

### 3.10 SPECIAL OPERATIONS

#### 3.10.1 Inservice Leak and Hydrostatic Testing Operation

LCO 3.10.1 The average reactor coolant temperature specified in Table 1.1-1 for MODE 4 may be changed to "NA," and operation considered not to be in MODE 3; and the requirements of LCO 3.4.10, "Residual Heat Removal (RHR) Shutdown Cooling System - Cold Shutdown," may be suspended, to allow performance of an inservice leak or hydrostatic test provided the following MODE 3 LCOs are met:

- a. LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," Functions 1, 3, 4 and 6 of Table 3.3.6.2-1;
- b. LCO 3.6.4.1, "Secondary Containment";
- c. LCO 3.6.4.2, "Secondary Containment Isolation Valves (SCIVs)"; and
- d. LCO 3.6.4.3, "Standby Gas Treatment (SGT) System."

APPLICABILITY: MODE 4 with average reactor coolant temperature  $> 100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ).

ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each requirement of the LCO.  
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CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more of the above requirements not met.</p>	<p>A.1 -----NOTE----- Required Actions to be in MODE 4 include reducing average reactor coolant temperature to <math>\leq 212^{\circ}\text{F}</math>. -----  Enter the applicable Condition of the affected LCO.  <u>OR</u>  A.2.1 Suspend activities that could increase the average reactor coolant temperature or pressure.  <u>AND</u>  A.2.2 Reduce average reactor coolant temperature to <math>\leq 212^{\circ}\text{F}</math>.</p>	<p>Immediately</p> <p>Immediately</p> <p>24 hours</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.10.1.1 Perform the applicable SRs for the required MODE 3 LCOs.</p>	<p>According to the applicable SRs</p>

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#### 3.10.2 Reactor Mode Switch Interlock Testing

LCO 3.10.2 The reactor mode switch position specified in Table 1.1-1 (Section 1.1, Definitions) for MODES 3, 4, and 5 may be changed to include the run, startup/hot standby, and refuel position, and operation considered not to be in MODE 1 or 2, to allow testing of instrumentation associated with the reactor mode switch interlock functions, provided:

- a. All control rods remain fully inserted in core cells containing one or more fuel assemblies; and
- b. No CORE ALTERATIONS are in progress.

APPLICABILITY: MODES 3 and 4 with the reactor mode switch in the run, startup/hot standby, or refuel position,  
MODE 5 with the reactor mode switch in the run or startup/hot standby position.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the above requirements not met.	A.1 Suspend CORE ALTERATIONS except for control rod insertion.	Immediately
	<u>AND</u>	
	A.2 Fully insert all insertable control rods in core cells containing one or more fuel assemblies.	1 hour
	<u>AND</u>	
	A.3.1 Place the reactor mode switch in the shutdown position.	1 hour
	<u>OR</u>	
	A.3.2 -----NOTE----- Only applicable in MODE 5. ----- Place the reactor mode switch in the refuel position.	1 hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.10.2.1 Verify all control rods are fully inserted in core cells containing one or more fuel assemblies.	12 hours
SR 3.10.2.2 Verify no CORE ALTERATIONS are in progress.	24 hours

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#### 3.10.3 Single Control Rod Withdrawal - Hot Shutdown

LCO 3.10.3 The reactor mode switch position specified in Table 1.1-1 for MODE 3 may be changed to include the refuel position, and operation considered not to be in MODE 2, to allow withdrawal of a single control rod, provided the following requirements are met:

- a. LCO 3.9.2, "Refuel Position One-Rod-Out Interlock";
- b. LCO 3.9.4, "Control Rod Position Indication";
- c. All other control rods are fully inserted; and
- d.
  1. LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," MODE 5 requirements for Functions 1.a, 1.b, 8.a, 8.b, 11, and 12 of Table 3.3.1.1-1, and  
  
LCO 3.9.5, "Control Rod OPERABILITY - Refueling,"

OR

2. All other control rods in a five by five array centered on the control rod being withdrawn are disarmed, and

LCO 3.1.1, "SHUTDOWN MARGIN (SDM)," MODE 3 requirements, except the single control rod to be withdrawn may be assumed to be the highest worth control rod.

