EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2020050101 K/A: 202002A4.06

URO: 2.7 SRO: 2.6

TASK DESCRIPTION: Ability to manually operate and/or monitor Scoop Tube Power in the Control Room

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. None

C. REFERENCES

1. SO 2D.7.B-2, Recirculation MG Set Scoop Tube Lockup and Reset.

D. TASK STANDARD

1. Satisfactory task completion is indicated when the "A" Recirculation Scoop Tube has been "LOCKED", in accordance with the approved procedure.

2. Estimated time to complete: 10 minutes <u>Non-Time Critical</u>

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to reset the lockup on the "A" Recirc MG Set Scoop Tube in accordance with SO 2D.7.B-2, "Recirculation MG Set Scoop Tube Lockup and Reset", Step 4.3. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Reactor power is 60% due to a load drop.

2. The "A" and "B" Recirc pump M/A stations are in manual.

3. A scoop tube lockup has occurred on "A" Recirc MG Set.

4. The cause of the lockup was a component failure in the Jordan Positioner (<u>NOT</u> a loss of power to the Scoop Tube Positioner).

5. I&C has corrected the problem with the Jordan Positioner.

6. All administrative controls to complete this repair have been cleared.

7. The Scoop Tube Positioner was <u>NOT</u> operated manually while the Recirc Pump Scoop Tube was locked up.

G. INITIATING CUE

The Control Room Supervisor directs you to reset the scoop tube lockup on "A" Recirculation MG Set in accordance with SO 2D.7.B-2, "Recirculation MG Set Scoop Tube Lockup and Reset", Step 4.3.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	P	A copy of SO 2D.7.B-2, "Recirculation MG Set Scoop Tube Lockup and Reset", is obtained. Prerequisites & Precautions reviewed.
2	Verify power available to the Scoop Tube Lockup circuit. **CUE: If asked by the student after locating the light on the appropriate panel, respond that "the M/G Set Scoop Tube Lockout Circuit" power light is ON."**	P	Observes the "M/G Set Scoop Tube Lockout Circuit" power light is **ON** at panel 20C004A.
*3	Adjust the "A" MG Set Controller demand setting to match generator speed. (CUE: Speed demand is at the desired setting.) (CUE: "V" on the Moore Controller has stopped ramping.)	P	Adjusts the "A" MG Set Controller as follows: • Sets the Moore Controller demand setting near the actual generator speed. • Verifies speed demand is at desired setting using actual and demand speed indications on 20C004A. • Verifies `V' on the Moore Controller SPIC-2-02-184-016A has stopped ramping.

*****Note*****

As soon as the "A" Scoop Tube Positioner Lockup Switch 2A-S2A, on 20C004, is placed in the "RESET" position, the "A" Recirculation Pump speed will begin to oscillate. The operator will be expected to recognize the malfunction and take steps to re-lock the "A" MG Set Scoop Tube.

*4	Reset the "A" MG Set Scoop Tube Lockup.	P	Resets the "A" MG Set Scoop Tube Lockup as follows: • Places the "A" Scoop Tube Positioner Lockup Switch 2A-S2A, on 20C004, to the "RESET" position, AND • Allows it to spring return to the "NORMAL" position.

STEP NO	STEP	ACT	STANDARD
5	Recognize "A" Recirculation Pump speed oscillations. (CUE: "A" Recirculation Pump speed is oscillating uncontrollably.)	P	Observes the activation of ARC 214 20C204M D-2, **"A" Recirc Speed Control Signal Fail.** Then observes the "A" Recirculation Pump speed is oscillating uncontrollably using any or all of the following instruments: • SPIC-2-02-184-016A, "A" RR Pump Speed. • SPI—2-02-184-016A, "A" Generator Speed. • FT-2-02-110A, Loop "A" Flow.
	*****Note***** **The Student may report the situation on the "A" Recirculation Pump to the CRS prior to taking any steps to stop the condition. If the Student chooses this path use the cues in step 6.**		
*6	Re-lock the "A" MG Set Scoop Tube. **CUE: If the Student Reports the situation concerning the "A" Recirculation Pump prior to taking steps to mitigate the situation, give the Student the following order: "(Student's name) lock the "A" Recirculation Pump Scoop Tube."**	P	Places the Scoop Tube Positioner "Lockup" switch 2A-S2A at panel 20C004A to the "LOCK" position.
7	Reports "A" Recirculation Pump Scoop Tube condition. **CUE: As the CRS, acknowledge the students report concerning the "A" Recirculation Pump Scoop Tube.**		Reports to the CRS that the "A" Recirculation Pump Scoop Tube has been "LOCKED".

STEP NO	STEP	ACT	STANDARD
8	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) **AND** procedures.	P	**Positive control established.**

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE:
When the "A" Recirculation Pump Scoop Tube has been "Locked" and the Control Room Supervisor has been informed of the Recirculation System status, the evaluator will terminate the exercise.

J. SPECIAL INSTRUCTIONS:

None

TASK CONDITIONS/PREREQUISITES

1. Reactor power is 60% due to a load drop.

2. The "A" and "B" Recirc pump M/A stations are in manual.

3. A scoop tube lockup has occurred on "A" Recirc MG Set.

4. The cause of the lockup was a component failure in the Jordan Positioner (NOT a loss of power to the Scoop Tube Positioner).

5. I&C has corrected the problem with the Jordan Positioner.

6. All administrative controls to complete this repair have been cleared.

7. The Scoop Tube Positioner was NOT operated manually while the Recirc Pump Scoop Tube was locked up.

INITIATING CUE

The Control Room Supervisor directs you to reset the scoop tube lockup on "A" Recirculation MG Set in accordance with SO 2D.7.B-2, "Recirculation MG Set Scoop Tube Lockup and Reset", Step 4.3.

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2590050101 K/A: 259001A4.02

URO: 3.9 SRO: 3.7

TASK DESCRIPTION: Place the "C" Reactor Feedwater Pump in "Standby"

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. None

C. REFERENCES

1. SO 6D.2.A-2 Rev. 19, "Reactor Feedwater Pump Shutdown".
2. GP-5, Section 3.0 Rev. 52, "Power Reductions".

D. TASK STANDARD

1. Satisfactory task completion is indicated when the "C" Reactor Feedwater Pump as been properly secured following the manual trip during the operation to place it in "standby".

2. Estimated time to complete: 15 minutes <u>Non-Time Critical</u>

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to place the "C" Reactor Feedwater Pump in "standby" in accordance with SO 6D.2.A-2, "Reactor Feedwater Pump Shutdown," steps 4.3 through 4.5. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. A power reduction, using GP-5, "Power Operations", Section 3.0, is in progress for Control Rod pattern adjustment and Condenser Waterbox work.
2. Total Feedwater flow is between 7.5×10^6 lbs/hr and 11.5×10^6 lbs/hr.
3. All three (3) Reactor Feedwater Pumps are operating within normal parameters.
4. Zinc Injection System is aligned to the "A" Reactor Feedwater Pump.
5. GP-5, "Power Operations", Section 3.0, "Power Reductions" has been completed up to step 3.3.9.
6. An Equipment Operator is standing by in the vicinity of the "C" Reactor Feedwater Pump to support placing the pump in "STANDBY".

