

Docket Number 50-346
License Number NPF-3
Serial Number 2025
Attachment
Page 16

ATTACHMENT

Attached is the proposed marked-up change to the Operating License.

INSTRUMENTATION

FOR INFORMATION ONLY

3/4.3.2 SAFETY SYSTEM INSTRUMENTATION

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2.1 The Safety Features Actuation System (SFAS) functional units shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4 and with RESPONSE TIMES as shown in Table 3.3-5.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With a SFAS functional unit trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the functional unit inoperable and apply the applicable ACTION requirement of Table 3.3-3, until the functional unit is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With a SFAS functional unit inoperable, take the action shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1.1 Each SFAS functional unit shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST during the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.1.2 The logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of functional units affected by bypass operation. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each functional unit affected by bypass operation.

4.3.2.1.3 The SAFETY FEATURES RESPONSE TIME of each SFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one functional unit per function such that all functional units are tested at least once every M times 18 months where M is the total number of redundant functional units in a specific SFAS function as shown in the "Total No. of Units" Column of Table 3.3-3.

DAVIS-BESSE, UNIT 1

3/4 3-9

FOR INFORMATION ONLY

TABLE 3.3-3

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF UNITS</u>	<u>UNITS TO TRIP</u>	<u>MINIMUM UNITS OPERABLE</u>	<u>APPLICABLE NODES</u>	<u>ACTION</u>
1. INSTRUMENT STRINGS					
a. Containment Radiation - High	4	2	3	1, 2, 3, 4, 6****	100
b. Containment Pressure - High	4	2	3	1, 2, 3	100
c. Containment Pressure - High-High	4	2	3	1, 2, 3	100
d. RCS Pressure - Low	4	2	3	1, 2, 3 ^a	100
e. RCS Pressure - Low-Low	4	2	3	1, 2, 3 ^{aa}	100
f. BVST Level - Low-Low	4	2	3	1, 2, 3	100
2. OUTPUT LOGIC					
a. Incident Level #1: Containment Isolation	2	1	2	1, 2, 3, 4, 6****	11
b. Incident Level #2: High Pressure Injection and Starting Diesel Generators	2	1	2	1, 2, 3, 4	11
c. Incident Level #3: Low Pressure Injection	2	1	2	1, 2, 3, 4	11
d. Incident Level #4: Containment Spray	2	1	2	1, 2, 3, 4	11
e. Incident Level #5: Containment Sump Recirculation Permissive	2	1	2	1, 2, 3, 4	11

FOR INFORMATION ONLY

TABLE 3.3-1 (Continued)

SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF UNITS</u>	<u>UNITS TO TRIP</u>	<u>MINIMUM UNITS OPERABLE</u>	<u>APPLICABLE NODES</u>	<u>ACTION</u>
1. MANUAL ACTUATION					
a. SFAS (except Containment Spray and Emergency Sump Recirculation)	2	2	2	1,2,3,4,6****	12
b. Containment Spray	2	2	2	1,2,3,4	12
4. SEQUENCE LOGIC CHANNELS					
a. Sequencer	4	2***	3	1,2,3,4	10H
b. Essential Bus Feeder Breaker Trip (90%)	2	1	2*****	1,2,3,4	15H
c. Diesel Generator Start, Load Shed on Essential Bus (59%)	2	1	2	1,2,3,4	15H
5. INTERLOCK CHANNELS					
a. Decay Heat Isolation Valve	1	1	1	1,2,3	13E
b. Pressurizer Heaters	2	2	2	3****	14

FOR INFORMATION ONLY

TABLE 1.1-4

SAFETY FEATURES: ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE VALUES
INSTRUMENT STRINGS		
a. Containment Radiation	$\frac{4}{2} \times$ Background at RATED THERMAL POWER	$\frac{4}{2} \times$ Background at RATED THERMAL POWER ^u
b. Containment Pressure - High	19.08 psia	19.09 psia ^{**}
c. Containment Pressure - High-High	18.4 psia 40.93 psia	18.52 psia 40.97 psia ^{**}
d. RCS Pressure - Low	1620.75 psig 1546.20 psig	1615.75 psig 1546.00 psig ^{**}
e. RCS Pressure - Low-Low	416.20 430.75 psig	415.75 psig ^{**} 413.30 psig ^{***}
f. BWST Level	95.59 89.5 and ≤ 100.5 in. H ₂ O	95.57 89.3 and ≤ 100.7 in. H ₂ O ^{**}
SEQUENCE LOGIC CHANNELS		
a. Essential Bus Feeder Breaker Trip (90%)	> 3744 volts for < 7.8 sec	> 3558 volts < 7.8 sec
b. Diesel Generator Start, Load Shed on Essential Bus (59%)	> 2071 and ≤ 2450 volts for 0.1 to 0.1 sec	> 2071 and ≤ 2450 volts for 0.5 \pm 0.1 sec [#]
INTERLOCK CHANNELS		
a. Decay Heat Isolation Valve and Pressurizer Heater	< 438 psig	< 443 psig ^u

[#] Allowable Value for CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION.