APPLICABILITY: MODE 3 with the reactor mode switch in the refuel position.

ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each requirement of the LCO.  
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CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the above requirements not met.	A.1 -----NOTE----- 1. Required Actions to fully insert all insertable control rods include placing the reactor mode switch in the shutdown position.  2. Only applicable if the requirement not met is a required LCO.  -----  Enter the applicable Condition of the affected LCO.	Immediately
	<u>OR</u>  A.2.1 Initiate action to fully insert all insertable control rods.	Immediately
	<u>AND</u>  A.2.2 Place the reactor mode switch in the shutdown position.	1 hour

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE	FREQUENCY
SR 3.10.3.1 Perform the applicable SRs for the required LCOs.	According to the applicable SRs
SR 3.10.3.2 -----NOTE----- Not required to be met if SR 3.10.3.1 is satisfied for LCO 3.10.3.d.1 requirements. -----  Verify all control rods, other than the control rod being withdrawn, in a five by five array centered on the control rod being withdrawn, are disarmed.	24 hours
SR 3.10.3.3 Verify all control rods, other than the control rod being withdrawn, are fully inserted.	24 hours



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#### 3.10.4 Single Control Rod Withdrawal - Cold Shutdown

LCO 3.10.4 The reactor mode switch position specified in Table 1.1-1 for MODE 4 may be changed to include the refuel position, and operation considered not to be in MODE 2, to allow withdrawal of a single control rod, and subsequent removal of the associated control rod drive (CRD) if desired, provided the following requirements are met:

- a. All other control rods are fully inserted;
- b. 1 LCO 3.9.2, "Refuel Position One-Rod-Out Interlock," and  
LCO 3.9.4, "Control Rod Position Indication," except the control rod of the associated CRD removal.

OR

2. A control rod withdrawal block is inserted; and
- c. 1. -----NOTE-----  
LCO 3.10.4.c.1 is not applicable to the CRD removal.  
-----

LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," MODE 5 requirements for Functions 1.a, 1.b, 8.a, 8.b, 11, and 12 of Table 3.3.1.1-1,

LCO 3.9.5, "Control Rod OPERABILITY - Refueling,"

OR

2. All other control rods in a five by five array centered on the control rod being withdrawn are disarmed, and  
LCO 3.1.1, "SHUTDOWN MARGIN (SDM)," MODE 4 requirements, except the single control rod to be withdrawn may be assumed to be the highest worth control rod.

APPLICABILITY: MODE 4 with the reactor mode switch in the refuel position.

ACTIONS

-----NOTE-----  
Separate Condition entry is allowed for each requirement of the LCO.  
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CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. One or more of the above requirements not met with the affected control rod drive (CRD) is not removed.</p>	<p>A.1 -----NOTE----- 1. Required Actions to fully insert all control rods include placing the reactor mode switch in the shutdown position.  2. Only applicable if the requirement not met is a required LCO. -----  Enter the applicable Condition of the affected LCO.</p>	<p>Immediately</p>
	<p><u>OR</u></p> <p>A.2.1 Initiate action to fully insert all control rods.</p>	<p>Immediately</p>
	<p><u>AND</u></p> <p>A.2.2 Place the reactor mode switch in the shutdown position.</p>	<p>1 hour</p>

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more of the above requirements not met with the affected control rod drive (CRD) has been removed.	B.1 Suspend withdrawal of the control rod and removal of associated CRD.	Immediately
	<u>AND</u>	
	B.2.1 Initiate action to fully insert all control rods include restoring the CRD and inserting its control rod.	Immediately
	<u>OR</u>	
	B.2.2 Initiate action to satisfy the requirements of this LCO.	Immediately

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE	FREQUENCY
SR 3.10.4.1 Perform the applicable SRs for the required LCOs.	According to applicable SRs
SR 3.10.4.2 -----NOTE----- Not required to be met if SR 3.10.4.1 is satisfied for LCO 3.10.4.c.1 requirements. -----  Verify all control rods, other than the control rod being withdrawn, in a five by five array centered on the control rod being withdrawn, are disarmed.	24 hours
SR 3.10.4.3 Verify all control rods, other than the control rod being withdrawn, are fully inserted.	24 hours
SR 3.10.4.4 -----NOTE----- Not required to be met if SR 3.10.4.1 is satisfied for LCO 3.10.4.b.1 requirements. -----  Verify a control rod withdrawal block is inserted.	24 hours

