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## CHAPTER 3.7

### PLANT SYSTEMS

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### 3.7 PLANT SYSTEMS

#### 3.7.1 Main Steam Safety Valves (MSSVs)

LCO 3.7.1 Five MSSVs per steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTIONS

----- NOTE -----  
Separate Condition entry is allowed for each MSSV.  
-----

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more steam generators with one MSSV inoperable and the Moderator Temperature Coefficient (MTC) zero or negative at all power levels.</p>	<p>A.1 Reduce THERMAL POWER to <math>\leq 85\%</math> RTP.</p>	<p>4 hours</p>
<p>B. One or more steam generators with two or more MSSV's inoperable.</p> <p><u>OR</u></p> <p>One or more steam generators with one MSSV inoperable and the MTC positive at any power level.</p>	<p>B.1 Reduce THERMAL POWER to less than or equal to the Maximum Allowable % RTP specified in <b>Table 3.7.1-1</b> for the number of OPERABLE MSSVs.</p> <p><u>AND</u></p>	<p>4 hours</p> <p>(continued)</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	<p>B.2</p> <p>----- NOTE ----- Only required in Mode 1. -----</p> <p>Reduce the Power Range Neutron Flux - High Trip setpoints to less than or equal to the Maximum Allowable % RTP specified in <b>Table 3.7.1-1</b> for the number of OPERABLE MSSVs.</p>	36 hours
<p>C. Required Action and associated Completion Time not met.</p> <p><u>OR</u></p> <p>One or more steam generators with <math>\geq 4</math> MSSVs inoperable.</p>	<p>C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>C.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.1.1</p> <p>----- NOTE ----- Only required to be performed in MODES 1 and 2. -----</p> <p>Verify each required MSSV lift setpoint per <b>Table 3.7.1-2</b> in accordance with the INSERVICE TESTING PROGRAM. Following testing, lift setting shall be within <math>\pm 1\%</math>.</p>	<p>In accordance with the INSERVICE TESTING PROGRAM</p>

TABLE 3.7.1-1 (page 1 of 1)  
OPERABLE Main Steam Safety Valves versus  
Maximum Allowable Power

NUMBER OF OPERABLE MSSVs PER STEAM GENERATOR	MAXIMUM ALLOWABLE POWER (% RTP)
4	≤ 85
3	≤ 45
2	≤ 27

TABLE 3.7.1-2 (PAGE 1 OF 1)  
MAIN STEAM SAFETY VALVE LIFT SETTINGS

VALVE NUMBER				LIFT SETTING (psig +3%/-1%)
STEAM GENERATOR				
#1	#2	#3	#4	
ABV0055	ABV0065	ABV0075	ABV0045	1185
ABV0056	ABV0066	ABV0076	ABV0046	1197
ABV0057	ABV0067	ABV0077	ABV0047	1210
ABV0058	ABV0068	ABV0078	ABV0048	1222
ABV0059	ABV0069	ABV0079	ABV0049	1234

3.7 PLANT SYSTEMS

3.7.2 Main Steam Isolation Valves (MSIVs), Main Steam Isolation Valve Bypass Valves (MSIVBVs), and Main Steam Low Point Drain Isolation Valves (MSLPDIVs)

LCO 3.7.2 The MSIV and its associated actuator trains, the MSIVBV, and the MSLPDIV in each of the four main steam lines shall be OPERABLE.

APPLICABILITY: For the MSIV and its associated actuator trains in each main steam line:

MODE 1,  
MODES 2 and 3 except when the MSIV is closed and de-activated.

For the MSIVBV in each main steam line:

MODES 1, 2, and 3 except when:

- a. MSIVBV is closed and de-activated, or
- b. MSIVBV is closed and isolated by a closed manual valve, or
- c. MSIVBV is isolated by two closed manual valves.

For the MSLPDIV in each main steam line:

MODES 1, 2, and 3 except when:

- a. MSLPDIV is closed and de-activated, or
- b. MSLPDIV is closed and isolated by a closed manual valve, or
- c. MSLPDIV is isolated by two closed manual valves.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One MSIV actuator train inoperable.	A.1 Restore MSIV actuator train to OPERABLE status.	72 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Two MSIV actuator trains inoperable for different MSIVs when the inoperable actuator trains are <u>not</u> in the same separation group.	B.1 Restore one MSIV actuator train to OPERABLE status.	24 hours
C. Two MSIV actuator trains inoperable when the inoperable actuator trains <u>are</u> in the same separation group.	C.1 Restore one MSIV actuator train to OPERABLE status.	4 hours
D. Two actuator trains for one MSIV inoperable.	D.1 Declare the affected MSIV inoperable.	Immediately
E. Three or more MSIV actuator trains inoperable.  <u>OR</u>  Required Action and associated Completion Time of Condition A, B, or C not met.	E.1 Declare each affected MSIV inoperable.	Immediately
F. One MSIV inoperable in MODE 1.	F.1 Restore MSIV to OPERABLE status.	8 hours
G. Required Action and associated Completion Time of Condition F not met.	G.1 Be in MODE 2.	6 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>H. ----- NOTE ----- Separate Condition entry is allowed for each main steam line. ----- One or more MSIVBVs inoperable.</p>	<p>H.1 Close or isolate MSIVBV.  <u>AND</u>  H.2 Verify MSIVBV is closed or isolated.</p>	<p>7 days   Once per 7 days</p>
<p>I. ----- NOTE ----- Separate Condition entry is allowed for each main steam line. ----- One or more MSLPDIVs inoperable.</p>	<p>I.1 Close or isolate MSLPDIV.  <u>AND</u>  I.2 Verify MSLPDIV is closed or isolated.</p>	<p>7 days   Once per 7 days</p>
<p>J. ----- NOTE ----- Separate Condition entry is allowed for each main steam line. ----- One or more MSIVs inoperable in MODE 2 or 3.</p>	<p>J.1 Close MSIV.  <u>AND</u>  J.2 Verify MSIV is closed.</p>	<p>8 hours   Once per 7 days</p>
<p>K. Required Action and associated Completion Time of Condition H, I, or J not met.</p>	<p>K.1 Be in MODE 3.  <u>AND</u>  K.2 Be in MODE 4.</p>	<p>6 hours   12 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	Verify isolation time of each MSIV is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.7.2.2	Verify each MSIV, each MSIVBV, and each MSLPDIV actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.2.3	Verify isolation time of each MSIVBV and MSLPDIV is within limits.	In accordance with the INSERVICE TESTING PROGRAM

### 3.7 PLANT SYSTEMS

#### 3.7.3 Main Feedwater Isolation Valves (MFIVs), Main Feedwater Regulating Valves (MFRVs), and Main Feedwater Regulating Valve Bypass Valves (MFRVBVs)

LCO 3.7.3            The MFIV, MFRV, and MFRVBV in each of the four main feedwater lines shall be OPERABLE.

APPLICABILITY:    For the MFIV in each main feedwater line:

MODES 1, 2, and 3 except when:

- a.     The MFIV is closed and de-activated; or
- b.     The MFRV is closed and de-activated or closed and isolated by a closed manual valve; and the MFRVBV is closed and de-activated, or closed and isolated by a closed manual valve, or isolated by two closed manual valves.

For the MFRV in each main feedwater line:

MODES 1, 2, and 3 except when:

- a.     The MFIV is closed and de-activated; or
- b.     The MFRV is closed and de-activated or closed and isolated by a closed manual valve.

For the MFRVBV in each main feedwater line:

MODES 1, 2, and 3 except when:

- a.     The MFIV is closed and de-activated; or
- b.     The MFRVBV is closed and de-activated, or closed and isolated by a closed manual valve, or isolated by two closed manual valves.

