

### 3/4.7 PLANT SYSTEMS

#### 3/4.7.1.6.1 MAIN FEEDWATER REGULATING VALVES AND STARTUP FEEDWATER REGULATING VALVES

##### LIMITING CONDITION FOR OPERATION

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3.7.1.6.1 In support of their backup functions to the Main Feedwater Isolation Valves, each Main Feedwater Regulating Valve (MFRV) and Startup Feedwater Regulating Valve (SFRV) shall be able to actuate to the closed position on MSIS.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTION:

Note: Separate Condition entry is allowed for each valve.

With one or more MFRV or SFRV degraded such that it is unable to actuate to the closed position on MSIS, either:

- a. Close and deactivate, or isolate the degraded valve within 72 hours and verify degraded valve closed and deactivated or isolated once every 7 days or
- b. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

<sup>^</sup> (DRN 04-1191, Am. 91)

The provisions of TRM LCO 3.0.4 are not applicable.

□ (DRN 04-1191, Am. 91)

##### SURVEILLANCE REQUIREMENTS

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4.7.1.6.1 Functionality of each MFRV and SFRV shall be demonstrated:

<sup>^</sup> (DRN 04-1191, Am. 91)

- a. By verifying isolation  $\leq 4.5$  seconds when tested pursuant to the inservice testing program.

□ (DRN 04-1191, Am. 91)

- b. By verifying actuation to the closed position on an actual or simulated actuation signal at least once per 18 months.

→ (DRN 02-1683, Am 65; 03-881, Am. 78)

REACTOR TRIP OVERRIDE CREDITED SUPPORT FUNCTION  
IN THE MFIV CLOSURE SCENARIO HAS BEEN MOVED  
TO TS BASES SECTION 3/4.7.1.6.

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← (DRN 02-1683, Am. 65; 03-881, Am. 78)

→ (DRN 02-1683, Am. 65)

← (DRN 02-1683, Am. 65)

→ (DRN 02-1683)

AUXILIARY FEEDWATER PUMP HIGH DISCHARGE PRESSURE TRIP  
CREDITED SUPPORT FUNCTION IN THE MFIV CLOSURE SCENARIO  
HAS BEEN MOVED TO TS BASES SECTION 3/4.7.1.6.

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← (DRN 02-1683)

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→(DRN 04-1244, Am. 99)

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PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM - APPENDIX R

LIMITING CONDITION FOR OPERATION

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3.7.3 Component Cooling Water pumps A and B shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTION:

With Component Cooling Water pump A and/or B inoperable, restore the inoperable Component Cooling Water pump(s) to OPERABLE status within 7 days or within the next hour establish an hourly fire watch patrol in accordance with Table 3.7-1.

SURVEILLANCE REQUIREMENTS

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4.7.3 No additional surveillance requirements other than those required by Technical Specifications 4.7.3.

Table 3.7-1  
 Impacted Fire Areas with CCW Pump(s) Inoperable

→(LBDCR 14-005)

Out Of Service Component	Fire Areas Impacted (Fire Watch Required)
CCW Pump A	RAB1A RAB1E RAB5 RAB6 RAB7B RAB7C RAB8B RAB21 RAB23
CCW Pump B	RAB1A RAB1E RAB7A RAB7C RAB8A RAB16 RAB17 RAB19 RAB23

←(LBDCR 14-005)

→(LBDCR 13-003, Am. 124)

## PLANT SYSTEMS

### 3/4.7.5 FLOOD PROTECTION

#### LIMITING CONDITION FOR OPERATION

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→(LBDCR 13-001, Am. 125)

3.7.5 Flood protection shall be provided for all safety-related systems, components, and structures **prior to** the water level of the Mississippi River **attaining** +27.0 ft Mean Sea Level USGS datum, at the levee fronting the Waterford Unit 3 site.

←(LBDCR 13-001, Am. 125)

APPLICABILITY: At all times.

#### ACTION:

→(LBDCR 13-001, Am. 125)

With the water level at the levee fronting the Waterford Unit 3 site **projected to rise to an** elevation **of** +27.0 ft Mean Sea Level USGS datum **within the next 12 hours**, initiate and complete procedures ensuring that all doors and penetrations **to the nuclear plant island structure** below the +30.0 ft elevation are secure **prior to attaining** +27.0 ft Mean Sea Level USGS datum.

←(LBDCR 13-001, Am. 125)

#### SURVEILLANCE REQUIREMENTS

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4.7.5 The water level at the levee fronting the Waterford Unit 3 site shall be determined to be within the limits by:

→(LBDCR 13-001, Am. 125)

- a. Measurement at least once per 24 hours when the water level is equal to or above elevation +24.0 ft Mean Sea Level USGS datum, and
- b. Measurement at least once per 2 hours when the water level is **projected to reach an** elevation **of** +27.0 ft Mean Sea Level USGS datum **within the next 12 hours**.

←(LBDCR 13-003, Am. 124; LBDCR 13-001, Am. 125)

→(LBDCR 13-003, Am. 124)

←(LBDCR 13-003, Am. 124)

PLANT SYSTEMS

3/4.7.8 SHOCK SUPPRESSORS (SNUBBERS)

LIMITING CONDITION FOR OPERATION

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3.7.8 Shock suppressors (Snubbers) listed in TRM Tables 3.7.8-1 and 3.7.8-2 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4. MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES.