G. INITIATING CUE

The Control Room Supervisor directs you to place the "C" Reactor Feedwater Pump in "STANDBY" in accordance with SO 6D.2.A-2, "Reactor Feedwater Pump Shutdown", steps 4.3 through 4.5.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	P	A copy of SO 6D.2.A-2 is obtained. Prerequisites & Precautions reviewed.
	Note **The Student may not verify this condition because it is stated in the Task Conditions that this flow is currently established.**		
2	Verify Plant Operating Conditions for placing "C" Reactor Feedwater Pump in "standby".	P	Verifies Total Feedwater flow is between 7.5 x 10^6 lbs/hr and 11.5 x 10^6 lbs/hr by performing the following: • Observe "blue" pen reading on FR-2-06-098.
	Note **the Simulator the Feed Pumps bias does not need to be adjusted.**		
3	If required, minimize "Control Signal" differences between the Reactor Feedwater Pumps to remain in service. **CUE: If asked by the RO about "bias" adjustment respond, "Continue to monitor the Reactor Feedwater Pumps bias, but at this time take no action to adjust bias."**	P	Reports "bias" information for the two Reactor Feedwater Pumps that are to remain in service. May requests CRS direction for adjustment of the bias.

STEP NO	STEP	ACT	STANDARD
4	Verify the status of the Zinc Injection System. **CUE: If asked by the RO about the Zinc Injection System, respond by saying:** **"The Zinc Injection System is aligned to the "A" Reactor Feedwater Pump."**	P	Verifies the Zinc Injection System is aligned to either the "A" or "B" Reactor Feed Water Pumps by contacting an Equipment Operator.
	CUE: If the RO requests an Equipment Operator check for the appropriate number of Condensate Demins, respond by saying: **"There is a sufficient number of Condensate Demins in service for removing "C" RFP from service."**		
*****Note***** **Opening the Recirc Valve will cause a drop in the associated RFP discharge flow and a rise in the Condensate System flow.**			
*5	Open the Reactor Feedwater Pump (RFP) Minimum Flow Recirculation Valve.	P	**OPENS** AO-2139C, "RPF 'C' Min Flow Recirc Valve", by placing the control switch on 20C06A-6 in the **"OPEN"** position.
6	Verifies the Reactor Feedwater Pump (RFP) Minimum Flow Recirculation Valve is open. (CUE: RED light is "ON" GREEN light is "OFF".)		Verifies AO-2139C, "RPF 'C' Min Flow Recirc Valve" is **OPEN** by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**.

STEP NO	STEP	ACT	STANDARD
7	Verify Reactor Water Level and Total Feedwater Flow. (CUE: Reactor Water Level and Feedwater Flow have stabilized.)	P	Verifies stable and/or allows Reactor Water Level to stabilize while monitoring level indicators on 20C05A-3. Verify stable and/or allow Feedwater Flow to stabilize while monitoring flow on FR-2-06-098.
*8	Close the "C" Reactor Feedwater Pump Discharge Check Valve.	P	Places AO-2147C, "RFP 'C' Disch. Check Valve", control switch on 20C06A-6 in the **"CLOSE"** position.
9	Verifies the "C" Reactor Feedwater Pump Discharge Check Valve is closed. (CUE: RED light is "OFF" GREEN light is "ON".)	P	Verifies AO-2147C, "RFP 'C' Disch. Check Valve" is **CLOSED** by observing the following; • "RED" light **OFF**. • "GREEN" light **ON**.

*****Note*****

AO-2147C, "RFP C Discharge Check Valve" will remain open in this condition, however, the actuator will indicate closed.

*10	Take "MANUAL" control of the "C" Reactor Feedwater Pump.	P	Places the Reactor Feedwater Pump M/A Station, HCS-2-06-084C, on 20C05A-11 in **"MANUAL"**.
11	Verify the Reactor Feedwater Pump M/A Station in manual. (CUE: The "M" on the Controller is backlit RED.)	P	Verifies the Reactor Feedwater Pump M/A Station, HCS-2-06-084C, on 20C05A-11 in **"MANUAL"** by observing the following; • The **"M"** on the controller is backlit **RED**.

STEP NO	STEP	ACT	STANDARD
*12	Close "C" Reactor Feedwater Pump Discharge Valve.	P	**CLOSES** the "C" Feedwater Pump discharge valve by performing the following: • "Bumps" **CLOSED** MO-2194C, Feed Pump C Disch. Valve", using the control switch on 20C06A-6. ○ Takes the control switch to close and releases to the "NEUTRAL" position. ○ The first bump should be at least one (1) second past split indication. ○ Uses short bumps, 2-5 seconds, during the second half of the valve's stroke.
13	Verify the "C" Reactor Feedwater Pump Discharge Valve is closing. (CUE: RED light is "ON" GREEN light is "ON".)		Verifies MO-2194C, "C" Feedwater Pump discharge valve is **CLOSING** by observing the following: • "RED" light **ON**. • "GREEN" light **ON**.
14	Verify individual Feedwater Pump Flows and Reactor Water Level. (CUE: Reactor Water Level is stable.)	P	Checks flow rate lowering on the "C" RFP using FR-2565 on 20C05A-2, green pen. Checks flow rate rising on the "A" & "B" RFP's using FR-2565 on 20C05A-2, red and blue pens. Verifies Reactor Water Level is stable and/or allows it to stabilize while monitoring level indicators on 20C05A-3.
	*****Note***** **The "CAUTION" prior to step 4.5 of SO 6D.2.A-2 requires an immediate trip of the Reactor Feedwater Pump being secured if its discharge check valve is "SLAMMING". This is the point at which this JPM becomes an "Alternate Path" JPM.**		
	CUE: Once the RO has taken two or three bumps "CLOSED" on the RFP discharge valve report the following as the EO in the vicinity of the RFP. "RFP 'C' discharge check valve is slamming."		

STEP NO	STEP	ACT	STANDARD
*15	Trip the "C" Reactor Feedwater Pump.	P	**TRIPS** the "C" RFP by depressing, "Feed Pump Trip, Turbine Trip C" pushbutton PBC1, on 20C05A-10.
16	Verify the "C" RFP tripped. (CUE: RED light is "OFF" GREEN light is "ON".)	P	Verifies that the "C" Feed Pump Turbine has tripped by observing the following: • Turbine "RED" light **OFF**. • Turbine "GREEN" light **ON**.
17	Report Feedwater Pump status to the Control Room Supervisor (CRS). **CUE: As the CRS, acknowledge the Student's report concerning the current condition of the "C" Feedwater Pump.**	P	Reports the following to the CRS; • While placing the "C" RFP in standby the discharge check valve was observed to be slamming. • The "C" RFP was immediately tripped per the procedural requirement.
18	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) **AND** procedures.	P	**Positive control established.**

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When "C" Reactor Feedwater Pump has been tripped in accordance with SO 6D.2.A-2, "Reactor Feedwater Pump Shutdown" and the Control Room Supervisor has been informed of the Feedwater System status, the evaluator will terminate the exercise.

J. SPECIAL INSTRUCTIONS:

NONE.

TASK CONDITIONS/PREREQUISITES

1. A power reduction, using GP-5, "Power Operations", Section 3.0, is in progress for Control Rod pattern adjustment and Condenser Waterbox work.
2. Total Feedwater flow is between 7.5×10^6 lbs/hr and 11.5×10^6 lbs/hr.
3. All three (3) Reactor Feedwater Pumps are operating within normal parameters.
4. Zinc Injection System is aligned to the "A" Reactor Feedwater Pump.
5. GP-5, "Power Operations", Section 3.0, has been completed up to step 3.3.9.
6. An Equipment Operator is standing by in the vicinity of the "C" Reactor Feedwater Pump to support placing the pump in "STANDBY".

