ATTACHMENT IV

PROPOSED TECHNICAL SPECIFICATION CHANGE

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TABLE 2.2-1

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
1. Manual Reactor Trip	N.A.	N.A.	N.A.	N.A.	N.A.
2. Power Range, Neutron Flux					
a. High Setpoint	7.5	4.56	0	≤109% of RTP*	≤112.3% of RTP*
b. Low Setpoint	8.3	4.56	0	≤25% of RTP*	≤28.3% of RTP*
3. Power Range, Neutron Flux, High Positive Rate	2.4	0.5	0	≤4% of RTP* with a time constant ≥2 seconds	6.3% of RTP* with a time constant ≥2 seconds
4. Power Range, Neutron Flux, High Negative Rate	2.4	0.5	0	≤4% of RTP* with a time constant ≥2 seconds	≤6.3% of RTP* with a time constant ≥2 seconds
5. Intermediate Range, Neutron Flux	17.0	8.41	0	≤25% of RTP*	≤35.3% of RTP*
6. Source Range, Neutron Flux	17.0	10.01	0	$\leq 10^5$ cps	$\leq 1.6 \times 10^6$ cps
7. Overtemperature ΔT	**7.0** ~~7.9~~	**4.86** ~~4.61~~	**1.67** ~~2.57~~	See Note 1	See Note 2
8. Overpower ΔT	**4.6** ~~5.0~~	**2.02** ~~2.15~~	**0.14** ~~0.15~~	See Note 3	See Note 4
9. Pressurizer Pressure-Low	3.7	0.71	2.49	≥1915 psig	≥1906 psig
10. Pressurizer Pressure-High	7.5	0.71	2.49	≤2385 psig	≤2400 psig
11. Pressurizer Water Level-High	8.0	2.18	1.96	≤92% of instrument span	≤93.9% of instrument span

*RTP = RATED THERMAL POWER
**Loop design flow - 93,600 gpm

TABLE 2.2-1 (Continued)

TABLE NOTATIONS (Continued)

NOTE 1: (Continued)

T' ~~≤ 581.2°F~~ 586.5 (Nominal T_{avg} at RATED THERMAL POWER);

K_3 = 0.000671;

P = Pressurizer pressure, psig;

P' = 2235 psig (Nominal RCS operating pressure);

S = Laplace transform operator, s^{-1};

and $f_1(\Delta I)$ is a function of the indicated difference between top and bottom detectors of the power-range neutron 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 -25% and ~~+7%~~ 5, $f_1(\Delta I) = 0$, 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;

(ii) for each percent that the magnitude of $q_t - q_b$ exceeds -25%, the ΔT Trip Setpoint shall be automatically reduced by 1.8% of its value at RATED THERMAL POWER; and

(iii) for each percent that the magnitude of $q_t - q_b$ exceeds ~~+7%~~ 5, the ΔT Trip Setpoint shall be automatically reduced by ~~1.384%~~ 1.56 of its value at RATED THERMAL POWER.

NOTE 2: The channel's maximum Trip Setpoint shall not exceed its computed Trip Setpoint by more than ~~2.5%~~ 1.8 of ΔT span.

TABLE 2.2-1 (Continued)

TABLE NOTATIONS (Continued)

NOTE 3: (Continued)

K_6 = 0.00128/°F for T > T" and K_6 = 0 for T ≤ T";

T = Average temperature, °F;

T" = Indicated T_{avg} at RATED THERMAL POWER (Calibration temperature for ΔT instrumentation, ≤ ~~581.2~~ 586.5 °F);

S = Laplace transform operator, s^{-1}; and

$f_2(\Delta I)$ = 0 for all ΔI

NOTE 4: The channel's maximum Trip Setpoint shall not exceed its computed Trip Setpoint by more than ~~2.8%~~ 2.6 of ΔT span.

TABLE 3.2-1

DNB PARAMETERS

	PARAMETER	LIMITS Four Loops in Operation
1.	Indicated Reactor Coolant System T_{avg}	≤~~585.0~~ 590.5 °F
2.	Indicated Pressurizer Pressure	≥2220 psig*
3.	Reactor Coolant System Flow Rate	≥38.4 x 10^4 GPM

*Limit not applicable during either a THERMAL POWER ramp in excess of 5% of RATED THERMAL POWER per minute or a THERMAL POWER step in excess of 10% of RATED THERMAL POWER.

POWER DISTRIBUTION LIMITS

BASES

QUADRANT POWER TILT RATIO (Continued)

The 2-hour time allowance for operation with a tilt condition greater than 1.02 but less than 1.09 is provided to allow identification and correction of a dropped or misaligned control rod. In the event such ACTION does not correct the tilt, the margin for uncertainty on $F_Q(X,Y,Z)$ is reinstated by reducing the maximum allowed power by 3% for each percent of tilt in excess of 1.

For purposes of monitoring QUADRANT POWER TILT RATIO when one excore detector is inoperable, the movable incore detectors are used to confirm that the normalized symmetric power distribution is consistent with the QUADRANT POWER TILT RATIO. The incore detector monitoring is done with a full incore flux map or two sets of four symmetric thimbles. The two sets of four symmetric thimbles is a unique set of eight detector locations. These locations are C-8, E-5, E-11, H-3, H-13, L-5, L-11, N-8.

3/4.2.5 DNB PARAMETERS

The limits on the Reactor Coolant System T_{avg} and the pressurizer pressure assure that each of the parameters are maintained within the normal steady-state envelope of operation assumed in the transient and accident analyses. The limits are consistent with the initial USAR assumptions and have been analytically demonstrated adequate to maintain a DNBR above the safety analysis limit DNBR specified in the CORE OPERATING LIMITS REPORT (COLR) throughout each analyzed transient. The indicated T_{avg} value of ~~585~~ 590.5 °F and the indicated pressurizer pressure value of 2220 psig correspond to analytical limits of ~~587.7~~ 593.0 °F and 2205 psig respectively, with allowance for measurement uncertainty.

The 12-hour periodic surveillance of these parameters through instrument readout is sufficient to ensure that the parameters are restored within their limits following load changes and other expected transient operation.

Fuel rod bowing reduces the value of DNB ratio. Credit is available to offset this reduction in the generic margin. The generic margins completely offset any rod bow penalties. This is the margin between the correlation DNBR limit and the safety analysis limit DNBR. These limits are specified in the COLR.

The applicable values of rod bow penalties are referenced in the USAR.

When RCS flow rate and $F_{\Delta H}(X,Y)$, per Specification 3.2.3, are measured, no additional allowances are necessary prior to comparison with the limits in the COLR. Measurement uncertainties of 2.5% for RCS total flow rate and 4% for $F_{\Delta H}(X,Y)$ have been allowed for in determination of the design DNBR value.