

ESFAS Instrumentation
3.3.2

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Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE ^(a)
4. Steam Line Isolation					
a. Manual Initiation	1,2 ^(b) , 3 ^(b)	2	F	SR 3.3.2.8	NA
b. Automatic Actuation Logic and Actuation Relays (SSPS)	1,2 ^(b) , 3 ^(b)	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 (MSFIS)	1, 2 ^(b) , 3 ^(b)	2 trains ^(c)	S	SR 3.3.2.3	NA
d. Containment Pressure - High 2	1,2 ^(b) , 3 ^(b)	3	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≤ 18.3 psig
e. Steam Line Pressure					
(1) Low	1,2 ^(b) , 3 ^{(b)(d)}	3 per steam line	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≥ 571 psig ^(e)
(2) Negative Rate - High	3 ^{(b)(d)}	3 per steam line	D	SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10	≤ 124 psi ^(f)

(continued)

- (a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.
- (b) Above the P-11 (Pressurizer Pressure) Interlock and below P-11 unless the Function is blocked.
- (c) Time constants used in the lead/lag controller are $\tau_1 \geq 50$ seconds and $\tau_2 \leq 5$ seconds.
- (g) Below the P-11 (Pressurizer Pressure) Interlock; however, may be blocked below P-11 when safety injection on low steam line pressure is not blocked.
- (h) Time constant utilized in the rate/lag controller is ≥ 50 seconds.
- (i) Except when all MSIVs are closed.
- (o) Each train requires a minimum of two programmable logic controllers to be OPERABLE.

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
S. One train inoperable	<p style="text-align: center;">----- NOTE -----</p> <p>One train may be bypassed for up to 4 hours for surveillance testing provided the other train is OPERABLE.</p> <hr/> <p>S.1 Restore train to OPERABLE status.</p> <p><u>OR</u></p> <p>S.2.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>S.2.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p> <p>18 hours</p>

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3.7 PLANT SYSTEMS

3.7.2 Main Steam Isolation Valves (MSIVs)

LCO 3.7.2 Four MSIVs shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One MSIV inoperable in MODE 1.	A.1 Restore MSIV to OPERABLE status.	8 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 2.	6 hours
C. ----- NOTE ----- Separate Condition entry is allowed for each MSIV. ----- One or more MSIVs inoperable in MODE 2 or 3.	C.1 Close MSIV. <u>AND</u> C.2 Verify MSIV is closed.	8 hours Once per 7 days
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. <u>AND</u> D.2 Be in MODE 4.	6 hours 12 hours

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	<p>-----NOTE----- Only required to be performed in MODES 1 and 2.</p> <p>Verify isolation time of each MSIV is \leq 5 seconds.</p>	In accordance with the Inservice Testing Program
SR 3.7.2.2	<p>-----NOTE----- Only required to be performed in MODES 1 and 2.</p> <p>Verify each MSIV actuates to the isolation position on an actual or simulated actuation signal.</p>	18 months