INITIATING CUE

The Control Room Supervisor directs you to place the "C" Reactor Feedwater Pump in "STANDBY" in accordance with SO 6D.2.A-2, "Reactor Feedwater Pump Shutdown", steps 4.3 through 4.5.

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: X K/A: 239001A4.01

URO: 4.2 SRO: 4.0

TASK DESCRIPTION: Ability to manually operate and/or monitor the MSIV's in the Control Room

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. None

C. REFERENCES

1. SO 1A.7.A-2 Rev. 4, Main Steam System Recovery following a Group I Isolation.
2. COL 1A.7.A-2 Rev.2, Main Steam System Lineup after a Group I Isolation.

D. TASK STANDARD

1. Satisfactory task completion is indicated when the MSIV's have been reopened following a Group I Isolation.

2. Estimated time to complete: 12 minutes <u>Non-Time Critical</u>

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to open the Main Steam Isolation Valves following a valid Group I isolation in accordance with SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation". I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. A Group I Isolation signal occurred. The Group I Isolation signal is now clear <u>AND</u> both logic channels are reset in accordance with GP-8.A, "PCIS Isolation – Group I."
2. All SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation", Prerequisites are met.
3. COL 1A.7.A-2, "Main Steam System Lineup after a Group I Isolation", has been completed.
4. An Equipment Operator is standing by should manual operation or verification be required during the performance of this procedure.

G. INITIATING CUE

The Control Room Supervisor directs you to open the Main Steam Isolation Valves (MSIV's) following a valid Group I isolation in accordance with SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	P	A copy of SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation," is obtained. Prerequisites & Precautions reviewed.
2	Verify the position of the, AO-2-02-086 A, Outboard Main Steam Isolation Valve (MSIV). (CUE: RED light is "ON" GREEN light is "OFF".)	P	At Panel 20C03D-3, verifies AO-2-02-086 A, Main Steam Line Outboard Isolation Valve, is OPEN as indicated by each valves; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"AUTO/OPEN"** position.
3	Verify the position of the, AO-2-02-086 B, Outboard Main Steam Isolation Valve (MSIV). (CUE: RED light is "ON" GREEN light is "OFF".)	P	At Panel 20C03D-3, verifies AO-2-02-086 B, Main Steam Line Outboard Isolation Valve, is OPEN as indicated by each valves; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"AUTO/OPEN"** position.
4	Verify the position of the, AO-2-02-086 C, Outboard Main Steam Isolation Valve (MSIV). (CUE: RED light is "ON" GREEN light is "OFF".)	P	At Panel 20C03D-3, verifies AO-2-02-086 C, Main Steam Line Outboard Isolation Valve, is OPEN as indicated by each valves; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"AUTO/OPEN"** position.
5	Verify the position of the, AO-2-02-086 D, Outboard Main Steam Isolation Valve (MSIV). (CUE: RED light is "ON" GREEN light is "OFF".)	P	At Panel 20C03D-3, verifies AO-2-02-086 D, Main Steam Line Outboard Isolation Valve, is OPEN as indicated by each valves; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"AUTO/OPEN"** position.

STEP NO	STEP	ACT	STANDARD
	Note The following step equalizes the pressure across the inboard main steam isolation valves AND pressurizes the main steam lines down to the turbine stop valves.		
*6	Equalize pressure across the Inboard Main Steam Isolation Valves, using Main Steam Line Drain Inboard Valve.	P	Opens MO-2-02-074, Main Steam Line Drain Inboard Valve, on 20C03B-3 by performing the following; • Places the control switch in the **OPEN** position and then allows it to return to the **NEUTRAL** position
7	Verifies MO-2-02-074, Main Steam line Drain Inboard Valve, opened as requested. (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies MO-2-02-074, Main Steam line Drain Inboard Valve is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
*8	Equalize pressure across the Inboard Main Steam Isolation Valves, using Main Steam Line Drain Outboard Valve.	P	Opens MO-2-02-077, Main Steam Line Drain Outboard Valve, on 20C03A-6 by performing the following; • Places the control switch in the **OPEN** position and then allows it to return to the **NEUTRAL** position.
9	Verifies MO-2-02-077, Main Steam line Drain Outboard Valve, opened as requested. (CUE: RED light is "ON" GREEN light is "OFF".)		Verifies MO-2-02-077, Main Steam line Drain Outboard Valve is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.

STEP NO	STEP	ACT	STANDARD
	Note **The Student will recognize that MO-2-02-078, Main Steam Line Drain Downstream Drain, is already open. It was opened using GP-3, Normal Plant Shutdown.**		
10	Verify the position of MO-2-02-078, Main Steam Line Drain Downstream Drain. (CUE: RED light is "ON" GREEN light is "OFF".)		Verifies MO-2-02-078, Main Steam Line Drain Downstream Drain, on 20C03B-3 is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
11	Monitor d/p across the Inboard Main Steam Isolation Valves until less than 50 psid.	P	Observes the d/p across the Inboard Main Steam Isolation Valves using: • PI-2-06-090 A, B or C, Reactor Pressure, on 20C005A. **AND** • Main Turbine pressure as read on Main Steam pressure "A" AND Main Steam pressure "B" on 20C008A. Until the d/p is less than 50 psid.
*12	Open one (1) of the Inboard Main Steam Isolation Valves (MSIV's). **CUE: As the CRS, acknowledge the report of level and pressure trending.**	P	When the d/p across the Inboard MSIV's is less than 50 psid, THEN; • **OPEN** one (1) of the Inboard MSIV's, **AND** • Allow Reactor pressure, water level **AND** power to stabilize. • Reports level and pressure trends to the CRS.
13	Verify the position of the operated Inboard Main Steam Isolation Valve (MSIV) (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies the operated Inboard Main Steam Isolation Valve (MSIV) is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"AUTO/OPEN"** position.

STEP NO	STEP	ACT	STANDARD
*14	Open the remaining Inboard Main Steam Isolation Valves (MSIV's)	P	When Reactor pressure, water level AND power have stabilized, THEN; OPEN the three (3) remaining Inboard MSIV's.
15	Verify the position of the operated Inboard Main Steam Isolation Valves (MSIV's). (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies the operated Inboard Main Steam Isolation Valves (MSIV's) are open by observing the following; • "RED" lights **ON**. • "GREEN" lights **OFF**. • Control switches in the **"AUTO/OPEN"** position.
*16	Isolate Main Steam Line drain path, Main Steam Line Drain Inboard Valve.	P	When the Inboard MSIV's have been opened: • CLOSES MO-2-02-074, Main Steam Line Drain Inboard Valve, on 20C03B-3 by placing the control switch in the **CLOSE** position and then allowing it to return to the NEUTRAL position.
17	Verifies MO-2-02-074, Main Steam line Drain Inboard Valve, closed as requested. (CUE: RED light is "OFF" GREEN light is "ON".)	P	Verifies MO-2-02-074, Main Steam line Drain Inboard Valve is closed by observing the following; • "RED" light **OFF**. • "GREEN" light **ON**. • Control switch in the **"NEUTRAL"** position.
*18	Isolate Main Steam Line drain path, Main Steam Line Drain Inboard Valve.	P	When the Inboard MSIV's have been opened: • CLOSES MO-2-02-077, Main Steam Line Drain Outboard Valve, on 20C03A-6 by placing the control switch in the **CLOSE** position and then allowing it to return to the NEUTRAL position.

