Industry/TSTF Standard Technical Specification Change Traveler

Add Note to ESFAS Logic that MSIS Function not required when affected valves are closed

Classification: 1) Correct Specifications

NUREGs Affected: ☐ 1430 ☐ 1431 ☑ 1432 ☐ 1433 ☐ 1434

Description:

Add a note to Table 3.3.6-1 (Digital). and Table 3.3.5-1 (Analog) that states the MSIS Function is not required in MODES 2 3, and 4 (MODE 4 for Analog only) when all associated valves isolated by the MSIS function are closed [and deactivated]. The Bases have been revised to be consistent.

Justification:

A Note is added to NUREG-1432, ESFAS Instrumentation, LCO 3.3.4 (Analog) and LCO 3.3.5 (Digital) stating that the MSIS Function is not required in MODES 2, 3 and 4 (MODE 4 for analog only) when all associated valves isolated by MSIS function are closed [and deactivated]. The MSIS function is designed to isolate the Steam Generators to prevent cooldown during an excessive steam flow event. With all of the valves which are isolated by the MSIS function closed, there is no need for the MSIS function to terminate a cooldown. The Bases have been revised to be consistent with the change. This note is also consistent with Specification 3.7.2 for the MSIV's.

Note that a similar Note exists in NUREG-1431.

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Revision History

OG Revision 0 — Revision Status: Closed

Revision Proposed by Palo Verde

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 14-Jan-98

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 27-Jan-98

TSTF Review Information

TSTF Received Date: 27-Jan-98 Date Distributed for Review 28-May-98

OG Review Completed: ☑ BWOG ☑ WOG ☑ CEOG ☑ BWROG

TSTF Comments:

Make changes to Tables.

TSTF Resolution: Superceeded Date: 28-Jul-98

OG Revision 1 — Revision Status: Active — Next Action: NRC

Revision Proposed by CEOG

OG Revision 1 **Revision Status: Active** **Next Action: NRC**

Revision Description:
Moved new footnote annotation from Function column to Applicability column.

Owners Group Review Information

Date Originated by OG: 28-Jul-98

Owners Group Comments
(No Comments)

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TSTF Comments:
CEOG only.

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NRC Review Information

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(No Comments)

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Incorporation Into the NUREGs

File to BBS/LAN Date: TSTF Informed Date: TSTF Approved Date:

NUREG Rev Incorporated:

Affected Technical Specifications

LCO 3.3.5	ESFAS Logic and Manual Trip (Analog)	
	Change Description:	Table 3.3.5-1
LCO 3.3.5 Bases	ESFAS Logic and Manual Trip (Analog)	
	Change Description:	Table 3.3.5-1
LCO 3.3.6	ESFAS Logic and Manual Trip (Digital)	
	Change Description:	Table 3.3.6-1
LCO 3.3.6 Bases	ESFAS Logic and Manual Trip (Digital)	
	Change Description:	Table 3.3.6-1

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Table 3.3.6-1 (page 1 of 1)
Engineered Safety Features Actuation System Logic and Manual Trip Applicability

FUNCTION	APPLICABLE MODES
1. Safety Injection Actuation Signal	
a. Matrix Logic	1,2,3
b. Initiation Logic	1,2,3,4
c. Actuation Logic	1,2,3,4
d. Manual Trip	1,2,3,4
2. Containment Isolation Actuation Signal	
a. Matrix Logic	1,2,3
b. Initiation Logic	1,2,3,4
c. Actuation Logic	1,2,3,4
d. Manual Trip	1,2,3,4
3. Containment Cooling Actuation Signal(a)	
a. Initiation Logic	1,2,3,4
b. Actuation Logic	1,2,3,4
c. Manual Trip	1,2,3,4
4. Recirculation Actuation Signal	
a. Matrix Logic	1,2,3
b. Initiation Logic	1,2,3,4
c. Actuation Logic	1,2,3,4
d. Manual Trip	1,2,3,4
5. Containment Spray Actuation Signal(b)	
a. Matrix Logic	1,2,3
b. Initiation Logic	1,2,3
c. Actuation Logic	1,2,3
d. Manual Trip	1,2,3
6. Main Steam Isolation Signal	
a. Matrix Logic	1,2,3 (c)
b. Initiation Logic	1,2,3
c. Actuation Logic	1,2,3
d. Manual Trip	1,2,3
7. Emergency Feedwater Actuation Signal SG #1 (EFAS-1)	
a. Matrix Logic	1,2,3
b. Initiation Logic	1,2,3
c. Actuation Logic	1,2,3
d. Manual Trip	1,2,3
8. Emergency Feedwater Actuation Signal SG #2 (EFAS-2)	
a. Matrix Logic	1,2,3
b. Initiation Logic	1,2,3
c. Actuation Logic	1,2,3
d. Manual Trip	1,2,3

(a) Automatic SIAS also initiates CCAS.

