(c) for each percent that the magnitude of $q_t - q_b$ exceeds -17 percent, the ΔT trip setpoint shall be automatically reduced by an equivalent of 2.0 percent of rated power.

(5) Overpower ΔT $\left(\frac{1}{1+\tau_3 S}\right)$

$$\leq \Delta T_o \left(K_4 - K_5\left(\frac{\tau_5 S}{\tau_5 S + 1}\right) \left(\frac{1}{1+\tau_4 S}\right) T - K_6 (T-T') - f(\Delta I)\right)$$

where

ΔT_o = indicated ΔT at rated power, °F

T = average temperature, °F

T' = 574.2°F

$K_4 \leq$ 1.089 of rated power

K_5 = 0.0262 for increasing %

= 0.0 for decreasing T

K_6 = 0.00123 for $T \geq T'$

= 0.0 for $T < T'$

τ_5 = 10 sec

f (ΔI) as defined in (4) above,

τ_3 = 2 sec for Rosemont or equivalent RTD

= 0 sec for Sostman or equivalent RTD

τ_4 = 2 sec for Rosemont or equivalent RTD

= 0 sec for Sostman or equivalent RTD

(6) Undervoltage - $\geq$75 percent of normal voltage

(7) Indicated reactor coolant flow per loop - $\geq$90 percent of normal indicated loop flow

(8) Reactor coolant pump motor breaker open

(a) Low frequency set point $\geq$57.5 cps

(b) Low voltage set point $\geq$75 percent of normal voltage.

(3)* Low pressurizer pressure - $\geq$1865 psig for operation at 2250 psia primary system pressure

$\geq$1790 psig for operation at 2000 psia primary system pressure

(4) Overtemperature $\Delta T\left(\frac{1}{1+\tau_3 S}\right)$

$$\leq \Delta To\ (K_1 - K_2(T(\frac{1}{1+\tau_4 S})-T')(\frac{1+\tau_1 S}{1+\tau_2 S}) + K_3\ (P-P') - f(\Delta I))$$

where

ΔTo = indicated ΔT at rated power, °F

T = average temperature, F°

T' = 574.2 °F

P = pressurizer pressure, psig

P' = 2235 psig

*K_1 $\leq$1.117 for operation at 2250 psia primary system pressure

$\leq$1.30 for operation at 2000 psia primary system pressure

K_2 = 0.0150

K_3 = 0.000791

$\tau 1$ = 25 sec

$\tau 2$ = 3 sec

$\tau 3$ = 2 sec for Rosemont or equivalent RTD

= 0 sec for Sostman or equivalent RTD

$\tau 4$ = 2 sec for Rosemont or equivalent RTD

= 0 sec for Sostman or equivalent RTD

and $f(\Delta I)$ is an even 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, where q_t and q_b are the percent power in the top and bottom halves of the core respectively, and $q_t + q_b$ is total core power in percent of rated power, such that:

(a) for $q_t - q_b$ within -17, +5 percent, $f(\Delta I) = 0$.

(b) for each percent that the magnitude of $q_t - q_b$ exceeds +5 percent, the ΔT trip set point shall be automatically reduced by an equivalent of 2.0 percent of rated power.

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* Appropriate safety analyses shall be performed prior to shifting operation from one primary system pressure to the other.