STEP NO	STEP	ACT	STANDARD
19	Verifies MO-2-02-077, Main Steam line Drain Outboard Valve, closed as requested. (CUE: RED light is "OFF" GREEN light is "ON".)	P	Verifies MO-2-02-077, Main Steam line Drain Outboard Valve is closed by observing the following; • "RED" light **OFF**. • "GREEN" light **ON**. • Control switch in the **"NEUTRAL"** position.
*20	Open MO-2308, Turbine Inlet Drain Lead Drain.	P	**OPENS** MO-2308, Turbine Inlet Drain Lead Drain, on 20C008A by placing the control switch in the **OPEN** position and then allowing it to return to the NEUTRAL position.
21	Verify MO-2308, Turbine Inlet Drain Lead Drain open. (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies MO-2308, Turbine Inlet Drain Lead Drain is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
*22	Open MO-2533A, A Stop Valve (SV) Above Seat Drain.	P	**OPENS** MO-2533A, A SV Above Seat Drain, on 20C008A by placing the control switch in the **OPEN** position and then allowing it to return to the NEUTRAL position.
23	Verify MO-2533A, A SV Above Seat Drain open. (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies MO-2533A, A SV Above Seat Drain is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
*24	Open MO-2533B, B SV Above Seat Drain.	P	**OPENS** MO-2533B, B SV Above Seat Drain, on 20C008A by placing the control switch in the **OPEN** position and then allowing it to return to the NEUTRAL position.

STEP NO	STEP	ACT	STANDARD
25	Verify MO-2533B, B SV Above Seat Drain open. (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies MO-2533B, B SV Above Seat Drain is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
*26	Open MO-2533C, C SV Above Seat Drain.	P	**OPENS** MO-2533C, C SV Above Seat Drain, on 20C008A by placing the control switch in the **OPEN** position and then allowing it to return to the NEUTRAL position.
27	Verify MO-2533C, C SV Above Seat Drain open. (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies MO-2533C, C SV Above Seat Drain is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
*28	Open MO-2533D, D SV Above Seat Drain.	P	**OPENS** MO-2533D, D SV Above Seat Drain, on 20C008A by placing the control switch in the **OPEN** position and then allowing it to return to the NEUTRAL position.
29	Verify MO-2533D, D SV Above Seat Drain open. (CUE: RED light is "ON" GREEN light is "OFF".)	P	Verifies MO-2533D, D SV Above Seat Drain is open by observing the following; • "RED" light **ON**. • "GREEN" light **OFF**. • Control switch in the **"NEUTRAL"** position.
30	Reports to the Control Room Supervisor (CRS). **CUE: As the CRS, acknowledge the student's report concerning the Main Steam Isolation Valves.**	P	Reports to the CRS that the Main Steam Isolation Valves have been opened in accordance with SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation".

STEP NO	STEP	ACT	STANDARD
31	As an evaluator ensure that you have positive control of all exam material provided to the examinee (Task Conditions/Prerequisites) **AND** procedures.	P	**Positive control established.**

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When Main Steam Isolation Valves have been opened in accordance with SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation," and the Control Room Supervisor has been informed of the Main Steam System status, the evaluator will terminate the exercise.

J. SPECIAL INSTRUCTIONS:

None

TASK CONDITIONS/PREREQUISITES

1. A Group I Isolation signal occurred. The Group I Isolation signal is now clear AND both logic channels are reset in accordance with GP-8.A, "PCIS Isolation – Group I."
2. All SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation", Prerequisites are met.
3. COL 1A.7.A-2, "Main Steam System Lineup after a Group I Isolation", has been completed.
4. An Equipment Operator is standing by should manual operation or verification be required during the performance of this procedure.

INITIATING CUE

The Control Room Supervisor directs you to open the Main Steam Isolation Valves (MSIV's) following a valid Group I isolation in accordance with SO 1A.7.A-2, "Main Steam System Recovery following a Group I Isolation".

PECO NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2060140201 / PLOR-077C K/A: 206000G13

URO: 4.2 SRO: 4.0

TASK DESCRIPTION: Startup HPCI in the CST to CST Mode

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

SO 23.1.B-2, Rev. 15, "HPCI System Manual Operation"

D. TASK STANDARD

1. Satisfactory task completion is indicated when HPCI is started up in the CST to CST Mode with system flowrate at 5000 gpm at 100 to 300 psig above reactor pressure.

2. Estimated time to complete: 14 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to startup the HPCI system in the CST to CST Mode using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Reactor is at 100% power.

2. The HPCI System is set up for operation in accordance with SO 23.1.A-2, "HPCI System Setup for Automatic or Manual Operation".

3. Rad Protection has been notified to monitor radiological conditions.

4. The HPCI Lube Oil Tank Level is filled to within two inches of the top of the sightglass.

5. The oil level in both of the HPCI Booster Pump Bearing sightglasses is between the MIN and MAX markings.

6. The HPCI turbine oil temperatures are presently 85°F.

7. "B" RHR loop is in Torus Cooling in accordance with SO 10.1.D-2 "RHR System Torus Cooling".

8. SBGT is in service in accordance with SO 9A.1.B, "Standby Gas Treatment System Manual Startup".

9. ST-O-007-540-2, "Torus Water Temperatures" is in progress.

G. INITIATING CUE

The Control Room Supervisor directs you to startup the HPCI system in the CST to CST Mode in accordance with SO 23.1.B-2 "HPCI System Manual Operation" with a flowrate of 5000 gpm at 100 to 300 psig above reactor pressure.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure SO 23.1.B-2.	P	A copy of procedure SO 23.1.B-2 is obtained.
2	Verify the HPCI steam lines to AND from the Turbine are drained. (Cue: Annunciators 221 D-2 and E-2 are NOT lit.)	P	Annunciators 221 D-2 and E-2 verified NOT lit at panel 20C204B.
3	Start the gland seal condenser vacuum pump 20K002. (Cue: Acknowledge control switch operation.)	P	Gland seal condenser vacuum pump control switch is placed in the "START" position at panel 20C004B.
4	Verify the gland seal condenser vacuum pump 2OK002 is running. (Cue: 20K002 red light is on, green light is off.)	P	20K002 red light is verified ON at panel 2OC004B.
*5	Throttle open MO-2-23-021, "Full Flow Test" until the red "OPEN" indicating light has been lit for 3 to 4 seconds. (Cue: MO-21 green light is on, red light has been on for 3 to 4 seconds.)	P	M0-2-23-021 control switch is momentarily placed in the "OPEN" position. Approximately 3 to 4 seconds after the red light lit, the red stop travel pushbutton is depressed at panel 20C004B.
*6	Open MO-2-23-024, "Cond. Tank Return" valve. (Cue: Acknowledge control switch operation.)	P	MO-2-23-024 control switch is momentarily placed in the "OPEN" position at panel 20C004B.
7	Verify MO-2-23-024, "Cond. Tank Return" opened. (Cue: MO-24 red light is on, green light is off.)	P	MO-2-23-024 red light is verified ON at panel 20C004B.