ACTION:<sup>1, 2, 3</sup>

- a. With one or more required snubbers inoperable while installed on the associated supported system, perform an engineering evaluation to determine effects on supported system OPERABILITY in accordance with the Corrective Action Program.
- b. With one or more required snubbers listed in TRM Table 3.7.8-1 inoperable AND EFW or alternate means of core cooling is available:
  1. Enter TS LCO 3.0.8, and
  2. Verify acceptable risk for current plant configuration in accordance with Risk Assessment Guidelines, and
  3. If desired, perform an engineering evaluation to determine if the snubber(s) is required for continued OPERABILITY of the supported system within the associated time for restoration of the snubber(s) as delineated in TS LCO 3.0.8, and
  4. Restore the snubber(s) to OPERABLE status within the associated time for restoration of the snubber(s) as delineated in TS LCO 3.0.8
- c. With one or more required snubbers listed in TRM Table 3.7.8-2 inoperable, or  
With the requirements of ACTION b above not met, or  
With one or more required snubbers listed in TRM Table 3.7.8-1 inoperable AND EFW or alternate means of core cooling is not available:
  1. Declare the supported system inoperable and enter the appropriate TS for that system, and
  2. If desired, perform an engineering evaluation to determine if the snubber(s) is required for continued OPERABILITY of the supported system within the associated TS LCO allowed outage time (AOT), and



ACTION c (continued)

If the dynamic feature of the snubber(s) is determined to not be required, but the seismic feature of the snubber(s) is required for continued OPERABILITY of the supported system, AND EFW or alternate means of core cooling is available:<sup>4</sup>

3. Enter TS LCO 3.0.8 immediately,<sup>5</sup> and
4. Exit the supported system TS for applicable snubber entered in Action c.1 above, and
5. Verify acceptable risk for current plant configuration in accordance with Risk Assessment Guidelines, and
6. Restore the snubber(s) to OPERABLE status within the associated time for restoration of the snubber(s) as delineated in TS LCO 3.0.8.

If the snubber(s) is not restored to OPERABLE status within the restoration time delineated in TS LCO 3.0.8, declare the supported system inoperable and enter the appropriate TS for that system.

If ACTION a engineering evaluation determined no impact on supported system OPERABILITY (if applicable) AND an engineering evaluation has determined the snubber(s) is not required for continued OPERABILITY of supported system, then restore the snubber(s) to OPERABLE status in a timeframe commensurate with the importance to safety.

## TECHNICAL REQUIREMENTS

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|---------|--|
| 4.7.8.1 | Perform visual inspections of snubbers in accordance with the TRM 6.5.1, "Snubber Inspection Program." |
| 4.7.8.2 | Perform functional tests on snubbers in accordance with TRM 6.5.1, "Snubber Inspection Program."       |
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## NOTES

- <sup>1</sup> Separate entry is allowed for each snubber listed in TRM Tables 3.7.8-1 and 3.7.8-2.
- <sup>2</sup> EFW is required to be available when applying TS LCO 3.0.8 during MODES in which EFW is required to be OPERABLE. Opposite train EFW (or alternate means of core cooling) is required when applying TS LCO 3.0.8.a. Either train EFW (or alternate means of core cooling) is acceptable when applying TS LCO 3.0.8.b.
- <sup>3</sup> ACTIONS b and c are not required to be entered (or may be exited) when an engineering evaluation has concluded that the applicable snubber(s) is not required for continued OPERABILITY of the supported system. For Table 3.7.8-2 snubbers, this means that both the seismic and dynamic functions are not required for the continued OPERABILITY of the supported system.
- <sup>4</sup> ACTIONS c.3 through c.6 not applicable if ACTION c is entered due to failure to comply with requirements of ACTION b OR if EFW or alternate means of core cooling is not available.
- <sup>5</sup> TS LCO entry is retroactive to the time the snubber(s) was initially declared inoperable.

**Table 3.7.8-1****LIST OF SNUBBERS WITH SEISMIC LOADS ONLY**

Exam No	Equipment Tag Number	System	Seismic Only
3	CASR-4021	Containment Air	X
4	CCSR-1067A	Component Cooling Water	X
5	CCSR-1067B	Component Cooling Water	X
6	CCSR-77	Component Cooling Water	X
7	CHSR-3024	Chemical Volume Control	X
12	EASR-3006A	EDG Exhaust	X
13	EASR-3006B	EDG Exhaust	X
14	FSSR-250	Fuel Pool Cooling and Purification	X
73	MSSR-3028	Main Steam	X
76	MSSR-3042	Main Steam	X
78	MSSR-3069	Main Steam	X
79	MSSR-3073	Main Steam	X
107	SASR-80	Station Air	X
118	SISR-1055	Safety Injection	X
119	SISR-1064	Safety Injection	X
120	SISR-1067	Safety Injection	X
124	SISR-215	Safety Injection	X
125	SISR-3022	Safety Injection	X
127	SISR-418	Safety Injection	X
128	SISR-704	Safety Injection	X

**Table 3.7.8-1 (Continued)**

**LIST OF SNUBBERS WITH SEISMIC LOADS ONLY**

Exam No	Equipment Tag Number	System	Seismic Only
137	SISR-773	Safety Injection	X
138	SISR-774	Safety Injection	X
139	SISR-802	Safety Injection	X
140	SISR-821	Safety Injection	X
141	SISR-843	Safety Injection	X
142	SISR-848	Safety Injection	X
143	SISR-876A	Safety Injection	X
144	SISR-876B	Safety Injection	X
145	SISR-883	Safety Injection	X
146	SISR-888	Safety Injection	X
147	SISR-891	Safety Injection	X
148	SISR-921	Safety Injection	X
152	SISR-986	Safety Injection	X

