOM(X,Y), ~~and~~ BHDES(X,Y), AND BRDES(X,Y) data bases are provided for input to the plant power distribution analysis computer codes on a cycle specific basis and are determined using the methodology for core limit generation described in the references in Specification 6.9.1.14.

Insert

2.6.4 BRDES (X,Y) = maximum allowable design peaking factor which ensures that the steady-state DNBR limit will be preserved for operation within the LCO limits, including allowances for calculational and measurement uncertainties.

2.6.5 RRH = 3.34 when $0.8 < P \leq 1.0$

RRH = 1.67 when $P \leq 0.8$

where RRH = Thermal power reduction required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds its limit.

P = Thermal Power / Rated Thermal Power

2.6.6 TRH = 0.033 when $0.8 < P \leq 1.0$

TRH = 0.017 when $P \leq 0.8$

where TRH = Reduction in OTΔT K_1 setpoint required to compensate for each 1% that $F_{\Delta H}(X,Y)$ exceeds its limit.

2.6.7 All cycle burnups shall use a 2% increase in $F_{\Delta H}^{M}(X,Y)$ for compliance with the 4.2.3.2.d.1 Surveillance Requirement.

2.7 Quadrant Power Tilt Ratio - QPTR (Specification 3/4.2.4)

The Quadrant Power Tilt Ratio (QPTR) shall not exceed 1.03.

3.0 REACTOR CORE PROTECTIVE LIMITS

3.1 Trip Reset Term [$f_1(\Delta I)$] for Overtemperature Delta T Trip (Specification 2.2.1)

The following parameters are required to specify the power level-dependent $f_1(\Delta I)$ trip reset term limits for the Overtemperature Delta T trip function:

3.1.1 QTNL = -33%

where QTNL = the maximum negative ΔI setpoint at rated thermal power at which the trip setpoint is not reduced by the axial power distribution.

3.1.2 QTPL = +25%

where QTPL = the maximum positive ΔI setpoint at rated thermal power at which the trip setpoint is not reduced by the axial power distribution.

3.1.3 QTNS = 2.80%

where QTNS = the percent reduction in Overtemperature Delta T trip setpoint for each percent that the magnitude of ΔI exceeds its negative limit at rated themal power (QTNL).