STEP NO	STEP	ACT	STANDARD
*8	Simultaneously start the Auxiliary Oil Pump (20P026), and open MO-2-23-014, "Supply" valve. (Cue: Acknowledge control switch operation.)	P	Auxiliary Oil Pump control switch is placed in the "START" position and MO-2-23-014 control switch is momentarily placed in "OPEN" position simultaneously at panel 20C004B.
9	Verify the Auxiliary Oil pump started. (Cue: Auxiliary Oil pump red light is on, green light is off and annunciator 222 D-5 is alarming.)	P	Auxiliary Oil Pump red light is verified ON at panel 20C004B.
10	Verify MO-2-23-014, "Supply" valve opened. (Cue: MO-14 red light is on, green light is off, HPCI discharge pressure, flow, speed and exhaust pressure rise, Aux. oil pump red light is off and green light is on.)	P	MO-2-23-14 red light verified ON and HPCI speed, discharge pressure, and flow are verified at panel 20C004B.
11	Verify the proper start of HPCI. (Cue: PI-2-23-109, FI-2-23-108, SPI-4505, PI-2-23-112 increasing and Aux Oil Pump red light is off, green light is on.)	P	Verify pump discharge pressure, discharge flow, speed and exhaust pressure increase and then stabilize. Verify Aux Oil Pump red light is off, green light is ON at panel 2OC004B.
12	Verify pump flowrate of 5000 gpm on FI-2-23-108. (Cue: FI-2-23-108 indicates 5000 gpm.)	P	FIC-2-23-108 setpoint is adjusted to obtain 5000 gpm on FI-2-23-108 at panel 20C004B.
*13	Throttle MO-2-23-021 to obtain desired pressure. (Cue: Acknowledge control switch operation. PI-2-23-109 reads 1250 psig, FI-2-23-108 reads 5000 gpm.)	P	MO-2-23-021 control switch is closed to raise pressure, opened to lower pressure and red stop travel pushbutton is depressed to obtain a pressure of 1050 to 1350 psig on PI-2-23-109 while maintaining turbine speed greater than 2200 rpm at SPI-4505 at panel 20C004B.
14	Inform Control Room Supervisor of task completion. (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When HPCI is running in the CST to CST Mode at 5000 gpm at 100-300 psig above Reactor Pressure, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

1. Reactor is at 100% power.

2. The HPCI System is set up for operation in accordance with SO 23.1.A-2, "HPCI System Setup for Automatic or Manual Operation".

3. Rad Protection has been notified to monitor radiological conditions.

4. The HPCI Lube Oil Tank Level is filled to within two inches of the top of the sightglass.

5. The oil level in both of the HPCI Booster Pump Bearing sightglasses is between the MIN and MAX markings.

6. The HPCI turbine oil temperatures are presently 85°F.

7. "B" RHR loop is in Torus Cooling in accordance with SO 10.1.D-2 “RHR System Torus Cooling”.

8. SBGT is in service in accordance with SO 9A.1.B, "Standby Gas Treatment System Manual Startup".

9. ST-O-007-540-2, "Torus Water Temperatures" is in progress.

INITIATING CUE

The Control Room Supervisor directs you to startup the HPCI system in the CST to CST Mode in accordance with SO 23.1.B-2 “HPCI System Manual Operation” with a flowrate of 5000 gpm at 100 to 300 psig above reactor pressure.

PECO NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2880140401 / PLOR-095C K/A: 272000A4.02
URO: 3.0 SRO: 3.0

TASK DESCRIPTION: Raising Main Steam Line Tunnel High Temperature Setpoints

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

Numac Key for TIS-80547A

C. REFERENCES

Procedure AO 40B.1-2 Rev. 9, "Raising Main Steam Line Tunnel PCIS Group I High Temp. Trip Setpoint"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the trip setpoint for the TE-4931A Main Steam Line Tunnel temperature instrument has been raised to 250°F.

2. Estimated time to complete: 10 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to raise the Main Steam Line Tunnel high temperature trip setpoint using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

Shift Manager's permission to perform this procedure has been obtained.

G. INITIATING CUE

The Control Room Supervisor directs you to raise the trip setpoint for the 'A' Main Steam Line Tunnel Temperature instrument, TE-4931A, using AO 40B.1-2, "Raising Main Steam Line Tunnel PCIS Group I High Temperature Trip Setpoint".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
*1	At Panel 2AC270 insert key in TIS-80547A, turn to "Inop" mode. (Cue: Acknowledge key in "Inop" position.)	P	Key placed in "Inop" position on TIS-80547A
*2	Use the "ETC" key to display "Enter Inop-Set". (Cue: Acknowledge "Enter Inop Set" on screen.)	P	"Enter Inop Set" displayed on screen.
*3	Depress "Enter Inop-Set" soft key. (Cue: Acknowledge pushbutton operation.)	P	"Enter Inop Set" softkey depressed.
*4	Enter password (1234) within 10 seconds and press enter on keypad. (Cue: Acknowledge password entered properly.)	P	Password entered properly.
*5	Move cursor to A1-1 and select "Set RTD Parameters". (Cue: Acknowledge "Set RTD Parameters" on screen.)	P	Cursor moved to A1-1 position and "Set RTD Parameter" is selected.
*6	Use the "Next Parameter" key to get to page 4 of 4. (Cue: Acknowledge page 4 of 4 displayed.)	P	Page 4 of 4 is displayed on screen.
7	Record "As Found isolation Setpoint" on Table 1.	P	"As Found Isolation Setpoint" recorded on Table 1.
*8	Move cursor right to desired "Isolation Setpoint" and use the up/down keys to change setpoint to 250°F. (Cue: Acknowledge setpoint at 250°F.)	P	"Isolation Setpoint" is raised to 250°F.
*9	Press "Accept" soft key. (Cue: Acknowledge pushbutton operation.)	P	"Accept" softkey depressed.
*10	Press "Exit" key. (Cue: Acknowledge pushbutton operation.)	P	"Exit" softkey depressed.

STEP NO	STEP	ACT	STANDARD
*11	Press "Exit Inop-set" key. (Cue: Acknowledge pushbutton operation.)	P	"Exit Inop Set" softkey depressed.
*12	Press the "Yes" key. (Cue: Acknowledge pushbutton operation.)	P	"Yes" softkey depressed.
*13	Place key in "Operate" mode. (Cue: Acknowledge key in "Operate" position.)	P	Key placed in "Operate" position on TIS-80547A (B, C, D).
14	Press "Reset Memory" key. (Cue: Acknowledge pushbutton operation.)	P	"Reset-Memory" softkey depressed.
15	Record time and adjusted isolation setpoint temperature on Table 1.	P	Time and isolation setpoint recorded on Table 1.
16	Inform Shift Supervisor of task completion. (Cue: Shift Supervisor acknowledges report.)	P	Task completion reported.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When the setpoint for the Main Steam Tunnel temperature instrument, TE-4931A, has been adjusted to 250°F, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

Shift Manager's permission to perform this procedure has been obtained.

INITIATING CUE

The Control Room Supervisor directs you to raise the trip setpoint for the 'A' Main Steam Line Tunnel Temperature instrument, TE-4931A, using AO 40B.1-2, "Raising Main Steam Line Tunnel PCIS Group I High Temperature Trip Setpoint".

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2640060101 / PLOR-045C K/A: 264000A4.04

URO: 3.7 SRO: 3.7

TASK DESCRIPTION: Unload and Shutdown the Diesel Generator

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

Synchronizing switch removable handle

C. REFERENCES

1. Procedure SO 52A.1.B, Rev. 24, "Diesel Generator Operations"

2. Procedure SO 33.2.A, Rev. 2, "Emergency Service Water System Setup for Normal Standby Operation"

D. TASK STANDARD

1. Satisfactory task completion is indicated when E-4 Diesel Generator is shutdown with 2SUE supplying E-43 bus.

2. Estimated time to complete: 17 minutes <u>Non-Time Critical</u>

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to unload and shutdown the E-4 Diesel Generator using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. E-4 Diesel Generator is in parallel with 2SUE supplying the E-43 bus.

