Attachment II

Marked Up Copy of R.E. Ginna Nuclear Power Plant
Technical Specifications

Instructions:

Remove pages 3.3-18 and 3.3-19 and replace with the attached pages.

Table 3.3.1-1 (page 5 of 6)
Reactor Trip System Instrumentation

Note 1: Overtemperature ΔT

The Overtemperature ΔT Function Trip Setpoint is defined by:

$$\text{Overtemperature } \Delta T \leq \Delta T_0 \left\{ K_1 + K_2 (P - P') - K_3 (T - T') \left[\frac{1 + \tau_1 s}{1 + \tau_2 s} \right] - f(\Delta I) \right\}$$

Where:

ΔT is measured RCS ΔT, °F.
ΔT_0 is the indicated ΔT at RTP, °F.

s is the Laplace transform operator, sec^{-1}.

T is the measured RCS average temperature, °F.
T' is the nominal T_{avg} at RTP, °F.

P is the measured pressurizer pressure, psig.
P' is the nominal RCS operating pressure, psig.

3.ii

K_1 is the Overtemperature ΔT reactor trip setpoint, 1.20.
K_2 is the Overtemperature ΔT reactor trip depressurization setpoint penalty coefficient, 0.000900 /psi
K_3 is the Overtemperature ΔT reactor trip heatup setpoint penalty coefficient, 0.0209 /°F

τ_1 is the measured lead/lag time constant, 25 seconds.

τ_2 is the measured lead/lag time constant, 5 seconds.

$f(\Delta I)$ is a function of the indicated difference between the top and bottom detectors of the Power Range Neutron Flux channels 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~~ q_b is the total THERMAL POWER in percent RTP.

3.ii

$f(\Delta I) = 0$ when $q_t - q_b$ is $\cancel{\geq}$ $\leq$ +13% ~~RTP~~

$f(\Delta I) = 1.3 \{ (q_t - q_b) - 13 \}$ when $q_t - q_b$ is > +13% RTP

Table 3.3.1-1 (page 6 of 6)
Reactor Trip System Instrumentation

Note 2: Overpower ΔT

The Overpower ΔT Function Trip Setpoint is defined by:

$$\text{Overpower } \Delta T \leq \Delta T_0 \left\{ K_4 - K_5 \left(T - T' \right) - K_6 \left[\frac{\tau_3 s T}{\tau_3 s + 1} \right] - f(\Delta I) \right\}$$

Where:

ΔT is measured RCS ΔT, °F.
ΔT_0 is the indicated ΔT at RTP, °F.

s is the Laplace transform operator, sec^{-1}.

T is the measured RCS average temperature, °F.
T' is the nominal T_{avg} at RTP, °F.

3.ii

K_4 is the Overpower ΔT reactor trip setpoint, 1.077.
K_5 is the Overpower ΔT reactor trip heatup setpoint penalty coefficient which is:
0.0 /°F for T < T' and;
0.0011 /°F for T ≥ T'.
K_6 is the Overpower ΔT reactor trip thermal time delay setpoint penalty which is:
0.0262 /°F for increasing T and;
0.00 /°F for decreasing T.

τ_3 is the measured lead/lag time constant, 10 seconds.

3.ii

f(ΔI) is a function of the indicated difference between the top and bottom detectors of the Power Range Neutron Flux channels 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 the total THERMAL POWER in percent RTP.

$f(\Delta I) = 0$ when $q_t - q_b$ is ≤ +13% ~~RTP~~

$f(\Delta I) = 1.3 \{(q_t - q_b) - 13\}$ when $q_t - q_b$ is > +13% RTP

Attachment III

Proposed Technical Specifications

Instructions:

Remove pages 3.3-18 and 3.3-19 and replace with the attached pages.

Table 3.3.1-1 (page 5 of 6)
Reactor Trip System Instrumentation

Note 1: Overtemperature ΔT

The Overtemperature ΔT Function Trip Setpoint is defined by:

$$\text{Overtemperature } \Delta T \leq \Delta T_0 \left\{ K_1 + K_2 (P - P') - K_3 (T - T') \left[\frac{1 + \tau_1 s}{1 + \tau_2 s}\right] - f(\Delta I) \right\}$$

Where:

ΔT is measured RCS ΔT, °F.
ΔT_0 is the indicated ΔT at RTP, °F.

s is the Laplace transform operator, sec^{-1}.

T is the measured RCS average temperature, °F.
T' is the nominal T_{avg} at RTP, °F.

P is the measured pressurizer pressure, psig.
P' is the nominal RCS operating pressure, psig.

K_1 is the Overtemperature ΔT reactor trip setpoint, 1.20.
K_2 is the Overtemperature ΔT reactor trip depressurization setpoint penalty coefficient, 0.000900/psi.
K_3 is the Overtemperature ΔT reactor trip heatup setpoint penalty coefficient, 0.0209/°F.

τ_1 is the measured lead/lag time constant, 25 seconds.

τ_2 is the measured lead/lag time constant, 5 seconds.

$f(\Delta I)$ is a function of the indicated difference between the top and bottom detectors of the Power Range Neutron Flux channels 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 the total THERMAL POWER in percent RTP.

$f(\Delta I) = 0$ when $q_t - q_b$ is $\leq +13\%$

$f(\Delta I) = 1.3 \{(q_t - q_b) - 13\}$ when $q_t - q_b$ is $> +13\%$

Table 3.3.1-1 (page 6 of 6)
Reactor Trip System Instrumentation

Note 2: Overpower ΔT

The Overpower ΔT Function Trip Setpoint is defined by:

$$\text{Overpower } \Delta T \leq \Delta T_o \left\{ K_4 - K_5 (T - T') - K_6 \left[\frac{\tau_3 s T}{\tau_3 s + 1}\right] - f(\Delta I) \right\}$$

Where:

ΔT is measured RCS ΔT, °F.
ΔT_0 is the indicated ΔT at RTP, °F.

s is the Laplace transform operator, sec^{-1}.

T is the measured RCS average temperature, °F.
T' is the nominal T_{avg} at RTP, °F.

K_4 is the Overpower ΔT reactor trip setpoint, 1.077.
K_5 is the Overpower ΔT reactor trip heatup setpoint penalty coefficient which is:
0.0/°F for $T < T'$ and;
0.0011/°F for $T \geq T'$.
K_6 is the Overpower ΔT reactor trip thermal time delay setpoint penalty which is:
0.0262/°F for increasing T and;
0.00/°F for decreasing T.

τ_3 is the measured lead/lag time constant, 10 seconds.

$f(\Delta I)$ is a function of the indicated difference between the top and bottom detectors of the Power Range Neutron Flux channels 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 the total THERMAL POWER in percent RTP.

$f(\Delta I) = 0$	when $q_t - q_b$ is $\leq +13\%$
$f(\Delta I) = 1.3 \{(q_t - q_b) - 13\}$	when $q_t - q_b$ is $> +13\%$