ACTIONS

----- NOTE -----  
 Separate Condition entry is allowed for each main feedwater line.  
 -----

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more MFIVs inoperable.	A.1 Close MFIV.	72 hours
	<u>AND</u>	
	A.2 Verify MFIV is closed.	Once per 7 days
B. One or more MFRVs inoperable.	B.1 Close or isolate MFRV.	72 hours
	<u>AND</u>	
	B.2 Verify MFRV is closed or isolated.	Once per 7 days
C. One or more MFRVBVs inoperable.	C.1 Close or isolate MFRVBV.	72 hours
	<u>AND</u>	
	C.2 Verify MFRVBV is closed or isolated.	Once per 7 days
D. Two valves in the same flow path inoperable.	D.1 Isolate affected flow path.	8 hours
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	E.2 Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.3.1	<p>----- NOTE ----- Only required to be performed in MODES 1 and 2. -----</p> <p>Verify the closure time of each MFRV and MFRVBV is within limits.</p>	In accordance with the INSERVICE TESTING PROGRAM
SR 3.7.3.2	<p>----- NOTE ----- For the MFRVs and MFRVBVs, only required to be performed in MODES 1 and 2. -----</p> <p>Verify each MFIV, MFRV and MFRVBV actuates to the isolation position on an actual or simulated actuation signal.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.7.3.3	Verify the closure time of each MFIV is within limits.	In accordance with the INSERVICE TESTING PROGRAM

3.7 PLANT SYSTEMS

3.7.4 Atmospheric Steam Dump Valves (ASDs)

LCO 3.7.4 Four ASD lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required ASD line inoperable for reasons other than excessive ASD seat leakage.	A.1 Restore required ASD line to OPERABLE status.	7 days
B. Two required ASD lines inoperable for reasons other than excessive ASD seat leakage.	B.1 Restore all but one required ASD line to OPERABLE status.	72 hours
C. Three or more required ASD lines inoperable for reasons other than excessive ASD seat leakage.	C.1 Restore all but two required ASD lines to OPERABLE status.	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more of the required ASD(s) inoperable because of excessive seat leakage.	D.1 Initiate action to close the associated manual isolation valve(s).	Immediately
	<u>AND</u> D.2 Restore ASD(s) to OPERABLE status.	30 days
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3.	6 hours
	<u>AND</u> E.2 Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	<p>----- NOTE -----  Only required to be performed in MODES 1 and 2.  -----  Verify one complete cycle of each ASD.</p>	In accordance with the INSERVICE TESTING PROGRAM
SR 3.7.4.2	Verify one complete cycle of each ASD manual isolation valve.	In accordance with the INSERVICE TESTING PROGRAM

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Three AFW trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

----- NOTE -----  
LCO 3.0.4.b is not applicable when entering MODE 1.  
-----

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to turbine driven AFW pump inoperable.	A.1 Restore steam supply to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B. One ESW supply to turbine driven AFW pump inoperable.	B.1 Restore ESW supply to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. One AFW train inoperable for reasons other than Condition A or B.</p>	<p>C.1 Restore AFW train to OPERABLE status.</p>	<p>72 hours* <u>AND</u> 10 days from discovery of failure to meet the LCO</p>
<p>D. Required Action and associated Completion Time for Condition A, B or C not met.</p> <p><u>OR</u></p> <p>Two AFW trains inoperable.</p>	<p>D.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>D.2 Be in MODE 4.</p>	<p>6 hours</p> <p>12 hours</p>
<p>E. Three AFW trains inoperable.</p>	<p>E.1</p> <p>----- NOTE ----- LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one AFW train is restored to OPERABLE status. -----</p> <p>Initiate action to restore one AFW train to OPERABLE status.</p>	<p>Immediately</p>