**Table 3.7.8-2**

**LIST OF SNUBBERS WITH DYNAMIC LOADS**

Exam No	Equipment Tag Number	System	Seismic And Dynamic Consideration/ Requirement	Non-Seismic
1	BDSR-2	Blowdown	(2)	
2	BMSR-416	Boron Management	(3)	
8	CHSR-415	Chemical Volume Control	(3)	
9	CHSR-564	Chemical Volume Control	(3)	
10	CSSR-407	Containment Spray	(2)	
11	CSSR-408	Containment Spray	(2)	
15	FWSR-11	Feedwater	(3) (4)	
16	FWSR-14A	Feedwater	(3) (4)	
17	FWSR-14B	Feedwater	(3) (4)	
18	FWSR-182	Feedwater	(1) (4)	
19	FWSR-184	Feedwater	(1) (4)	
20	FWSR-185	Feedwater	(1) (4) (5)	
21	FWSR-187	Feedwater	(1) (4) (5)	
22	FWSR-18A	Feedwater	(3) (4)	
23	FWSR-18B	Feedwater	(3) (4)	
24	FWSR-190	Feedwater	(1) (4)	
25	FWSR-191	Feedwater	(1) (4) (5)	
26	FWSR-20A	Feedwater	(3) (4)	
27	FWSR-20B	Feedwater	(3) (4)	
28	FWSR-23	Feedwater	(3) (4)	
29	FWSR-25	Feedwater	(1) (4)	

**Table 3.7.8-2 (Continued)**

**LIST OF SNUBBERS WITH DYNAMIC LOADS**

Exam No	Equipment Tag Number	System	Seismic And Dynamic Consideration/ Requirement	Non-Seismic
30	FWSR-29	Feedwater	(1) (4) (5)	
31	FWSR-2A	Feedwater	(3) (4)	
32	FWSR-2B	Feedwater	(3) (4)	
33	FWSR-34	Feedwater	(1) (4)	
34	FWSR-341	Feedwater	(1) (4)	
35	FWSR-342	Feedwater	(1) (4)	
36	FWSR-347	Feedwater	(1) (4)	
37	FWSR-36	Feedwater	(1) (4) (5)	
38	FWSR-37	Feedwater	(1) (4)	
39	FWSR-39	Feedwater	(1) (4) (5)	
40	FWSR-41	Feedwater	(1) (4)	
41	FWSR-42	Feedwater	(1) (4)	
42	FWSR-45	Feedwater	(1) (4)	
43	FWSR-48	Feedwater	(1) (4)	
44	FWSR-52	Feedwater	(1) (4)	
45	FWSR-53	Feedwater	(1) (4)	
46	FWSR-55	Feedwater	(1) (4) (5)	
47	FWSR-57	Feedwater	(1) (4)	
48	FWSR-59	Feedwater	(1) (4)	
49	FWSR-60	Feedwater	(1) (4)	

**Table 3.7.8-2 (Continued)**

**LIST OF SNUBBERS WITH DYNAMIC LOADS**

Exam No	Equipment Tag Number	System	Seismic And Dynamic Consideration/ Requirement	Non-Seismic
50	FWSR-61	Feedwater	(1) (4)	
51	FWSR-63	Feedwater	(1) (4)	
52	FWSR-64	Feedwater	(1) (4) (5)	
53	FWSR-66	Feedwater	(1) (4)	
54	FWSR-6A	Feedwater	(3) (4)	
55	FWSR-6B	Feedwater	(3) (4)	
56	FWSR-71	Feedwater	(1) (4)	
57	FWSR-74	Feedwater	(1) (4)	
58	FWSR-76	Feedwater	(1) (4)	
59	FWSR-8A	Feedwater	(3) (4)	
60	FWSR-8B	Feedwater	(3) (4)	
61	MSSR-202A	Main Steam	(1) (6) (7)	
62	MSSR-202B	Main Steam	(1) (6) (7)	
63	MSSR-203A	Main Steam	(1) (5) (6) (7)	
64	MSSR-203B	Main Steam	(1) (5) (6) (7)	
65	MSSR-205A	Main Steam	(1) (5) (6) (7)	
66	MSSR-205B	Main Steam	(1) (5) (6) (7)	
67	MSSR-206A	Main Steam	(1) (5) (6) (7)	
68	MSSR-206B	Main Steam	(1) (5) (6) (7)	
69	MSSR-226A	Main Steam	(1) (6) (7)	

**Table 3.7.8-2 (Continued)**

**LIST OF SNUBBERS WITH DYNAMIC LOADS**

Exam No	Equipment Tag Number	System	Seismic And Dynamic Consideration/ Requirement	Non-Seismic
70	MSSR-226B	Main Steam	(1) (6) (7)	
71	MSSR-229A	Main Steam	(1) (6) (7)	
72	MSSR-229B	Main Steam	(1) (6) (7)	
74	MSSR-3035	Main Steam	(6) (7) (8)	
75	MSSR-3036	Main Steam	(6) (7) (8)	
80	MSSR-382	Main Steam	(6) (7)	(9)
81	MSSR-383	Main Steam	(6) (7)	(9)
82	MSSR-386A	Main Steam	(6) (7)	(9)
83	MSSR-386B	Main Steam	(6) (7)	(9)
84	MSSR-387A	Main Steam	(6) (7)	(9)
85	MSSR-387B	Main Steam	(6) (7)	(9)
86	MSSR-392A	Main Steam	(1) (6) (7)	
87	MSSR-392B	Main Steam	(1) (6) (7)	
88	MSSR-393A	Main Steam	(1) (6) (7)	
89	MSSR-393B	Main Steam	(1) (6) (7)	
90	MSSR-503	Main Steam	(6) (7)	(9)
91	MSSR-505	Main Steam	(6) (7)	(9)
92	RCMSNB-251-1A	Reactor Coolant	(3)	
93	RCMSNB-252-1B	Reactor Coolant	(3)	
94	RCMSNB-253-2B	Reactor Coolant	(3)	