2. E-4 Diesel Generator has been loaded to ≈ 1400 KW and ≈ 1000 KVAR for its entire run time.

3. "A" ESW pump is supplying D/G cooling water.

G. INITIATING CUE

The Control Room Supervisor directs you to unload and shutdown the E-4 Diesel Generator and the running ESW pump in accordance with SO 52A.1.B, "Diesel Generator Operations" Step 4.5.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure SO 52A.1.B.	P	A copy of procedure SO 52A.1.B is obtained.
2	Reduce D/G load to 100-150 KW. (Cue: [COUNTERCLOCKWISE, GOVERNOR control switch is taken to "LOWER"] E-4 D/G KW meter lowers to 100 KW.)	P	E-4 D/G load is lowered to 50-200 KW on the E-4 D/G KW meter by taking the "GOVERNOR" control switch 165-DG12 to "LOWER" at panel 00C026D.
3	Reduce D/G VAR load to 50 KVAR (Cue: [COUNTERCLOCKWISE, "AUTO VOLT REG" control switch is taken to "LOWER"] E-4 D/G VAR meter lowers to 50 KVAR.)	P	E-4 D/G load is lowered to 25-100 KVAR on the E-4 D/G VAR meter by taking the E-4 D/G AUTO VOLT REG. Control Switch 90-DG14 to "LOWER" at panel OOC026D.
*4	Trip the E-43 Breaker. (Cue: Acknowledge control switch operation.)	P	E-43 Breaker control switch is momentarily placed in the TRIP position at panel 00C026D.
5	Verify the E-43 Breaker is open. (Cue: E-43 breaker green light is on, red light is off, E-4 D/G "WATTS" meter indicates 0 KW, E-4 D/G VAR meter indicates 0 KVAR.)	P	E-43 Breaker green light on, E-4 D/G "WATTS" meter indicates Ø KW, VAR meter indicates Ø KVAR are verified at panel 00C026D.
*6	Shutdown the E-4 D/G by momentarily taking the "START/ STOP" switch (101-DG12) to "STOP". (Cue: Acknowledge control switch operation.)	P	E-4 D/G control switch, 101-DG12, is momentarily placed in the STOP position at panel 00C026D.
7	Verify the E-4 D/G shuts down. (Cue: E-4 D/G green light on, red light off, E-4 D/G Voltmeter drops toØ .)	P	E-4 D/G green light verified ON and Voltmeter verified to drop toØ volts at panel 00C026D.
8	Obtain a copy of procedure SO 33.2.A.	P	A copy of procedure SO 33.2.A is obtained.

STEP NO	STEP	ACT	STANDARD
9	Stop running "A" Emergency Service water pump. (Cue: Acknowledge control switch operation.)	P	Turns the "A" ESW pump control switch to "STOP" and allows the control switch to spring return to "NORMAL" at panel 00C026B.
10	Verify "A" ESW pump is secured. (Cue: "A" ESW pump green light lit, pump control switch is green flagged, pump discharge pressure on PI-0236A and motor amps on "A" ESW pump motor ammeter go to zero.)	P	"A" ESW pump discharge pressure on PI-0236A and amps on "A" ESW pump motor ammeter are verified going to zero at panel 00C026B.
11	Inform Control Room Supervisor of task completion. (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When E-4 Diesel Generator is shutdown, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

1. E-4 Diesel Generator is in parallel with 2SUE supplying the E-43 bus.

2. E-4 Diesel Generator has been loaded to ≈ 1400 KW and ≈ 1000 KVAR for its entire run time.

3. "A" ESW pump is supplying D/G cooling water.

INITIATING CUE

The Control Room Supervisor directs you to unload and shutdown the E-4 Diesel Generator and the running ESW pump in accordance with SO 52A.1.B, "Diesel Generator Operations" Step 4.5.

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2610050101 / PLOR-044C K/A: 261000A4.03

URO: 3.0 SRO: 3.0

TASK DESCRIPTION: Manually Start SBGT System

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

1. Procedure SO 9A.1.B Rev. 8, "Standby Gas Treatment System Manual Startup"

2. Procedure ST-O-09A-500-2, Rev. 3 "Standby Gas Treatment Filter Train Operation Log"

D. TASK STANDARD

1. Satisfactory task completion is indicated when Standby Gas Treatment System in operation with:

   a. "A" SBGT fan running.

   b. "A" Filter train in service.

2. Estimated time to complete: 10 minutes <u>Non-Time Critical</u>

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to manually start the Standby Gas Treatment System using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Standby Gas Treatment System is lined up for automatic operation in accordance with SO 9A.1.A, "Standby Gas Treatment System Lineup for Automatic Operation".

2. Standby Gas Treatment System is required for HPCI System operation.

3. The "B" SBGT filter train run time is greater than the "A" SBGT filter train run time.

G. INITIATING CUE

The Control Room Supervisor directs you to start the Standby Gas Treatment System in preparation for HPCI System operation in accordance with SO 9A.1.B "Standby Gas Treatment System Manual Startup".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure SO 9A.1.B.	P	A copy of procedure SO 9A.1.B is obtained.
2	Notify Health Physics prior to starting SBGT for Unit 2 HPCI operations. (Cue: Health Physics acknowledges notification.)	P	Health Physics has been notified that SBGT is going to be started.
*3	Open AO-00475-1, SBGT "A" Filter Inlet damper. (Cue: Acknowledge control switch operation.)	P	AO-00475-1 control switch is placed in the "OPEN" position at panel 20C012.
4	Verify AO-00475-1 SBGT "A" Filter Inlet damper is open. (Cue: AO-0475-1 red light is on, green light is off.)	P	AO-00475-1 red light is verified ON at panel 20C012.
5	Acknowledge the "STAND-BY GAS TREATMENT FILTERS NOT IN AUTO" annunciator. (Cue: Annunciator 216 A-5 is not lit.)	P	The annunciator "ACKNOWLEDGE" pushbutton is depressed at panel 20C012.
*6	Open AO-00475-2 SBGT "A" Filter Outlet damper. (Cue: Acknowledge control switch operation.)	P	AO-00475-2 control switch is placed in the "OPEN" position at panel 20C012.
7	Verify AO-00475-2 SBGT "A" Filter Outlet damper is open. (Cue: AO-00475-2 red light is on, green light is off.)	P	AO-00475-2 red light is verified ON at panel 20C012.
8	Verify AO-20469-1 D/W Rx Bldg Equip Exh damper is Closed. (Cue: AO-20469-1 green light is on, red light is off.)	P	AO-20469-1 green light is verified ON at panel 20C012.

STEP NO	STEP	ACT	STANDARD
9	Verify AO-20469-2 D/W Rx Bldg Equip Exh damper is Closed. (Cue: AO-20469-2 green light is on, red light is off.)	P	AO-20469-2 green light is verified ON at panel 20C012.
*10	Start "A"("B") SBGT Fan. (Cue: Acknowledge control switch operation.)	P	"A"("B") SBGT Fan control switch is placed in the "RUN" position at panel 20C012.
11	Verify the proper start of the "A"("B") SBGT Fan. (Cue: "A"("B") SBGT Fan red light is on, green light is off.)	P	"A"("B") SBGT Fan red light is
	******NOTE ****** **SBGT system flows and system differential pressures do not need to be verified in a specific range for HPCI System operation.**		
12	Log the start time for the filter train in service in accordance with ST-0-09A-500-2. (Cue: Log entry made.)	P	Log entry made in SBGT Filter Train Run Log.
13	Inform Control Room Supervisor of task completion. (Cue: Control Room Supervisor acknowledges report.)	P	Task completion reported.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When SBGT system is running to support HPCI operation, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

1. Standby Gas Treatment System is lined up for automatic operation in accordance with SO 9A.1.A, "Standby Gas Treatment System Lineup for Automatic Operation".

