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## 1.0 MODE 3

### **NOTE:**

The following groups of steps should be performed concurrently, except for 1.4, which may be performed after every step has been completed.

### 1.1 ADMIN

- 1.1.1 **VERIFY** all personnel out of the drywell **PRIOR** to placing the mode switch in START/HOT STBY
- 1.1.2 **PRIOR** to switching to Mode 2, **VERIFY** RPS trip systems restored to service per SOP-RPS-BYPASS
- 1.1.3 **OBTAIN** permission from the Operations Manager to place the Mode Switch in the START/HOT STBY position.
- 1.1.4 **CONDUCT** a panel walk down looking for equipment status that may not be consistent with Mode 2 operation.
- 1.1.5 **VERIFY** reactor scram reset.

### 1.2 NSS/BOP/POWER

- 1.2.1 **OPEN** the MSIVs per SOP-MSIV-OPS
- 1.2.2 **SECURE** Shutdown Cooling per SOP-RHR-SDC
- 1.2.3 **VERIFY** RHR is in a standby lineup per SOP-RHR-STBY
- 1.2.4 **VERIFY** both RRC pumps are running at 15 Hz per SOP-RRC-START
- 1.2.5 **VERIFY** RCIC-V-13 Closed.
- 1.2.6 PRIOR to 48 psig, **VERIFY** the following are closed;
  - RHR-V-8
  - RHR-V-9
- 1.2.7 **VERIFY** LPCS lineups completed, SOP-LPCS-STBY.

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1.2.8 **START** CRD per SOP-CRD-STARTUP.

### 1.3 LEVEL

1.3.1 **LINEUP** RWCU for blowdown, in accordance with SOP-RWCU-OPS

1.3.2 **PREPARE** RFW for level control, SOP-RFW-STARTUP.

1.3.3 **VERIFY** HPCS lineups completed, SOP-HPCS-STBY.

1.4 **PLACE** the Mode Switch in the START/HOT STBY position.

## 2.0 MODE 2

### NOTE:

The following groups of steps should be performed concurrently.

2.1 **LOG** The time and date of entry into Mode 2. Time \_\_\_\_\_ Date \_\_\_\_\_

### 2.2 POWER

2.1.1 **PERFORM** SOP-RWM-STBY.

2.1.2 **WITHDRAW** the 1st control rod as directed by the rod worth minimizer pull  
checklist.

### NOTE:

The following step may not be performed if the reactor is being started up with the RWM inoperable (LCO 3.3.2.1 C).

2.1.3 WHEN the 1st control rod is withdrawn to its target position,  
THEN **PERFORM** OSP-RWM-C401.

2.1.4 **WITHDRAW** control rods as directed by the rod withdrawal sequence sheet to achieve criticality.

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## 2.2 POWER (cont)

2.1.5 **MAINTAIN** Reactor Period GT 60 seconds.

2.1.6 WHEN neutron level rises, THEN **VERIFY** IRM response.

2.1.7 **WITHDRAW** SRMs to maintain indicate levels between the rod blocks.  
(100 cps and 1X10E5 cps)

2.1.8 **ADVANCE** the IRM range change switches to maintain an indication of 25 to 75.

## 2.3 LEVEL/NSS/BOP

2.2.1 **PERFORM** Prestart checks on the first Reactor Feed Pump.

2.2.2 With RPV pressure below the RCIC isolation limit,  
**BEGIN** SOP-RCIC-STBY with those steps which can be performed.

2.2.3 **PERFORM** Prestart checks on the second Reactor Feed Pump.

## 3.0 HEATING RANGE

### NOTE:

The following groups of steps should be performed concurrently.

### 3.1 NSS/BOP

### NOTE:

RCIC should be made operable prior to 150 psig (LCO 3.5.3)

3.1.1 **WHEN** RPV pressure increases to 68 psig,  
**CONTINUE** SOP-RCIC-STBY.

### 3.2 POWER

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- 3.2.1 **VERIFY** APRMs response.
- 3.2 POWER (cont)
  - 3.2.2 **MAINTAIN** power below the APRM rod block (12%).
  - 3.2.3 **WITHDRAW** IRMs as required to maintain indications below the rod block.
- 3.3 PRESSURE
  - 3.3.1 **MAINTAIN** 100°F/hr with the Main Turbine Bypass Valves by modulating the EHC pressure setpoint.
  - 3.3.2 **VERIFY** Bypass valve opens when pressure increases to the EHC setpoint.
- 3.4 LEVEL
  - 3.4.1 **CONTINUE** SOP-RFW-STARTUP as key parameters are reached.
- 3.5 WHEN Reactor Pressure is greater than 850 psig,  
AND Reactor Power is GE 5%,  
AND All MSIVs are open,  
THEN **PLACE** the Reactor Mode Switch in the RUN position.
- 4.0 MODE 1
  - 4.1 **LOG** The time and date of entry into Mode 1.      Time\_\_\_\_\_ Date\_\_\_\_\_
  - 4.2 **INCREASE** Reactor Power to 20%.
  - 4.3 **BEGIN** placing the Main Turbine on-line, per SOP-MT-STARTUP.
  - 4.4 WHEN The Main Turbine has been placed on-line,  
THEN **INCREASE** Reactor Power to 100%, not exceeding 10 MWE per minute.

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TABLE 1.1, Commonly used acronyms

"RRC"	Reactor Recirculation Control
"RPS"	Reactor Protection System
"BISI"	Bypass Inoperable Status Display
"RHR"	Residual Heat Removal
"HPCS"	High Pressure Core Spray
"LPCS"	Low Pressure Core Spray
"RCIC"	Reactor Core Isolation Cooling
"RFW"/"RFP"/"RFT"	Reactor Feed Water/Pump/Turbine
"RPV"	Reactor Pressure Vessel
"RX"	Reactor
"P601"	Panel 601 (Panel numbers listed with white label on top of each panel)
"P602"	Panel 602 (See "P601")
"P603"	Panel 603 (See "P601")
"P800"	Panel 800 (See "P601")
"P820"	Panel 820 (See "P601")
"P840"	Panel 840 (See "P601")
"RWM"	Rod Worth Minimizer
"MSIV"	Main Steam Isolation Valve (P601)
"APRM"	Average Power Range Monitor
"IRM"	Intermediate Range Montior
"SRM"	Source Range Monitor
"MS"	Main Steam

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"COND"	Condensate System
"MLB"	Million Pounds
"GE"	General Electric OR Greater Than or Equal To
"LE"	Less Than or Equal To
"GT"	Greater Than
"LT"	Less Than