

TABLE 2.2.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. Intermediate Range Monitor		
a. Neutron Flux-High	< 120/125 divisions of full scale	< 122/125 divisions of full scale
b. Inoperative	NA	NA
2. Average Power Range Monitor:		
a. Neutron Flux-High, Setdown	< 15% of RATED THERMAL POWER	< 20% of RATED THERMAL POWER
b. Flow Biased Simulated Thermal Power-High		
1) Flow Biased	< 0.66 (W-ΔW)+48%, (a) with a maximum of	< 0.66 (W-ΔW)+51%, (a) with a maximum of
2) High Flow Clamped	< 111.0% of RATED THERMAL POWER	< 113.0% of RATED THERMAL POWER
c. Neutron Flux-High	< 118% of RATED THERMAL POWER	< 120% of RATED THERMAL POWER
d. Inoperative	NA	NA
3. Reactor Vessel Steam Dome Pressure - High	< 1065 psig	< 1080 psig
4. Reactor Vessel Water Level - Low, Level 3	> 8.9 inches above instrument zero*	> 8.3 inches above instrument zero
5. Reactor Vessel Water Level-High, Level 8	< 52.0 inches above instrument zero*	< 52.6 inches above instrument zero
6. Main Steam Line Isolation Valve - Closure	< 8% closed	< 12% closed
7. Main Steam Line Radiation - High	< 3.0 x full power background**	< 3.6 x full power background**

TABLE 2.2.1-1 (Continued)

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
8. Drywell Pressure - High	≤ 1.68 psig	≤ 1.88 psig
9. Scram Discharge Volume Water Level - High		
a. Level Transmitter		
1C11-N601A	≤ 30 in.†	$\leq 40 \frac{1}{4}$ in.
1C11-N601B	≤ 30 in.†	$\leq 40 \frac{1}{4}$ in.
1C11-N601C	≤ 30 in.††	$\leq 39 \frac{3}{16}$ in.
1C11-N601D	≤ 30 in.††	$\leq 39 \frac{3}{16}$ in.
b. Float Switch		
1C11-N013A	≤ 762 ft. 1.375 in. msl	≤ 763 ft. 3 $\frac{1}{4}$ in. msl
1C11-N013B	≤ 762 ft. 1.125 in. msl	≤ 763 ft. 3 $\frac{1}{4}$ in. msl
1C11-N013C	≤ 762 ft. 0.75 in. msl	≤ 763 ft. 1 $\frac{11}{16}$ in. msl
1C11-N013D	≤ 762 ft. 1.125 in. msl	≤ 763 ft. 1 $\frac{11}{16}$ in. msl
10. Turbine Stop Valve - Closure	$\leq 5\%$ closed	$\leq 7\%$ closed
11. Turbine Control Valve Fast Closure, Valve Trip System Oil Pressure - Low	> 530 psig NA	> 465 psig NA
12. Reactor Mode Switch Shutdown Position	NA	NA
13. Manual Scram	NA	NA

(a) The Average Power Range Monitor Scram Function varies as a function of recirculation loop drive flow (W). ΔW is the difference in indicated drive flow (in percent of drive flow which produces the same core flow) between two loop and single loop operation at the same core flow. $\Delta W = 0$ for two loop operation. $\Delta W = 8\%$ for single loop operation.

*See Bases Figure B 3/4 3-1.

†Instrument zero is 759 ft. 11 in. msl

††Instrument zero is 759 ft. 10.5 in. msl

*** Insert Attached

Within 24 hours prior to the planned start of the hydrogen injection test, with reactor power at greater than 20% of RATED THERMAL POWER, the normal full power background radiation level and associated trip setpoints may be changed based on a calculated value of the radiation level expected during the test. The background radiation level and associated trip setpoints may be adjusted during the test based on either calculations or measurements of actual radiation levels resulting from hydrogen injection. The background radiation level shall be verified and the associated trip setpoints shall be returned to their normal value within 24 hours of re-establishing normal radiation levels after completion of the hydrogen injection test at greater than 20% of RATED THERMAL POWER or within 12 hours of establishing reactor power levels below 20% of RATED THERMAL POWER.

TABLE 3.3.2-2 (Continued)

CRVICS INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. <u>PRIMARY AND SECONDARY CONTAINMENT ISOLATION (Continued)</u>		
k. Containment Pressure - High	≤ 2.62 psid	≤ 3.00 psid
l. Main Steam Line Radiation - High	$\leq 3.0 \times$ full power background*	$\leq 3.6 \times$ full power background*
m. Fuel Building Exhaust Radiation - High	≤ 10 mR/hr	≤ 17 mR/hr
n. Manual Initiation	NA	NA
2. <u>MAIN STEAM LINE ISOLATION</u>		
a. Reactor Vessel Water Level - Low Low Low, Level 1	≥ -145.5 in.*	≥ -147.7 in.
b. Main Steam Line Radiation - High	$\leq 3.0 \times$ full power background*	$\leq 3.6 \times$ full power background*
c. Main Steam Line Pressure - Low	≥ 849 psig	≥ 837 psig
d. Main Steam Line Flow - High	≤ 170 psid**	≤ 178 psid**
e. Condenser Vacuum - Low	≥ 8.5 in. Hg vacuum	≥ 7.6 in. Hg vacuum
f. Main Steam Line Tunnel Temp. - High	$\leq 165^\circ\text{F}$	$\leq 176^\circ\text{F}$
g. Main Steam Line Tunnel Δ Temp. - High	$\leq 54.5^\circ\text{F}$	$\leq 60^\circ\text{F}$
h. Main Steam Line Turbine Bldg. Temp. - High	$\leq 131.2^\circ\text{F}$	$\leq 138^\circ\text{F}$
i. Manual Initiation	NA	NA
3. <u>REACTOR WATER CLEANUP SYSTEM ISOLATION</u>		
a. Δ Flow - High	≤ 59 gpm	≤ 66.1 gpm
b. Δ Flow Timer	≤ 45 sec.	≤ 47 sec.

TABLE 3.3.2-2 (Continued)

CRVICS INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
5. <u>RHR SYSTEM ISOLATION (Continued)</u>		
c. Reactor Vessel Water Level - Low, Level 3	≥ 8.9 in.*	≥ 8.3 in.
d. Reactor Vessel Water Level - Low Low Low, Level 1	≥ -145.5 in.*	≥ -147.7 in.
e. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	≤ 135 psig**	≤ 150 psig**
f. Drywell Pressure - High		
1) Containment Spray	≤ 1.68 psig	≤ 1.88 psig
2) Fuel Pool Cooling	≤ 1.68 psig	≤ 1.88 psig
g. Manual Initiation	NA	NA

*See Bases Figure B 3/4 3-1.

**Initial setpoint. Final setpoint to be determined during startup test program. Any required change to this setpoint shall be submitted to the Commission within 90 days of test completion.

Insert A #ached

Within 24 hours prior to the planned start of the hydrogen injection test, with reactor power at greater than 20% of RATED THERMAL POWER, the normal full power background radiation level and associated trip setpoints may be changed based on a calculated value of the radiation level expected during the test. The background radiation level and associated trip setpoints may be adjusted during the test based on either calculations or measurements of actual radiation levels resulting from hydrogen injection. The background radiation level shall be verified and the associated trip setpoints shall be returned to their normal value within 24 hours of re-establishing normal radiation levels after completion of the hydrogen injection test at greater than 20% of RATED THERMAL POWER or within 12 hours of establishing reactor power levels below 20% of RATED THERMAL POWER.