2. Standby Gas Treatment System is required for HPCI System operation.

3. The "B" SBGT filter train run time is greater than the "A" SBGT filter train run time.

INITIATING CUE

The Control Room Supervisor directs you to start the Standby Gas Treatment System in preparation for HPCI System operation in accordance with SO 9A.1.B "Standby Gas Treatment System Manual Startup".

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2001500401/ PLOR-316P K/A: 201001A2.09

URO: 3.2 SRO: 3.1

TASK DESCRIPTION: Low CRD Scram Air Header Pressure - Unit 3 (Alternate Path - Standby Regulator Must be Placed In Service)

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

Procedure ON-108, Rev. 6, "Low CRD Scram Air Header Pressure"

D. TASK STANDARD

1. Satisfactory task completion is indicated when Unit 3 scram air header PCV-5239A is in service and PCV-5239B has been removed from service.

2. Estimated time to complete: 14 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps of ON-108, "Low CRD Scram Air Header Pressure" procedure. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Unit 3 is operating at full power steady state conditions.

2. "SCRAM VALVE PILOT AIR HEADER PRESS HI-LO" annunciator is up on alarm panel 311 D-2.

3. The cause of low scram air header pressure condition is NOT caused by a loss of the Instrument Air system.

4. Scram air header PCV-5239B is presently in service.

G. INITIATING CUE

The Control Room Supervisor directs you, the Equipment Operator, to restore the Unit 3 CRD scram air header pressure to approximately 73 psig per procedure ON-108, "Low CRD Scram Air Header Pressure".

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure ON-108.	P	A copy of procedure ON-108 is obtained.
2	Verify low scram air header pressure locally on PI-3-03-229 at CRD flow nest. (Cue: PI-3-3-229 indicates 63 psig.)	P	Scram air header pressure is monitored on PI-3-3-229.
3	Check normal operation of the inservice scram air header pressure control regulator by observing loading pressure of approximately 80 psig and control pressure of approximately 75 psig on PCR-3-03-31688B pressure control regulator for PCV-5239B. (Cue: Loading pressure is approximately 80 psig, control pressure is 63 psig.)	P	Loading Pressure and control pressure is monitored on PCR-3-03-31688B.
*4	Adjust PCR knob (red knob) clockwise to raise scram air header pressure to 67 to 75 psig on PI-3-03-229. (Cue: Red knob on PCR-3-03-31688B is turned (clockwise) until it will not turn further, PI-3-3-229 indicates 65 psig.)	S	PCR-3-03-31688B red knob is turned clockwise while observe PI-3-3-229 until the knob will not turn further.
******NOTE****** **If requested the evaluator will serve as the second equipment operator to monitor pressure.**			
*5	Open HV-3-3-31681A, Instr Air Inlet Block Vv to PCV-3-03-5239A. (Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)	S	HV-3-3-31681A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.
*6	Open HV-3-3-31682A, Instr Air Outlet Block Vv from PCV-3-03-5239A. (Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)	S	HV-3-3-31682A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.

STEP NO	STEP	ACT	STANDARD
*7	Open HV-3-3-31686A, Instr Air Back Pressure to PCV-5239A. (Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)	S	HV-3-3-31686A handwheel is turned COUNTERCLOCKWISE until resistance of valve backseat is felt.
*8	Slowly open HV-3-3-31685A, Instrument Air Block Valve to PCV-5239A. (Cue: Valve handwheel is turned [COUNTERCLOCKWISE] until stem length above valve yoke rises 1 inch, then will not turn.)	S	HV-3-3-31685A handwheel is turned COUNTERCLOCKWISE slowly until resistance of valve backseat is felt.
*9	Adjust scram air header pressure to between 67 and 75 psig using the red knob on PCR-3-03-31688A. (Cue: Red knob on PCR-3-03-31688A is adjusted. Scram air header pressure is 73 psig.)	S	PCR-3-03-31688A is manipulated to adjust scram air header pressure monitored on PI-3-03-229.
10	Close HV-3-3-31685B, Instrument Air Block Valve to PCV-5239B. (Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn.)	S	HV-3-3-31685B handwheel is turned CLOCKWISE until resistance of valve seat is felt.
11	Close HV-3-3-31686B, Instr Air Back Pressure to PCV-5239B. (Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn.)	S	HV-3-3-31686B handwheel is turned CLOCKWISE until resistance of valve seat is felt.

STEP NO	STEP	ACT	STANDARD
12	Slowly close HV-3-3-31681B, Instr Air Inlet Block Vv to PCV-5239B. (Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn further.)	S	HV-3-3-31681B handwheel is turned CLOCKWISE slowly until resistance of valve seat is felt.
13	Close HV-3-3-31682B, Instr Air Outlet Block Vv from PCV-5239B. (Cue: Valve handwheel is turned [CLOCKWISE] until stem length above valve yoke lowers 1 inch, then handwheel will not turn.)	S	HV-3-3-31682B handwheel is turned CLOCKWISE until resistance of valve seat is felt.
14	Verify proper operation of the standby scram air header PCR, PCR-3-03-31688B "Pressure Control Regulator for PCV-5239B" by observing Loading Pressure of approximately 80 psig and Control Pressure of 75 psig. (Cue: Loading pressure is approximately 80 psig, Control Pressure is 75 psig.)	P	Loading Pressure and Control Pressure is monitored on PCR-3-03-31688B.
15	Verify scam air header pressure on PI-3-03-229 at the CRD flow nest is satisfactory (67 to 75 psig). (Cue: Scram air header pressure is 73 psig on PI-3-03-229.)	P	Scram air header pressure is monitored on PI-3-03-229.
16	Inform Control Room of task completion. (Cue: Control Room acknowledges report.)	S	Task completion reported using telephone, hand held radio or GAI-TRONICS page system.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When Unit 3 scram air header PCV-5239A is in service and PCV-5239B has been removed from service, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

1. Unit 3 is operating at full power steady state conditions.

2. "SCRAM VALVE PILOT AIR HEADER PRESS HI-LO" annunciator is up on alarm panel 311 D-2.

3. The cause of low scram air header pressure condition is NOT caused by a loss of the Instrument Air system.

4. Scram air header PCV-5239B is presently in service.

INITIATING CUE

The Control Room Supervisor directs you, the Equipment Operator, to restore the Unit 3 CRD scram air header pressure to approximately 73 psig per procedure ON-108, "Low CRD Scram Air Header Pressure".

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2170270499 / PLOR-056P K/A: 21700069
URO: 3.9 SRO: 3.5

TASK DESCRIPTION: Resetting a RCIC Mechanical Overspeed Trip

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

None

C. REFERENCES

SO 13.7.A-2 Rev.11, "Recovery from RCIC System Isolation or Turbine Trip"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the Unit 2 RCIC Trip Throttle Valve is reset.