**Table 3.7.8-2 (Continued)**

**LIST OF SNUBBERS WITH DYNAMIC LOADS**

Exam No	Equipment Tag Number	System	Seismic And Dynamic Consideration/ Requirement	Non-Seismic
95	RCMSNB-254-2A	Reactor Coolant	(3)	
96	RCSR-184	Reactor Coolant	(2) (3) (7)	
97	RCSR-265A	Reactor Coolant	(1) (7)	
98	RCSR-265B	Reactor Coolant	(1) (7)	
99	RCSR-268	Reactor Coolant	(1) (7)	
100	RCSR-270A	Reactor Coolant	(1) (7)	
101	RCSR-270B	Reactor Coolant	(1) (7)	
102	RCSR-274	Reactor Coolant	(1) (7)	
103	RCSR-275	Reactor Coolant	(1) (7)	
104	RCSR-276	Reactor Coolant	(1) (7)	
105	RCSR-279A	Reactor Coolant	(1) (7)	
106	RCSR-279B	Reactor Coolant	(1) (7)	
108	SGMSNB-734-1A	Steam Generator	(3)	
109	SGMSNB-735-1A	Steam Generator	(3)	
110	SGMSNB-736-1A	Steam Generator	(3)	
111	SGMSNB-737-1A	Steam Generator	(3)	
112	SGMSNB-738-1B	Steam Generator	(3)	
113	SGMSNB-739-1B	Steam Generator	(3)	
114	SGMSNB-740-1B	Steam Generator	(3)	
115	SGMSNB-741-1B	Steam Generator	(3)	



**Table 3.7.8-2 (Continued)  
LIST OF SNUBBERS WITH DYNAMIC LOADS**

Exam No	Equipment Tag Number	System	Seismic And Dynamic Consideration/ Requirement	Non-Seismic
116	SISR-1031	Safety Injection	(2) (7)	
117	SISR-1044	Safety Injection	(7)	
121	SISR-1151	Safety Injection	(2) (3) (7)	
122	SISR-1188	Safety Injection	(2) (3) (7)	
123	SISR-1285	Safety Injection	(3)	
126	SISR-3040	Safety Injection	(7)	
129	SISR-707	Safety Injection	(2)	
130	SISR-711	Safety Injection	(2)	
131	SISR-722	Safety Injection	(2)	
132	SISR-732	Safety Injection	(2)	
133	SISR-737	Safety Injection	(2)	
134	SISR-753A	Safety Injection	(7)	
135	SISR-753B	Safety Injection	(7)	
136	SISR-756	Safety Injection	(7)	
149	SISR-937	Safety Injection	(2) (7)	
150	SISR-961A	Safety Injection	(2) (7)	
151	SISR-961B	Safety Injection	(2) (7)	

- (1) Installed on Non-Safety Related pipe but is analyzed seismically to protect attached Safety Related pipe.
- (2) Waterhammer due to voiding
- (3) Branch Line Pipe Break
- (4) Waterhammer due to Fast Valve Closure of MFIV
- (5) Tornado and/or Hurricane
- (6) Transient due to turbine trip
- (7) Relief valve thrust
- (8) No detailed analysis of piping. Assumed same loadings as adjacent header.

→(EC-46694 Am. 127)

**(9) These restraints are judged to not impact the structural analysis of the safety-related MS piping.**

←(EC-46694 Am. 127)

←(EC-15515, Am. 118)

→(EC-15515, Am. 118)

←(EC-15515, Am. 118)

## PLANT SYSTEMS

### 3/4.7.9 SEALED SOURCE CONTAMINATION

#### LIMITING CONDITION FOR OPERATION

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3.7.9 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of greater than or equal to 0.005 microcurie of removable contamination.

APPLICABILITY: At all times.

#### ACTION:

- a. With a sealed source having removable contamination in excess of the above limit, immediately withdraw the sealed source from use and either:
  1. Decontaminate and repair the sealed source, or
  2. Dispose of the sealed source in accordance with Commission Regulations.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.7.9.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

- a. The licensee, or
- b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcurie per test sample.

4.7.9.2 Test Frequencies - Each category of sealed sources (excluding startup sources and fission detectors previously subjected to core flux) shall be tested at the frequencies described below.

- a. Sources in use - At least once per 6 months for all sealed sources containing radioactive material:
  1. With a half-life greater than 30 days (excluding Hydrogen 3), and
  2. In any form other than gas.

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- b. Stored sources not in use - Each sealed source and fission detector shall be tested prior to use or transfer to another licensee unless tested within the previous 6 months. Sealed sources and fission detectors transferred without a certificate indicating the last test date shall be tested prior to being placed into use.
- c. Startup sources and fission detectors - Each sealed startup source and fission detector shall be tested within 31 days prior to being subjected to core flux or installation and following repair or maintenance to the source or detector.

4.7.9.3 Reports - A report shall be prepared and submitted to the Commission on an annual basis if sealed source or fission detector leakage tests reveal the presence of greater than or equal to 0.005 microcurie of removable contamination.

## 3/4.7 PLANT SYSTEMS

### 3/4.7.10 FIRE SUPPRESSION WATER SYSTEMS

#### LIMITING CONDITION FOR OPERATION

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3.7.10.1 The fire suppression water system shall be OPERABLE with:

- a. Two fire suppression pumps, each with a rated capacity of 2000 gpm, with their discharge aligned to the fire suppression header,

→ (DRN 02-605, 07-213, Am. 114)

- b. Separate water supplies, each with a minimum contained volume of 236,910.7 gallons (33 feet, 91.5%), and

← (DRN 02-605, 07-213, Am. 114)

- c. An OPERABLE flow path capable of taking suction from the east fire water tank and the west fire water tank and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves, the last valve ahead of the water flow alarm device on each sprinkler or hose standpipe, and the last valve ahead of the deluge valve on each deluge or spray system required to be OPERABLE per Sections 3.7.10.4, 3.7.10.2 AND 3.7.10.5 of this document.

APPLICABILITY: At all times.

#### ACTION:

- a. With one pump and/or one water supply inoperable, restore at least two pumps and/or water supplies to OPERABLE status within 7 days or provide an alternate backup pump or supply.
- b. With the fire suppression water system otherwise inoperable, establish a backup fire suppression water system within 24 hours.

#### NOTE:

A backup water supply may be established by use of a fire department pumper or alignment to another plant system. In either case the backup supply shall be able to supply an equivalent flow and discharge pressure.

→ (DRN 04-1191, Am. 91)

- c. The provisions of TRM LCO 3.0.3 and 3.0.4 are not applicable.

← (DRN 04-1191, Am. 91)

#### SURVEILLANCE REQUIREMENTS

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4.7.10.1.1 The fire suppression water system shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying the contained water supply volume.
- b. At least once per 31 days by starting the electric motor-driven pump and operating it for at least 15 minutes.
- c. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.
- d. At least once per 12 months by performance of a system flush.

→(DRN 02-1794)

←(DRN 02-1794)

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#### SURVEILLANCE REQUIREMENTS (Continued)

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- e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

→(DRN 07-213, Am. 114; EC-8523, Am. 126)

- 1. Verify that each fire suppression pump develops at least 1218 gpm at a system head of 108.3 psid.

←(DRN 07-213, Am. 114; EC-8523, Am. 126)

- 2. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and
- 3. Verifying that the fire pumps start sequentially on a continued pressure drop in the fire suppression system.

- g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.

#### 4.7.10.1.2 Each fire pump diesel engine shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
  - 1. The diesel fuel oil day storage tank contains at least 170 gallons of fuel, and
  - 2. The diesel starts from ambient conditions and operates for at least 30 minutes.
- b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-75, is within the acceptable limits specified in Table 1 of ASTM D975-77 when checked for viscosity, water and sediment.
- c. At least once per 18 months during shutdown, by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

### 3/4.7 PLANT SYSTEMS

#### SURVEILLANCE REQUIREMENTS (Continued)

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4.7.10.1.3 Each fire pump diesel starting 12-volt battery bank and charger shall be demonstrated OPERABLE:

→ (DRN 02-936)

a. At least once per 31 days by verifying that:

← (DRN 02-936)

1. The electrolyte level of each battery is above the plates, and
2. The overall battery is greater than or equal to 12 volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

c. At least once per 18 months by verifying that:

1. The batteries and battery racks show no visual indication of physical damage or abnormal deterioration, and
2. The battery-to-battery and terminal connections are clean, tight, free of corrosion, and coated with anticorrosion material.

## 3/4.7 PLANT SYSTEMS

### 3/4.7.10.2 SPRAY AND/OR SPRINKLER SYSTEMS

#### LIMITING CONDITION FOR OPERATION

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(DRN 04-1191, Am. 91)

3.7.10.2 As a minimum, the Spray and/or Sprinkler Systems listed in Table 3.7-2 shall be OPERABLE.

(DRN 04-1191, Am. 91)

**APPLICABILITY:** Whenever equipment protected by the spray/ sprinkler system is required to be OPERABLE.

#### ACTION:

(DRN 02-238, Am. 52; 03-115, Am. 72)

a. With one or more of the above required spray and/or sprinkler systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas noted on Table 3.7-2 in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

(DRN 02-238, Am. 52; 03-115, Am. 72)

(DRN 04-1191, Am. 91)

b. The provisions of TRM LCO 3.0.3 and 3.0.4 are not applicable.

(DRN 04-1191, Am. 91)

#### SURVEILLANCE REQUIREMENTS

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4.7.10.2 Each of the Spray and/or Sprinkler Systems listed in Table 3.7-2 shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.
- b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- c. At least once per 18 months:
  1. By performing a system functional test which includes simulated automatic actuation of the system, and:
  2. Verifying that the automatic valves in the flow path actuate to their correct position on a thermal/ preaction test signal, and
  3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
  4. By a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity, and.
  5. By a visual inspection of each nozzle's spray area to verify the spray pattern is not obstructed.

### 3/4.7 PLANT SYSTEMS

#### SURVEILLANCE REQUIREMENTS (Continued)

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NOTE:

The charcoal filter unit spray nozzles need only be visually inspected for obstructions each time the charcoal is removed to meet 4.7.10.2d of this document (below).

- d. At least once per 3 years by performance of an air flow test through each open head spray and/or sprinkler system and verifying that each open head spray nozzle and sprinkler header system is unobstructed.



TABLE 3.7-2

SPRAY AND/OR SPRINKLER SYSTEMS

<u>Sprinkler No.</u>	<u>Bldg./Elev.</u>	<u>Location</u>
→ (DRN 02-238, Am. 52)		
← (DRN 02-238, Am. 52)		
→ (DRN 03-115, Am. 72)		
*FPM-3A	RAB +21, +46	Diesel Generator Area A, Feed Tank Room A
*FPM-4B	RAB +21, +46	Diesel Generator Area B, Feed Tank Room B
FPM-11A	RAB -35	Emergency D/G Fuel Oil Tank A
FPM-12B	RAB -35	Emergency D/G Fuel Oil Tank B
*FPM-17	RAB +35	Cable Vault Area
*FPM-18	RAB +35	Electrical Penetration Area 1
*FPM-19	RAB +35	Electrical Penetration Area 2
FPM-21	RAB -4	Administration Area (HP)
*FPM-22	RAB -4	Corridor and Blowdown Tank Rooms
*FPM-23	RAB -35	Corridor, Shutdown Heat Exchanger Rooms, EFW Pump Room
*FPM-24	RAB +21	Corridors, CCW Area
*FPM-25B	RAB +21	North High Voltage Switchgear Room
*FPM-26	RAB +46	Ventilation Equipment Rooms
*FPM-27	RAB +7	HVAC Rooms
*FPM-28	RAB -35	Auxiliary Component Cooling Water Pump Rooms
*FPM-29	RAB +35	Relay Room, Corridor
*FPM-30A	RAB +21	South High Voltage Switchgear Room
FPM-33	RAB +46	E-17 (3A-SA) Shield Building Ventilation System Filter Train "A" Charcoal Absorber
← (DRN 03-115, Am. 72)		
FPM-34	RAB +46	E-17 (3B-SB) Shield Building Ventilation System Filter Train "B" Charcoal Absorber
FPM-36	RAB +46	E-23 (3A-SA) Controlled Ventilation Area System Filter Train "A" Charcoal Absorber
FPM-37	RAB +46	E-23 (3B-SB) Controlled Ventilation Area System Filter Train "B" Charcoal Absorber

→ (DRN 03-115, Am. 72)

\* Protects areas with redundant systems or components.

← (DRN 03-115, Am. 72)

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## 3/4.7 PLANT SYSTEMS

### 3/4.7.10 FIRE HOSE STATIONS

#### LIMITING CONDITION FOR OPERATION

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→ (DRN 04-1191, Am. 91)

3.7.10.4 The Fire Hose Stations listed in Table 3.7-4 shall be OPERABLE.

← (DRN 04-1191, Am. 91)

**APPLICABILITY:** Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

#### ACTION:

- a. With one or more of the fire hose stations shown inoperable, provide gated wye(s) on the nearest operable hose station(s). One outlet of the wye shall be connected to the standard length of hose provided for the hose station. The second outlet of the wye shall be connected to length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the operable hose station. For those stations in the RCB the hose and gated wye(s) may be staged at the containment entry. With the exception of gated wyes staged at the containment entry, signs shall be mounted at the gated wye(s) to identify the proper hose to use. The above action shall be accomplished within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise, route the additional hose within 24 hours.

→ (DRN 04-1191, Am. 91)

b. The provisions of TRM LCO 3.0.3 and 3.0.4 are not applicable.

← (DRN 04-1191, Am. 91)

#### SURVEILLANCE REQUIREMENTS

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4.7.10.4 Each of the Fire Hose Stations listed shall be demonstrated OPERABLE.

- a. At least once per 31 days by visual inspection of the stations accessible during plant operation to assure all required equipment is at the station.
- b. At least once per 18 months by:
1. Visual inspection of the stations not accessible during plant operations to assure all required equipment is at the station.
  2. Removing the hose for inspection and racking, and
  3. Inspecting all gaskets and replacing any degraded gaskets in the couplings.
- c. At least once per 3 years by:
1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.
  2. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above maximum fire main operating pressure, whichever is greater.

TABLE 3.7-4

FIRE HOSE STATIONS

<u>LOCATION</u>	<u>BLDG/COLUMN</u>	<u>ELEVATION (Feet MSL)</u>	<u>HOSE RACK IDENTIFICATION</u>
FHB	2FH-U	-35	FH/A-010
FHB	3FH-V	+1	FH/A-020
FHB	5FH-V	+1	FH/A-021
FHB	2FH-T	+21	FH/A-040
FHB	2FH-V	+18	FH/A-041
FHB	Escape Exit	+21	FH/A-043
FHB	6FH-W	+18	FH/A-042
FHB	2FH-T	+46	FH/A-030
FHB	7FH-W	+46	FH/A-031
RAB	J-9A	-35	RA/F-101
RAB	J-6A	-35	RA/F-102
RAB	H-4A	-35	RA/F-103
RAB	J-3A	-35	RA/F-104
RAB	K-4A	-35	RA/F-105
RAB	M-10AZ	-35	RA/C-106
RAB	M-3A	-35	RA/A-107
RAB	M-2AC	-20	RA/K-108
RAB	M-11AZ	-20	RA/L-109
RAB	K-10A	-35	RA/F-110
RAB	K-11A	-4	RA/D-201
RAB	H-11A	-4	RA/D-202
RAB	J-10A	-4	RA/E-203
RAB	J-6A	-4	RA/H-204
RAB	H-4A	-4	RA/I-205
RAB	K-4A	-4	RA/J-206
RAB	M-10AZ	-4	RA/C-207
RAB	M-3A	-4	RA/A-208
RAB	LY-8A	-4	RA/B-209
RAB	K12A	+7	RA/D-301
RAB	J11A	+7	RA/D-302
RAB	H-11A	+21	RA/E-401
RAB	H-9A	+21	RA/E-402
RAB	K-11A	+21	RA/D-403
RAB	L-7A	+21	RA/C-411
RAB	N-10AZ	+21	RA/C-405
RAB	J-6A	+21	RA/I-406
RAB	H-4A	+21	RA/I-407
RAB	J-1A	+21	RA/I-408
RAB	K-4A	+21	RA/J-409
RAB	L-7A	+21	RA/G-410
RAB	N-4A	+21	RA/A-412

TABLE 3.7-4

FIRE HOSE STATIONS

<u>LOCATION</u>	<u>BLDG/COLUMN</u>	<u>ELEVATION (Feet MSL)</u>	<u>HOSE RACK IDENTIFICATION</u>
RAB	L-2A	+21	RA/A-413
RAB	H-12A	+35	RA/E-501
RAB	K-11A	+35	RA/E-502
RAB	N-10AZ	+35	RA/C-503
RAB	Northeast Stairwell	+21	RA/C-404
RAB	H-10A	+35	RA/E-504
RAB	K-9A	+35	RA/E-505
RAB	L-9A	+35	RA/C-506
RAB	LY-6A	+35	RA/A-507
RAB	J-9A	+35	RA/E-508
RAB	L-8A	+35	RA/E-509
RAB	G-9A	+35	RA/E-510
RAB	J-12A	+46	RA/E-601
RAB	K-11A	+46	RA/G-602
RAB	K-10A	+46	RA/G-603
RAB	K-8A	+46	RA/G-604
RAB	G-7A	+46	RA/G-605
RAB	K-6A	+46	RA/J-606
RAB	K-2A	+46	RA/J-607
RAB	J-2A	+46	RA/J-608
RAB	J-3A	+46	RA/J-609
RAB	K-2A	+69	RA/J-701
*RCB	19	-4	R/A-201
*RCB	12	-4	R/A-202
*RCB	6	-4	R/B-203
*RCB	1	-4	R/B-204
*RCB	20	+21	R/A-401
*RCB	13	+21	R/A-402
*RCB	7	+21	R/B-403
*RCB	1	+21	R/B-404
*RCB	13	+35	R/A-502
*RCB	20	+46	R/A-601
*RCB	13	+46	R/A-602
*RCB	7	+46	R/B-603
*RCB	2	+46	R/B-604

\*Indicates all hose stations not accessible during plant operations and shall be demonstrated operable at least once per 18 months.

### 3/4.7 PLANT SYSTEMS

#### 3/4.7.10 YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

##### LIMITING CONDITION FOR OPERATION

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→ (DRN 04-1191, Am. 91)

**3.7.10.5** The Yard Fire Hydrants and Associated Hydrant Hose Houses listed in **Table 3.7-5** shall be OPERABLE.

← (DRN 04-1191, Am. 91)

**APPLICABILITY:** Whenever equipment in the areas protected by the yard fire hydrants is required to be OPERABLE.

##### ACTION:

a. With one or more of the yard fire hydrants or associated hydrant hose houses shown inoperable, within 1 hour have sufficient additional lengths of 2-1/2-inch diameter hose located in an adjacent OPERABLE hydrant hose house to provide service to the unprotected area(s) if the inoperable fire hose is the primary means of fire suppression; otherwise, provide the additional hose within 24 hours.

→ (DRN 04-1191, Am. 91)

**b.** The provisions of TRM LCO 3.0.3 and 3.0.4 are not applicable.

← (DRN 04-1191, Am. 91)

##### SURVEILLANCE REQUIREMENTS

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**4.7.10.5** Each of the Yard Fire Hydrants and Associated Hydrant Hose Houses shown shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the hydrant hose house to assure all required equipment is at the hose house.
- b. At least once per 12 months by:
  1. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above maximum fire main operating pressure whichever is greater.
  2. Inspecting all the gaskets and replacing any degraded gaskets in the couplings.
  3. Performing a flow check of each hydrant to verify its OPERABILITY.
  4. Visually inspecting each yard fire hydrant and verifying that the hydrant barrel and the hydrant are not damaged.

TABLE 3.7-5

YARD FIRE HYDRANTS AND ASSOCIATED HYDRANT HOSE HOUSES

→(DRN 06-660, AM. 113)

<u>LOCATION</u>	<u>HYDRANT NUMBER</u>	<u>HOSE HOUSE</u>
Northeast Side RAB	4	4
Northeast Corner FHB	6	6
Northwest Corner FHB	7	6
Northeast Corner Service Building	9	8

←(DRN 06-660, AM. 113)

### 3/4.7 PLANT SYSTEMS

#### 3/4.7.11 FIRE RATED ASSEMBLIES

##### LIMITING CONDITION FOR OPERATION

---

3.7.11 All fire rated assemblies (walls, floor/ceilings, cable tray enclosures, and other fire barriers) separating safety-related fire areas or separating portions of redundant systems important to safe shutdown within fire area and all sealing devices in fire rated assembly penetrations (fire doors, fire windows, fire dampers, cable, piping, and ventilation duct penetration seals) shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required fire rated assemblies and/or sealing devices inoperable, within 1 hour either establish a continuous fire watch on at least one side of the affected assembly, or verify the OPERABILITY of the fire detectors on at least one side of the inoperable assembly and establish an hourly fire watch patrol, unless the inoperable assembly is inside the containment, then inspect that containment area at least once per 8 hours or monitor and record air temperature at least once per hour at each of the operable Containment Fan Cooler air intakes.  
→ (DRN 04-1191, Am. 91)
- b. The provisions of TRM LCO 3.0.3 and 3.0.4 are not applicable.  
← (DRN 04-1191, Am. 91)

##### SURVEILLANCE REQUIREMENTS

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- 4.7.11.1 At least once per 18 months the above required fire rated assemblies and penetration sealing devices other than fire doors shall be verified OPERABLE by:
  - a. Performing a visual inspection of the exposed surfaces of each fire rated assembly.  
→ (DRN 02-450)
  - b. Performing a visual inspection of at least 10% sample of the fire windows / fire dampers / and associated hardware. If degradation or deficiencies are found, a visual inspection of an additional 10% sample of the fire windows / fire dampers / and associated hardware shall be made. This inspection process shall continue until a 10% sample with no degradation or deficiencies is found. Samples shall be selected such that each fire window / fire damper / and associated hardware will be inspected at least once per 15 years.  
← (DRN 02-450)
  - c. Performing a visual inspection of at least 10% of each type of accessible sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10% of that type of sealed penetration shall be made. This inspection process shall continue until a 10% sample with no apparent changes in appearance or abnormal degradation is found. Samples shall be selected such that each accessible penetration seal will be inspected at least once per 15 years.  
← (DRN 02-814)
- 4.7.11.2 Each of the above required fire doors shall be verified OPERABLE by inspecting the automatic hold-open, release, and closing mechanism and latches at least once per 6 months, and by verifying:
  - a. That doors with automatic hold-open and release mechanisms are free of obstructions at least once per 24 hours and performing a functional test of these mechanisms at least once per 18 months.
  - b. That each fire door is closed at least once per 24 hours.



3/4.7 PLANT SYSTEMS

3/4.7.12 ESSENTIAL SERVICES CHILLED WATER SYSTEMS CHILLERS -  
APPENDIX R

LIMITING CONDITION FOR OPERATION

3.7.12 Three essential services chilled water chillers and associated chilled water pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTION:

With any essential services chilled water chiller(s) and/or associated chilled water pump(s) inoperable, restore the inoperable chiller(s) and/or associated chilled water pump(s) to OPERABLE status within 7 days or within the next hour establish an hourly fire watch patrol in accordance with Table 3.7-12.

SURVEILLANCE REQUIREMENTS

4.7.12 No additional surveillance requirements other than those required by Technical Specifications 4.7.12.1.

Table 3.7-12  
 Impacted Fire Areas with CHW Pump(s) or Chiller(s) Inoperable

→(LBDCR 14-005)

Out Of Service Component	Fire Areas Impacted (Fire Watch Required)
'A' CHW Chiller and/or Pump	RAB1A RAB1B RAB1E RAB2 RAB5 RAB7B RAB7C RAB8B RAB8C RAB15 RAB17 RAB23
'B' CHW Chiller and/or Pump	RAB1A RAB1E RAB2 RAB3 RAB6 RAB7A RAB7C RAB8A RAB8B RAB8C RAB16 RAB23
'AB' CHW Chiller and/or Pump	RAB2

←(LBDCR 14-005)

## PLANT SYSTEMS

### 3/4.7.13 SWITCHGEAR AREA VENTILATION SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.13 Two independent switchgear area ventilation trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTION:

→ (DRN 02-1609; 04-1191, Am. 91)

With one switchgear area ventilation train inoperable, restore two trains to OPERABLE status within 72 hours or **enter TRM LCO 3.0.3.**

← (DRN 02-1609; 04-1191, Am. 91)

#### SURVEILLANCE REQUIREMENTS

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4.7.13 No surveillances required specific to Switchgear Area Ventilation, only those currently required for Essential Services Chilled Water.

→ (DRN 02-1876)

## PLANT SYSTEMS

### 3/4.7.14 ESSENTIAL INSTRUMENT AIR

#### LIMITING CONDITION FOR OPERATION

---

3.7.14 The Essential Instrument Air System shall be OPERABLE with a minimum air bank pressure of 2250 PSIG.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

a. With one station inoperable and its air bank pressure  $\geq$  2250 PSIG, align the high pressure and low pressure cross-connect valves within 4 hours to maintain the operability of the valves served by the inoperable station.

→ (DRN 04-1191, Am. 91)

b. With one station inoperable and its air bank pressure <2250 PSIG or unable to align the high pressure cross connect, then align the low pressure cross-connect valves to supply the valves served by the inoperable station within 4 hours, and restore the inoperable air bank cylinders within 14 days; otherwise, enter TRM LCO 3.0.3.

← (DRN 04-1191, Am. 91)

## SURVEILLANCE REQUIREMENTS

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→ (DRN 03-1808, Am. 80)

4.7.14.1 No additional surveillance requirements other than those required by the Inservice Testing Program.

← (DRN 02-1876; 03-1808, Am. 80)