Table 3.3.1-1 (page 3 of 8)
Reactor Trip System Instrumentation

	FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE[a]
9.	Pressurizer Water Level - High	1[g]	3	M	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10	≤ 93.8% of instrument span
10.	Reactor Coolant Flow - Low	1[g]	3 per loop	M	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≥ 88.8%[m]
11.	Not Used					
12.	Undervoltage RCPs	1[g]	2/bus	M	SR 3.3.1.9 SR 3.3.1.10 SR 3.3.1.16	≥ 10105 Vac
13.	Underfrequency RCPs	1[g]	2/bus	M	SR 3.3.1.9 SR 3.3.1.10 SR 3.3.1.16	≥ 57.1 Hz
14.	Steam Generator (SG) Water Level Low-Low[l]					
	a. Steam Generator Water Level Low-Low (Adverse Containment Environment)	1, 2	4 per SG	E	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≥ 25.2% of Narrow Range Instrument Span
	b. Steam Generator Water Level Low-Low (Normal Containment Environment)	1[p],2[p]	4 per SG	E	SR 3.3.1.1 SR 3.3.1.7 SR 3.3.1.10 SR 3.3.1.16	≥ 19.8% of Narrow Range Instrument Span

(continued)

(a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.
(g) Above the P-7 (Low Power Reactor Trips Block) interlock.
(l) The applicable MODES for these channels in Table 3.3.2-1 are more restrictive.
(m) % of loop minimum measured flow (MMF = 95,660 gpm)
(p) Except when the Containment Pressure – Environmental Allowance Modifier channels in the same protection sets are tripped.

Table 3.3.2-1 (page 4 of 8)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE[a]
5. Turbine Trip and Feedwater Isolation					
a. Automatic Actuation Logic and Actuation Relays (SSPS)	1,2[j], 3[j]	2 trains	G	SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.6 SR 3.3.2.14	NA
b. Automatic Actuation Logic and Actuation Relays (MSFIS)	1, 2[j], 3[j]	2 trains[o]	G	SR 3.3.2.2	NA
c. SG Water Level - High High (P-14)	1,2[j]	4 per SG	I	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≤ 79.8% of Narrow Range Instrument Span
d. Safety Injection	Refer to Function 1 (Safety Injection) for all initiation functions and requirements.				
e. Steam Generator Water Level Low-Low[q]					
(1) Steam Generator Water Level Low-Low (Adverse Containment Environment)	1, 2[j], 3[j]	4 per SG	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≥ 25.2% of Narrow Range Instrument Span

(continued)

(a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.
(j) Except when all MFIVs are closed.
(o) Each train requires a minimum of two programmable logic controllers to be OPERABLE.
(q) Feedwater isolation only.

Table 3.3.2-1 (page 5 of 8)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE[a]
5. Turbine Trip and Feedwater Isolation					
e. Steam Generator Water Level Low-Low[q] (continued)					
(2) Steam Generator Water Level Low-Low (Normal Containment Environment)	1[r], 2[q,r], 3[q,r]	4 per SG	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≥ 19.8% of Narrow Range Instrument Span
(3) Vessel ΔT Equivalent including delay timers - Trip Time Delay					
(a) Vessel ΔT (Power-1)	1, 2[l]	4	M	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≤ Vessel ΔT Equivalent to 13.9% RTP[k]
(b) Vessel ΔT (Power-2)	1, 2[l]	4	M	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≤ Vessel ΔT Equivalent to 23.9% RTP[l]
(4) Containment Pressure - Environmental Allowance Modifier	1, 2[j], 3[j]	4	N	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≤ 2.0 psig

(continued)

(a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.
(j) Except when all MFIVs are closed.
(k) With a time delay ≤ 240 seconds.
(l) With a time delay ≤ 130 seconds.
(q) Feedwater isolation only.
(r) Except when the Containment Pressure – Environmental Allowance Modifier channels in the same protection sets are tripped.

Table 3.3.2-1 (page 6 of 8)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE[a]
6. Auxiliary Feedwater					
a. Manual Initiation	1, 2, 3	1/pump	P	SR 3.3.2.8	NA
b. Automatic Actuation Logic and Actuation Relays (SSPS)	1,2,3	2 trains	G	SR 3.3.2.2 SR 3.3.2.4 SR 3.3.2.6	NA
c. Automatic Actuation Logic and Actuation Relays (BOP ESFAS)	1,2,3	2 trains	Q	SR 3.3.2.3	NA
d. SG Water Level Low-Low					
(1) Steam Generator Water Level Low-Low (Adverse Containment Environment)	1, 2, 3	4 per SG	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≥ 25.2% of Narrow Range Instrument Span
(2) Steam Generator Water Level Low-Low (Normal Containment Environment)	1[(r)], 2[(r)], 3[(r)]	4 per SG	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≥ 19.8% of Narrow Range Instrument Span

(continued)

(a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.
(r) Except when the Containment Pressure – Environmental Allowance Modifier channels in the same protection sets are tripped.