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#### 3.10.5 Single Control Rod Drive (CRD) Removal - Refueling

LCO 3.10.5 The requirements of LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation"; LCO 3.3.8.2, "Reactor Protection System (RPS) Electric Power Monitoring"; LCO 3.9.1, "Refueling Equipment Interlocks"; LCO 3.9.4, "Control Rod Position Indication"; and LCO 3.9.5, "Control Rod OPERABILITY - Refueling," may be suspended in MODE 5 to allow the removal of a single CRD associated with a control rod withdrawn from a core cell containing one or more fuel assemblies, provided the following requirements are met:

- a. All other control rods are fully inserted;
- b. All other control rods in a five by five array centered on the withdrawn control rod are disarmed;
- c. when the LCO 3.9.2 "Refuel Position One-Rod-Out Interlock" is not met, a control rod withdrawal block is inserted.
- d. LCO 3.1.1, "SHUTDOWN MARGIN (SDM)," MODE 5 requirements may be changed to allow the single control rod withdrawn to be assumed to be the highest worth control rod; and
- e. No other CORE ALTERATIONS are in progress.

APPLICABILITY: MODE 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the above requirements not met.	A.1 Suspend removal of the CRD mechanism.  <u>AND</u>	Immediately
	A.2.1 Initiate action to fully insert all control rods include restoring the CRD and inserting its control rod.	Immediately
	<u>OR</u> A.2.2 Initiate action to satisfy the requirements of this LCO	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.10.5.1 Verify all controls rods, other than the control rod withdrawn for the removal of the associated CRD, are fully inserted.	24 hours
SR 3.10.5.2 Verify all control rods, other than the control rod withdrawn for the removal of the associated CRD, in a five by five array centered on the control rod withdrawn for the removal of the associated CRD, are disarmed.	24 hours

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.10.5.3 -----NOTE-----  Only required when the LCO 3.9.2 "Refuel  Position One-Rod-Out interlock" is not met  -----  Verify a control rod withdrawal block is inserted.</p>	<p>24 hours</p>
<p>SR 3.10.5.4 Perform SR 3.1.1.1.</p>	<p>According to SR 3.1.1.1</p>
<p>SR 3.10.5.5 Verify no other CORE ALTERATIONS are in progress.</p>	<p>24 hours</p>

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#### 3.10.6 Multiple Control Rod Withdrawal - Refueling

LCO 3.10.6 The requirements of LCO 3.9.3, "Control Rod Position"; LCO 3.9.4, "Control Rod Position Indication"; and LCO 3.9.5, "Control Rod OPERABILITY - Refueling," may be suspended, and the "full in" position indicators may be bypassed for any number of control rods in MODE 5, to allow withdrawal of these control rods, removal of associated control rod drives (CRDs), or both, provided the following requirements are met:

- a. The four fuel assemblies are removed from the core cells associated with each control rod or CRD to be removed;
- b. All other control rods in core cells containing one or more fuel assemblies are fully inserted; and
- c. Fuel assemblies shall only be loaded in compliance with an approved spiral reload sequence.

APPLICABILITY: MODE 5.



ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more of the above requirements not met.	A.1 Suspend withdrawal of control rods and removal of associated CRDs.	Immediately
	<u>AND</u>	
	A.2 Suspend loading fuel assemblies	Immediately
	<u>AND</u>	
	A.3.1 Initiate action to fully insert all control rods in core cells containing one or more fuel assemblies.	Immediately
<u>OR</u>		
A.3.2 Initiate action to satisfy the requirements of this LCO.	Immediately	

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE	FREQUENCY
SR 3.10.6.1    Verify the four fuel assemblies are removed from core cells associated with each control rod or CRD removed.	24 hours
SR 3.10.6.2    Verify all other control rods in core cells containing one or more fuel assemblies are fully inserted.	24 hours
SR 3.10.6.3    -----NOTE----- Only required to be met during fuel loading. -----  Verify fuel assemblies being loaded are in compliance with an approved spiral reload sequence.	24 hours

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3.10.7 Control Rod Testing - Operating

LCO 3.10.7 The requirements of LCO 3.1.6, "Rod Pattern Control," may be suspended and control rods bypassed in the Rod Action Control System as allowed by SR 3.3.2.1.8 to allow performance of SDM demonstrations, control rod scram time testing, control rod friction testing, provided conformance to the approved control rod sequence for the specified test is verified by a second licensed operator or other qualified member of the technical staff.