^u Referenced to the centerline of DH11 and DH12

^{**} Allowable Value for CHANNEL FUNCTIONAL TEST

^{***} Allowable Value for CHANNEL CALIBRATION

INSTRUMENTATION

STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM INSTRUMENTATION

FOR INFORMATION ONLY

LIMITING CONDITION FOR OPERATION

3.3.2.2 The Steam and Feedwater Rupture Control System (SFRCS) instrumentation channels shown in Table 3.3-11 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-12 and with RESPONSE TIMES as shown in Table 3.3-13.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With a SFRCS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-12, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-11, until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With a SFRCS instrumentation channel inoperable, take the action shown in Table 3.3-11.

SURVEILLANCE REQUIREMENTS

4.3.2.2.1 Each SFRCS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST during the MODES and at the frequencies shown in Table 4.3-11.

4.3.2.2.2 The logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.2.2.3 The STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM RESPONSE TIME of each SFRCS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific SFRCS function as shown in the "Total No. of Channels" Column of Table 3.3-11.

TABLE 3.3-11

STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>		<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1.	Main Steam Pressure Low Instrument Channels*	2	1	2	16#
a.	PS 3689B Steam Line 1 Channel 1				
b.	PS 3689D Steam Line 2 Channel 1				
c.	PS 3689F Steam Line 1 Channel 1				
d.	PS 3689H Steam Line 2 Channel 1				
e.	PS 3687A Steam Line 2 Channel 2				
f.	PS 3687C Steam Line 1 Channel 2				
g.	PS 3687E Steam Line 2 Channel 2				
h.	PS 3687G Steam Line 1 Channel 2				

FOR INFORMATION ONLY

Docket Number 50-346
License Number NPF-3
Serial Number 2025
Attachment
Page 22

TABLE 3.3-11 (Continued)

STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT		TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	ACTION
2.	Feedwater/Steam Generator Differential Pressure - High Instrument Channels	2	1	2	16H
a.	PDS 2685A Feedwater/Steam Generator 2 Channel 2 PDS 2685B Feedwater/Steam Generator 2 Channel 2				
b.	PDS 2685C Feedwater/Steam Generator 2 Channel 1 PDS 2685D Feedwater/Steam Generator 2 Channel 1				
c.	PDS 2686A Feedwater/Steam Generator 1 Channel 1 PDS 2686B Feedwater/Steam Generator 1 Channel 1				
d.	PDS 2686C Feedwater/Steam Generator 1 Channel 2 PDS 2686D Feedwater/Steam Generator 1 Channel 2				
1.	Steam Generator Level - Low Instrument Channels	2	1	2	16H
a.	LSLL SP9B8 Steam Generator 1 Channel 1 LSLL SP9B9 Steam Generator 1 Channel 1				
b.	LSLL SP9A6 Steam Generator 2 Channel 1 LSLL SP9A7 Steam Generator 2 Channel 1				
c.	LSLL SP9A8 Steam Generator 2 Channel 2 LSLL SP9A9 Steam Generator 2 Channel 2				

FOR INFORMATION ONLY

Docket Number 50-346
License Number NPF-3
Serial Number 2025
Attachment
Page 23

TABLE 3.3-11 (Continued)
STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
3. Steam Generator Level - Low Instrument Channels (continued)				
d. LSLL SP9B6 Steam Generator 1 Channel 2 LSLL SP9B7 Steam Generator 1 Channel 2				
4. Loss of RCP Channels	2	1	2	161
5. Manual Initiation (Push buttons)				
a. Initiate APPT #1	1	1	1	11
b. Initiate APPT #2	1	1	1	11
c. Initiate APPT #1 and Isolate SG #1	1	1	1	11
d. Initiate APPT #2 and Isolate SG #2	1	1	1	11

FOR INFORMATION ONLY

Docket Number 50-346
License Number NPF-3
Serial Number 2025
Attachment
Page 24

TABLE 3.3-12

STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM
INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNITS</u>	<u>TRIP SETPOINTS</u>	<u>ALLOWABLE VALUES</u>
1. Steam Line Pressure - Low	597.70 ≥ 591.6 psig	≥ 597.70 psig* ≥ 591.6 psig** ≥ 586.6 psig**
2. Steam Generator Level - Low (1)	16.40 in. ≥ 16.4 "	≥ 596.65 psig** ≥ 15.6 " 15.60 in. * ≥ 12.9 " 12.90 in. **
3. Steam Generator Feedwater Differential Pressure - High (2)	187.10 ≤ 197.6 psid	187.10 ≤ 197.6 psid* ≤ 199.6 psid** ≤ 191.90
4. Reactor Coolant Pumps - Loss of	1403.84 High ≤ 1384.6 amps Low ≥ 106.5 amps 102.42	1403.86 ≤ 1384.6 amps# ≤ 106.5 amps# ≤ 102.16

(1) Actual water level above the lower steam generator tubesheet.

(2) Where differential pressure is steam generator minus feedwater pressure.

*Allowable Value for CHANNEL FUNCTIONAL TEST

**Allowable Value for CHANNEL CALIBRATION

#Allowable Value for CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION