

PROPOSED TECHNICAL SPECIFICATION CHANGES

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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
4. MAIN STEAM AND FEEDWATER ISOLATION (MSIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Steam Generator Pressure - Low	≥ 712 psia (2)	≥ 699.6 psia (2)
5. CONTAINMENT COOLING (CCAS)		
a. Manual (Trip Buttons)	Not Applicable	Not applicable
b. Containment Pressure - High	≤ 18.3 psia	≤ 18.490 psia
c. Pressurizer Pressure - Low	≥ 1717.4 psia (1)	≥ 1686.3 psia (1)
6. RECIRCULATION (RAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Refueling Water Tank - Low	54,400 $\pm$ 2,370 gallons (equivalent to 6.0 $\pm$ 0.5% indicated level)	between 51,050 and 58,600 gallons (equivalent to between 5.11% and 6.88% indicated level)
7. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	(4)	2300 $\pm$ 699 volts with a 0.64 $\pm$ 0.34 second time delay
b. 460 volt Emergency Bus Undervoltage (Degraded Voltage)	423 $\pm$ 2.0 volts with an 8.0 $\pm$ 0.5 second time delay	423 $\pm$ 4.0 volts with an 8.0 $\pm$ 0.8 second time delay

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT		TRIP VALUE	ALLOWABLE VALUES	
8. EMERGENCY FEEDWATER (EFAS)	a. Manual (Trip Buttons)	Not Applicable	Not Applicable	
	b. Steam Generator (A&B) Level-Low	≥ 23% (3)	≥ 22.111% (3)	
	c. Steam Generator AP-High (SG-A > SG-B)	≤ 90 psi	≤ 99.344 psi	
	d. Steam Generator AP-High (SG-B > SG-A)	≤ 90 psi	≤ 99.344 psi	
	e. Steam Generator (A&B) Pressure - Low	≥ 712 psia (2)	≥ 699.6 psia (2)	

(1) Value may be decreased manually, to a minimum of ≥ 100 psia, during a planned reduction in pressurizer pressure, provided the margin between the pressurizer pressure and this value is maintained at ≤ 200 psi; the setpoint shall be increased automatically as pressurizer pressure is increased until the trip setpoint is reached. Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer pressure is ≥ 500 psia.

(2) Value may be decreased manually during a planned reduction in steam generator pressure, provided the margin between the steam generator pressure and this value is maintained at ≤ 200 psi; the setpoint shall be increased automatically as steam generator pressure is increased until the trip setpoint is reached.

(3) % of the distance between steam generator upper and lower level instrument nozzles.

(4) The trip value for this function is listed in the surveillance test procedures. The trip value will ensure that adequate protection is provided when all the applicable calibration tolerances, channel uncertainties, and time delays are taken into account.

MARKUP OF CURRENT ANO-2 TECHNICAL SPECIFICATIONS

(FOR INFO ONLY)

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
4. MAIN STEAM AND FEEDWATER ISOLATION (MSIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Steam Generator Pressure - Low	≥ 712 psia (2)	≥ 699.6 psia (2)
5. CONTAINMENT COOLING (CCAS)		
a. Manual (Trip Buttons)	Not Applicable	Not applicable
b. Containment Pressure - High	≤ 18.3 psia	≤ 18.490 psia
c. Pressurizer Pressure - Low	≥ 1717.4 psia (1)	≥ 1686.3 psia (1)
6. RECIRCULATION (RAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Refueling Water Tank - Low	54,400 $\pm$ 2,370 gallons (equivalent to 6.0 $\pm$ 0.5% indicated level)	between 51,050 and 58,600 gallons (equivalent to between 5.11% and 6.88% indicated level)
7. LOSS OF POWER		
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	3120 volts-(4)	3120 volts-(4) <u>2300 $\pm$ 699 volts</u> <u>with a 0.64 $\pm$ 0.34 second time delay</u>
b. 460 volt Emergency Bus Undervoltage (Degraded Voltage)	423 $\pm$ 2.0 volts with an 8.0 $\pm$ 0.5 second time delay	423 $\pm$ 4.0 volts with an 8.0 $\pm$ 0.6 second time delay

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
8. EMERGENCY FEEDWATER (EFAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Steam Generator (A&B) Level-Low	$\geq 23\%$ (3)	$\geq 22.111\%$ (3)
c. Steam Generator ΔP -High (SG-A > SG-B)	≤ 90 psi	≤ 99.344 psi
d. Steam Generator ΔP -High (SG-B > SG-A)	≤ 90 psi	≤ 99.344 psi
e. Steam Generator (A&B) Pressure - Low	≥ 712 psia (2)	≥ 699.6 psia (2)

(1) Value may be decreased manually, to a minimum of ≥ 100 psia, during a planned reduction in pressurizer pressure, provided the margin between the pressurizer pressure and this value is maintained at ≤ 200 psi; the setpoint shall be increased automatically as pressurizer pressure is increased until the trip setpoint is reached. Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer pressure is ≥ 500 psia.

(2) Value may be decreased manually during a planned reduction in steam generator pressure, provided the margin between the steam generator pressure and this value is maintained at ≤ 200 psi; the setpoint shall be increased automatically as steam generator pressure is increased until the trip setpoint is reached.

(3) % of the distance between steam generator upper and lower level instrument nozzles.

(4) The trip value for this function is listed in the surveillance test procedures. The trip value will ensure that adequate protection is provided when all the applicable calibration tolerances, channel uncertainties, and time delays are taken into account. Inverse time relay set value, not a trip value. The zero voltage trip will occur in 0.75 ± 0.075 seconds.