APPLICABILITY: MODES 1 and 2 with LCO 3.1.6 not met.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	A.1 Suspend performance of the test and actions of LCO 3.1.6 should be followed.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.10.7.1 Verify movement of control rods is in compliance with the approved control rod sequence for the specified test by a second licensed operator or other qualified member of the technical staff.	During control rod movement

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#### 3.10.8 SHUTDOWN MARGIN (SDM) Test - Refueling

LCO 3.10.8 The reactor mode switch position specified in Table 1.1-1 for MODE 5 may be changed to include the startup/hot standby position, and operation considered not to be in MODE 2, to allow SDM testing, provided the following requirements are met:

a. LCO 3.3.1.1, "Reactor Protection System Instrumentation," MODE 2 requirements for Function 2.a, ~~2.d~~ and ~~2.e~~ ~~2.d~~ of Table 3.3.1.1-1;

b. 1. LCO 3.3.2.1, "Control Rod Block Instrumentation," MODE 2 requirements for Function 1.b of Table 3.3.2.1-1,

OR

2. Conformance to the approved control rod sequence for the SDM test is verified by a second licensed operator or other qualified member of the technical staff;

c. Each withdrawn control rod shall be coupled to the associated CRD;

d. All control rod withdrawals during out of sequence control rod moves shall be made in single notch withdrawal mode;

e. No other CORE ALTERATIONS are in progress; and

f. CRD charging water header pressure  $\geq 106.9\text{kg/m}^2$  (1520 psig.)

APPLICABILITY: MODE 5 with the reactor mode switch in startup/hot standby position.

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ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>-----NOTE----- Separate Condition entry is allowed for each control rod. -----</p> <p>A. One or more control rods not coupled to its associated CRD.</p>	<p>-----NOTE----- Inoperable control rods may be bypassed in accordance with SR 3.3.2.1.8, if required, to allow insertion of inoperable control rod and continued operation. -----</p> <p>A.1 Fully insert inoperable control rod.</p> <p><u>AND</u></p> <p>A.2 Disarm the associated CRD.</p>	<p>3 hours</p> <p>4 hours</p>
<p>B. One or more of the above requirements not met, for reasons other than Condition A.</p>	<p>B.1 Place the reactor mode switch in the shutdown or refuel position.</p>	<p>Immediately</p>

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE	FREQUENCY
SR 3.10.8.1 Perform the MODE 2 applicable SRs for LCO 3.3.1.1, Functions 2.a, 2.d and 2.e 2.d of Table 3.3.1.1-1.	According to the applicable SRs
SR 3.10.8.2 -----NOTE----- Not required to be met if SR 3.10.8.3 satisfied. -----  Perform the MODE 2 applicable SRs for LCO 3.3.2.1, Function 1.b of Table 3.3.2.1-1.	According to the applicable SRs
SR 3.10.8.3 -----NOTE----- Not required to be met if SR 3.10.8.2 satisfied. -----  Verify movement of control rods is in compliance with the approved control rod sequence for the SDM test by a second licensed operator or other qualified member of the technical staff.	During control rod movement
SR 3.10.8.4 Verify no other CORE ALTERATIONS are in progress.	12 hours

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SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.10.8.5 Verify each withdrawn control rod does not go to the withdrawn overtravel position.</p>	<p>Each time the control rod is withdrawn to "full out" position</p> <p><u>AND</u></p> <p>Prior to satisfying LCO 3.10.8.c requirement after work on control rod or CRD System that could affect coupling</p>
<p>SR 3.10.8.6 Verify CRD charging water header pressure <math>\geq</math> 1520 psig.</p>	<p>7 days</p>