(b) Automatic SIAS also required for automatic CSAS initiation.

(c) The MSIS Function is not required to be OPERABLE in MODES 2 and 3 when all associated valves isolated by the MSIS Function are closed [and deactivated].

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BASES

LCO (continued)

The LCO is applicable to the MSIS in MODE 1. The LCO is applicable in MODES 2 and 3 except when all associated valves are closed [and deactivated].

6. Main Steam Isolation Signal

a. Manual Trip

This LCO requires two channels of MSIS Manual Trip to be OPERABLE in MODES 1, 2, and 3.

b. Matrix Logic

This LCO requires six channels of MSIS Matrix Logic to be OPERABLE in MODES 1, 2, and 3.

c. Initiation Logic

This LCO requires four channels of MSIS Initiation Logic to be OPERABLE in MODES 1, 2, and 3.

d. Actuation Logic

This LCO requires two channels of MSIS Actuation Logic to be OPERABLE in MODES 1, 2, and 3.

7. Emergency Feedwater Actuation Signal SG #1 (EFAS-1)

EFAS-1 is initiated either by a low steam generator level coincident with no low pressure trip present on SG #1 or by a low steam generator level coincident with a differential pressure between the two generators with the higher pressure in SG #1.

The steam generator secondary differential pressure is used, in conjunction with a Steam Generator Pressure—Low input from each steam generator, as an input of the EFAS logic where it is used to determine if a generator is intact. The EFAS logic inhibits feeding a steam generator if a Steam Generator Pressure—Low condition exists in that generator and the pressure in that steam generator is less than the Steam Generator Pressure Difference (SGPD)—High setpoint pressure.

The SGPD logic thus enables the feeding of a steam generator in the event that a plant cooldown causes a Steam Generator Pressure—Low condition, while

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Table 3.3.5-1 (page 1 of 1)
Engineered Safety Features Actuation System Actuation Logic and Manual Channel Applicability

FUNCTION	APPLICABLE MODES
1. Safety Injection Actuation Signal	1,2,3,[4]
2. Containment Spray Actuation Signal	1,2,3,[4]
3. Containment Isolation Actuation Signal	1,2,3,4
4. Main Steam Isolation Signal	1,2,3,4 (a)
5. Recirculation Actuation Signal	1,2,3,4
6. Auxiliary Feedwater Actuation Signal	1,2,3

(a) The MSIS Function is not required to be OPERABLE in MODES 2, 3, and 4 when all associated valves isolated by the MSIS Function are closed [and deactivated].

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BASES

LCO

b. Actuation Logic (continued)

initiating relay contacts responsible for actuating the ESF equipment.

4. Main Steam Isolation Signal

The LCO is applicable to the MSIS in MODE 1. The LCO is applicable in MODES 2, 3, and 4 except when all associated valves are closed [and deactivated].

a. Manual Trip

This LCO requires two channels per steam generator of the MSIS Manual Trip to be OPERABLE in MODES 1, 2, 3, and 4.

b. Actuation Logic

This LCO requires two channels of MSIS Actuation Logic to be OPERABLE in MODES 1, 2, 3, and 4.

Failures in the actuation subsystems, including the manual bypass key switches, are considered Actuation Logic failures and are addressed in the logic LCO.

5. Recirculation Actuation Signal

a. Manual Trip

This LCO requires two channels of RAS Manual Trip to be OPERABLE in MODES 1, 2, 3, and 4.

b. Actuation Logic

This LCO requires two channels of RAS Actuation Logic to be OPERABLE in MODES 1, 2, 3, and 4.

6. Auxiliary Feedwater Actuation Signal

A low level in either generator, as sensed by a two-out-of-four coincidence of four wide range sensors for each generator, will generate an auxiliary feedwater actuation signal (AFAS), which starts both trains of auxiliary feedwater (AFW) pumps and feeds both steam generators. The AFAS also monitors the

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