\*With the exception that the Completion Time associated with the Condition C entry on 2/3/04 for the turbine driven auxiliary feedwater pump has been extended on a one-time only basis to 144 hours. At the time a formal cause of the inoperability is determined, Condition D will be entered immediately.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.1 ----- NOTE ----- Only required to be performed for the AFW flow control valves when the system is placed in automatic control or when THERMAL POWER is &gt; 10% RTP. -----</p> <p>Verify each AFW manual, power operated, and automatic valve in each water flow path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.7.5.2 ----- NOTE ----- Not required to be performed for the turbine driven AFW pump until 24 hours after <math>\geq</math> 900 psig in the steam generator. -----</p> <p>Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.</p>	<p>In accordance with the Inservice Test Program</p>
<p>SR 3.7.5.3 Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.7.5.4</p> <p>----- NOTE -----</p> <p>Not required to be performed for the turbine driven AFW pump until 24 hours after <math>\geq 900</math> psig in the steam generator.</p> <p>-----</p> <p>Verify each AFW pump starts automatically on an actual or simulated actuation signal.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.7.5.5</p> <p>Verify proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.</p>	<p>Prior to entering MODE 2 whenever unit has been in MODE 5 or 6 for &gt; 30 days</p>

3.7 PLANT SYSTEMS

3.7.6 Condensate Storage Tank (CST)

LCO 3.7.6            The CST contained water volume shall be  $\geq$  281,000 gal.

APPLICABILITY:    MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CST contained water volume not within limit.	A.1      Verify by administrative means OPERABILITY of backup water supply.	4 hours
	<u>AND</u>	<u>AND</u>
	A.2      Restore CST contained water volume to within limit.	Once per 12 hours thereafter
		7 days
B. Required Action and associated Completion Time not met.	B.1      Be in MODE 3.	6 hours
	<u>AND</u>	
	B.2      Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.6.1	Verify the CST contained water volume is $\geq 281,000$ gal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.7 Component Cooling Water (CCW) System

LCO 3.7.7 Two CCW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CCW train inoperable.	A.1 ----- NOTE ----- Enter applicable Conditions and Required Actions of <b>LCO 3.4.6</b> , "RCS Loops – MODE 4," for residual heat removal loops made inoperable by CCW. ----- Restore CCW train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours  36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.7.1 ----- NOTE ----- Isolation of CCW flow to individual components does not render the CCW System inoperable. -----</p> <p>Verify each CCW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.7.7.2 Verify each CCW automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>
<p>SR 3.7.7.3 Verify each CCW pump starts automatically on an actual or simulated actuation signal.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

3.7 PLANT SYSTEMS

3.7.8 Essential Service Water System (ESW)

LCO 3.7.8 Two ESW trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESW train inoperable.	<p>A.1</p> <p>----- NOTE -----</p> <ol style="list-style-type: none"> <li>1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources-Operating," for emergency diesel generator made inoperable by ESW.</li> <li>2. Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops - MODE 4," for residual heat removal loops made inoperable by ESW.</li> </ol> <p>-----</p>	(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One ESW train inoperable.	<p>A.1 (continued)</p> <p>Restore ESW train to OPERABLE status.</p>	<p>-----NOTE-----            A one-time Completion Time of 14 days is allowed to support planned replacement of ESW 'B' train piping prior to April 30, 2009.            -----</p> <p>72 hours</p>
B. Required Action and associated Completion Time of Condition A not met.	<p>B.1      Be in MODE 3.</p> <p><u>AND</u></p> <p>B.2      Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.8.1	<p>----- NOTE -----</p> <p>Isolation of ESW flow to individual components does not render the ESW inoperable.</p> <p>-----</p> <p>Verify each ESW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	In accordance with the Surveillance Frequency Control Program
SR 3.7.8.2	Verify each ESW automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.8.3	Verify each ESW pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.9 Ultimate Heat Sink (UHS)

LCO 3.7.9            The UHS shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One cooling tower train inoperable.	A.1        Restore cooling tower train to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.  <u>OR</u>  UHS inoperable for reasons other than Condition A.	B.1        Be in MODE 3.  <u>AND</u>  B.2        Be in MODE 5.	6 hours   36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Verify water level of UHS is $\geq 834.0$ ft mean sea level.	In accordance with the Surveillance Frequency Control Program
SR 3.7.9.2	Verify average water temperature of UHS is $\leq 89^\circ\text{F}$ .	In accordance with the Surveillance Frequency Control Program
SR 3.7.9.3	Operate each cooling tower fan for $\geq 15$ minutes in both the fast and slow speed.	In accordance with the Surveillance Frequency Control Program
SR 3.7.9.4	Verify each cooling tower fan starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Ventilation System (CREVS)

LCO 3.7.10 Two CREVS trains shall be OPERABLE.

----- NOTE -----  
 The control room envelope (CRE) and control building envelope (CBE) boundaries may be opened intermittently under administrative control.  
 -----

APPLICABILITY: MODES 1, 2, 3, and 4,  
 During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREVS train inoperable for reasons other than Condition B.	A.1 Restore CREVS train to OPERABLE status.	7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. One or more CREVS trains inoperable due to an inoperable CRE boundary or an inoperable CBE boundary in MODE 1, 2, 3, or 4.</p>	<p>B.1 Initiate action to implement mitigating actions.</p> <p><u>AND</u></p>	<p>Immediately</p>
	<p>B.2 Verify mitigating actions to ensure CRE occupant radiological exposure will not exceed limits and CRE occupants are protected from chemical and smoke hazards.</p> <p><u>AND</u></p>	<p>24 hours</p>
	<p>B.3 Restore the CRE boundary and CBE boundary to OPERABLE status.</p>	<p>90 days</p>
<p>C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.</p>	<p>C.1 Be in MODE 3.</p> <p><u>AND</u></p>	<p>6 hours</p>
	<p>C.2 Be in MODE 5.</p>	<p>36 hours</p>

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>D. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies.</p>	<p>D.1 Place OPERABLE CREVS train in CRVIS mode.</p> <p><u>OR</u></p> <p>D.2.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>D.2.2 Suspend movement of irradiated fuel assemblies.</p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p>
<p>E. Two CREVS trains inoperable during movement of irradiated fuel assemblies.</p> <p><u>OR</u></p> <p>One or more CREVS trains inoperable due to an inoperable CRE boundary or an inoperable CBE boundary during movement of irradiated fuel assemblies.</p>	<p>E.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>E.2 Suspend movement of irradiated fuel assemblies.</p>	<p>Immediately</p> <p>Immediately</p>
<p>F. Two CREVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.</p>	<p>F.1 Enter LCO 3.0.3.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each CREVS train pressurization filter unit for $\geq 15$ continuous minutes with the heaters operating and each CREVS train filtration filter unit for $\geq 15$ continuous minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.2	Perform required CREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.10.3	Verify each CREVS train actuates on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.10.4	Perform required unfiltered air inleakage testing of the CRE and CBE boundaries in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

3.7 PLANT SYSTEMS

3.7.11 Control Room Air Conditioning System (CRACS)

LCO 3.7.11 Two CRACS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6,  
During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRACS train inoperable.	A.1 Restore CRACS train to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6, or during movement of irradiated fuel assemblies.</p>	<p>C.1 Place OPERABLE CRACS train in operation.</p> <p><u>OR</u></p> <p>C.2.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>C.2.2 Suspend movement of irradiated fuel assemblies.</p>	<p>Immediately</p> <p>Immediately</p> <p>Immediately</p>
<p>D. Two CRACS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies.</p>	<p>D.1 Suspend CORE ALTERATIONS.</p> <p><u>AND</u></p> <p>D.2 Suspend movement of irradiated fuel assemblies.</p>	<p>Immediately</p> <p>Immediately</p>
<p>E. Two CRACS trains inoperable in MODE 1, 2, 3, or 4.</p>	<p>E.1 Enter LCO 3.0.3.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.11.1      Verify each CRACS train has the capability to remove the assumed heat load.	In accordance with the Surveillance Frequency Control Program

### 3.7 PLANT SYSTEMS

3.7.12 Not Used.

3.7 PLANT SYSTEMS

3.7.13 Emergency Exhaust System (EES)

LCO 3.7.13 Two EES trains shall be OPERABLE.

----- NOTE -----

The auxiliary or fuel building boundary may be opened intermittently under administrative control.

-----

APPLICABILITY: MODES 1, 2, 3, and 4,  
During movement of irradiated fuel assemblies in the fuel building.

----- NOTE -----

The SIS mode of operation is required only in MODES 1, 2, 3 and 4. The FBVIS mode of operation is required only during movement of irradiated fuel assemblies in the fuel building.

-----

ACTIONS

----- NOTE -----

LCO 3.0.3 is not applicable to the FBVIS mode of operation.

-----

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One EES train inoperable.	A.1 Restore EES train to OPERABLE status.	7 days
B. Two EES trains inoperable due to inoperable auxiliary building boundary in MODE 1, 2, 3 or 4.	B.1 Restore auxiliary building boundary to OPERABLE status.	24 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.</p> <p><u>OR</u></p> <p>Two EES trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.</p>	<p>C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>C.2 Be in MODE 5.</p>	<p>6 hours</p> <p>36 hours</p>
<p>D. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies in the fuel building.</p>	<p>D.1 Place OPERABLE EES train in the FBVIS mode.</p> <p><u>OR</u></p> <p>D.2 Suspend movement of irradiated fuel assemblies in the fuel building.</p>	<p>Immediately</p> <p>Immediately</p>
<p>E. Two EES trains inoperable during movement of irradiated fuel assemblies in the fuel building.</p>	<p>E.1 Suspend movement of irradiated fuel assemblies in the fuel building.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each EES train for $\geq 15$ continuous minutes with the heaters operating.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.2	Perform required EES filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.13.3	Verify each EES train actuates on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.4	Verify one EES train can maintain a negative pressure $\geq 0.25$ inches water gauge with respect to atmospheric pressure in the auxiliary building during the SIS mode of operation.	In accordance with the Surveillance Frequency Control Program
SR 3.7.13.5	Verify one EES train can maintain a negative pressure $\geq 0.25$ inches water gauge with respect to atmospheric pressure in the fuel building during the FBVIS mode of operation.	In accordance with the Surveillance Frequency Control Program

### 3.7 PLANT SYSTEMS

3.7.14 Not Used.

3.7 PLANT SYSTEMS

3.7.15 Fuel Storage Pool Water Level

LCO 3.7.15            The fuel storage pool water level shall be  $\geq$  23 ft over the top of the storage racks.

APPLICABILITY:    During movement of irradiated fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool water level not within limit.	<p>A.1</p> <p>----- NOTE ----- LCO 3.0.3 is not applicable. -----</p> <p>Suspend movement of irradiated fuel assemblies in the fuel storage pool.</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.15.1      Verify the fuel storage pool water level is $\geq$ 23 ft above the storage racks.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.16 Fuel Storage Pool Boron Concentration

LCO 3.7.16            The fuel storage pool boron concentration shall be  $\geq$  2165 ppm.

APPLICABILITY:    When fuel assemblies are stored in the fuel storage pool and a fuel storage pool verification has not been performed since the last movement of fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME	
<p>A. Fuel storage pool boron concentration not within limit.</p>	<p>----- NOTE ----- LCO 3.0.3 is not applicable. -----</p>		
	<p>A.1            Suspend movement of fuel assemblies in the fuel storage pool.</p>		<p>Immediately</p>
	<p><u>AND</u></p>		
	<p>A.2.1        Initiate action to restore fuel storage pool boron concentration to within limit.</p>		<p>Immediately</p>
<p><u>OR</u></p>			
<p>A.2.2        Verify by administrative means that a non-Region 1 fuel storage pool verification has been performed since the last movement of fuel assemblies in the fuel storage pool.</p>	<p>Immediately</p>		

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.16.1	Verify the fuel storage pool boron concentration is within limit.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.17 Spent Fuel Assembly Storage

LCO 3.7.17 The combination of initial enrichment and burnup of each spent fuel assembly stored in Region 2 or 3 shall be within the Acceptable Domain of **Figure 3.7.17-1** or in accordance with **Specification 4.3.1.1**.

APPLICABILITY: Whenever any fuel assembly is stored in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	<p>A.1</p> <p>----- NOTE ----- LCO 3.0.3 is not applicable. -----</p> <p>Initiate action to move the noncomplying fuel assembly to Region 1.</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.17.1</p> <p>Verify by administrative means the initial enrichment and burnup of the fuel assembly is in accordance with <b>Figure 3.7.17-1</b> or <b>Specification 4.3.1.1</b>.</p>	Prior to storing the fuel assembly in Region 2 or 3

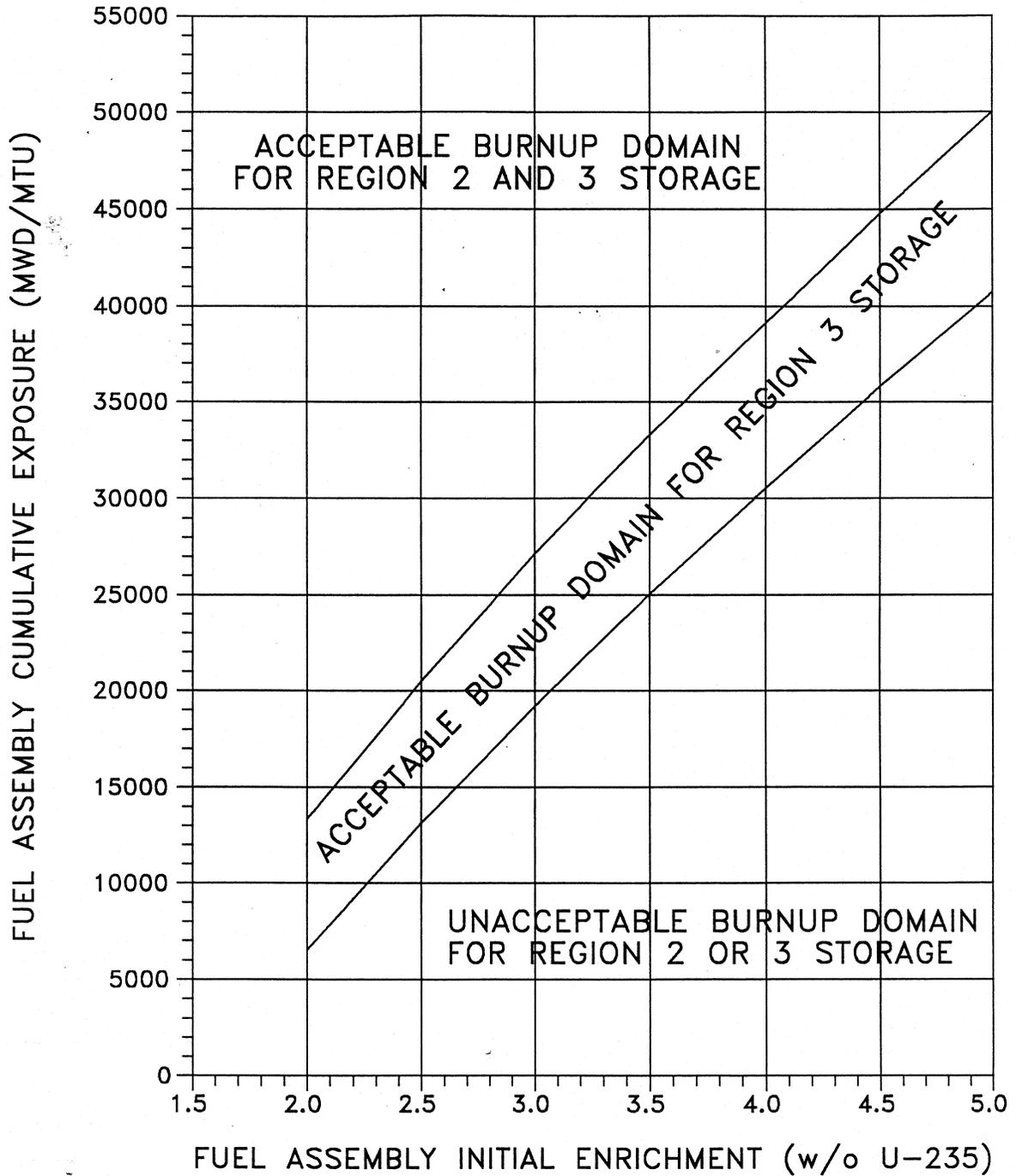


Figure 3.7.17-1 (page 1 of 1)  
MINIMUM REQUIRED FUEL ASSEMBLY BURNUP AS A FUNCTION OF  
INITIAL ENRICHMENT TO PERMIT STORAGE IN REGIONS 2 AND 3

3.7 PLANT SYSTEMS

3.7.18 Secondary Specific Activity

LCO 3.7.18            The specific activity of the secondary coolant shall be  $\leq 0.10 \mu\text{Ci/gm}$   
DOSE EQUIVALENT I-131.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Specific activity not within limit.	A.1            Be in MODE 3.	6 hours
	<u>AND</u>	
	A.2            Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.18.1        Verify the specific activity of the secondary coolant is $\leq 0.10 \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.19 Secondary System Isolation Valves (SSIVs)

LCO 3.7.19 The SSIVs shall be OPERABLE.

----- NOTE -----  
Locked closed manual SSIVs may be opened under administrative controls.  
-----

APPLICABILITY: MODES 1, 2, and 3 except for each secondary system flow path when:

- a. At least one of the two associated SSIVs is closed and de-activated; or
- b. At least one of the two associated SSIVs is closed and isolated by a closed manual valve; or
- c. The SSIV flow path is isolated by two closed manual valves, or two closed de-activated automatic valves, or a combination of a closed manual valve and a closed de-activated automatic valve.

ACTIONS

----- NOTE -----  
Separate Condition entry is allowed for each secondary system flow path.  
-----

CONDITION	REQUIRED ACTION	COMPLETION TIME	
A. One or more SSIVs inoperable.	<p>----- NOTE ----- Closed or isolated automatic SSIVs may be opened or unisolated under administrative controls. -----</p>		
	A.1 Close or isolate SSIV.		7 days
	<p><u>AND</u></p> <p>A.2 Verify SSIV is closed or isolated.</p>		Once per 7 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and Associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.19.1 Verify the isolation time of each automatic SSIV is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.7.19.2 Verify each automatic SSIV in the flow path actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.20 Class 1E Electrical Equipment Air Conditioning (A/C) System

LCO 3.7.20 Two Class 1E electrical equipment A/C trains shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Class 1E electrical equipment A/C train inoperable.	A.1 Initiate action to implement mitigating Actions.	Immediately
	<u>AND</u>	
	A.2 Verify room area temperatures $\leq 90^{\circ}$ F.	1 hour <u>AND</u> Once per 4 hours thereafter
	<u>AND</u>	
	A.3 Restore Class 1E electrical equipment A/C train to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	B.2 Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Two Class 1E electrical equipment A/C trains inoperable.	C.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.20.1      Verify each Class 1E electrical equipment A/C train actuates on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.20.2      Verify each Class 1E electrical equipment A/C train has the capability to remove the assumed heat load.	In accordance with the Surveillance Frequency Control Program