2. Estimated time to complete: 14 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to reset the Unit 2 RCIC Trip Throttle Valve using appropriate procedures. I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Unit 2 plant startup in progress; reactor pressure is 150 psig.

2. RCIC turbine overspeed trip occurred during performance of the RCIC flowrate test at 150 psig.

3. The cause of the turbine overspeed trip has been corrected.

G. INITIATING CUE

The Control Room Supervisor directs you, the Equipment Operator, to reset the Unit 2 RCIC Trip Throttle Valve per step 4.3.4 of procedure SO 13.7.A-2, "Recovery from RCIC System Isolation or Turbine Trip". All prior procedure steps have been completed.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure SO 13.7.A-2.	P	A copy of procedure SO 13.7.A-2 is obtained.
*2	Pull and hold connecting rod toward Trip-Throttle Valve. (Cue: Connecting rod is pulled toward Trip-Throttle Valve and held.)	S	RCIC mechanical overspeed trip Connecting Rod is pulled towards the Trip-Throttle Valve.
3	While holding connecting rod, verify tappet retracts into housing. (Cue: Tappet is retracted into housing.)	P	Visually verify tappet is retracted into housing.
4	Slowly release connecting rod. (Cue: Connecting rod has been released.)	S	Connecting rod is released slowly.
5	Verify proper contact of head lever and tappet as shown in Figure 1. (Cue: Head lever and tappet show proper contact.)	P	Compare contact of head lever and tappet with Figure 1.
6	Verify that the Trip-Throttle Valve latch lever is fully engaged with the trip hook as shown in Figure 1. (Cue: Trip-Throttle Valve latch lever is fully engaged.)	P	Compare latch lever fully engaged as shown in Figure 1.
7	Inform Control Room Supervisor of task completion. (Cue: Control Room Supervisor acknowledges report.)	S	Task completion reported using hand held radio, GAI-TRONICS page system, or plant telephone.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When the Unit 2 RCIC Trip-Throttle Valve is reset, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

1. Unit 2 plant startup in progress; reactor pressure is 150 psig.

2. RCIC turbine overspeed trip occurred during performance of the RCIC flowrate test at 150 psig.

3. The cause of the turbine overspeed trip has been corrected.

INITIATING CUE

The Control Room Supervisor directs you, the Equipment Operator, to reset the Unit 2 RCIC Trip Throttle Valve per step 4.3.4 of procedure SO 13.7.A-2, "Recovery from RCIC System Isolation or Turbine Trip". All prior procedure steps have been completed.

EXELON NUCLEAR
PEACH BOTTOM ATOMIC POWER STATION
JOB PERFORMANCE MEASURE

POSITION TITLE: Unit Reactor Operator/Senior Reactor Operator

TASK-JPM DESIGNATOR: 2390110401 / PLOR-313PA K/A: 239001G.09

URO: X.X SRO: X.X

TASK DESCRIPTION: Closing a Stuck Open MSIV – Alternate Path (Unit 3)

A. NOTES TO EVALUATOR:

1. An asterisk (*) before the step number denotes a CRITICAL STEP. CRITICAL STEPS are those steps which when not performed correctly will prevent the system from functioning properly or prevent successful task completion.

2. System cues included in the performance checklist are to be provided to the examinee when no system response is available.

3. JPM Performance

   a. "Control Room" JPMs are designed to be performed in the simulator. If a "Control Room" JPM is to be performed in the Control Room all perform steps (P) shall be simulated (S).

   b. When performing "In-Plant" JPMs, no equipment will be operated without Shift Management approval.

4. Satisfactory performance of this JPM is accomplished if:

   a. The task standard is met.

   b. JPM completion time requirement is met.

      1) For non-time critical JPMs, completion within double the estimated time (listed in paragraph D.2) is acceptable provided the evaluator determines that the progress to completion is acceptable.

      2) For time critical JPMs, completion within the estimated time (listed in paragraph D.2) is required.

5. The estimated time to complete this JPM, though listed in the task standard, is not to be given to the examinee.

B. TOOLS AND EQUIPMENT

1. Insulated Fuse Pullers

2. Radio

C. REFERENCES

AO 1A.2-3, Rev. 6, "Closing a Stuck Open Outboard Main Steam Isolation Valve"

D. TASK STANDARD

1. Satisfactory task completion is indicated when the Unit 3 Reactor Building 135' Elevation Instrument Air headers have been vented.

2. Estimated time to complete: 22 minutes Non-Time Critical

E. DIRECTIONS TO EXAMINEE

When given the initiating cue, perform necessary steps to close the stuck open outboard MSIVs using AO 1A.2-3, "Closing a Stuck Open Outboard Main Steam Isolation Valve". I will describe initial plant conditions and provide you access to the materials required to complete this task.

F. TASK CONDITIONS/PREREQUISITES

1. Unit 3 has just been manually scrammed (by placing the Mode Switch in "Shutdown").

2. RPV level is -175 inches (Group 1 isolation signal is present).

3. All outboard MSIVs failed to isolate.

4. Proper operation of SGIG system has been verified in accordance with SO 16B.8.A-3, "Backup Seismic Instrument Nitrogen System Routine Inspection".

5. Radiological conditions do NOT allow entry into the Outboard MSIV Room.

G. INITIATING CUE

The Control Room Supervisor directs you to close the Unit 3 outboard MSIVs in accordance with AO 1A.2-3, "Closing a Stuck Open Outboard Main Steam Isolation Valve", beginning with step 4.1.

H. PERFORMANCE CHECKLIST

STEP NO	STEP	ACT	STANDARD
1	Obtain a copy of procedure AO 1A.2-3 and a set of insulated fuse pullers.	P	A copy of procedure AO 1A.2-3 and a set of insulated fuse pullers are obtained.
	**** NOTE **** **Examinee should utilize sections 4.1 AND 4.3 of AO 1A.2-3.**		
2	Open panel 30C042 front panel doors. (Cue: Panel 30C042 doors are open.)	P	Door handle turned, doors pulled outward to gain access to the outboard MSIV AC and DC solenoid valve fuses at the front of panel 30C042 in the Cable Spreading Room.
3	Pull the outboard MSIV AC solenoid valve fuse 16A-F12B. (Cue: Fuse is removed.)	S	Fuse puller is attached to outboard MSIV AC solenoid valve fuse 16A-F12B fuse if pulled outward until fuse is free of fuse holder.
4	Direct the Unit Reactor Operator to monitor outboard MSIV position indication. (Cue: Outboard MSIVs are open, continue with the procedure.)	S	Unit Reactor Operator is contacted to monitor outboard MSIV position indication.
5	Pull the outboard MSIV DC solenoid valve fuse 16A-F11B. (Cue: Fuse is removed.)	S	Fuse puller is attached to outboard MSIV DC solenoid valve fuse 16A-F11B. Fuse is pulled outward until fuse is free of fuse holder.
6	Direct the Unit Reactor Operator to monitor Main Steam line flow using FI-3-06-088A,B,C,D on panel 30C008A. (Cue: Main Steam line FI-3-06-088A,B,C,D are NOT reading downscale. Position indication for all outboard MSIVs has been lost.)	S	Unit Reactor Operator is contacted to monitor Main Steam line flow on FI-3-06-088A,B,C,D at panel 30C008A.
7	Install fuse 16A-F11B. (Cue: Fuse is installed.)	S	Fuse puller is attached to outboard MSIV DC solenoid valve fuse 16A-F11B. Fuse is inserted until fuse is installed in fuse holder.
8	Close panel 30C042 front panel doors. (Cue: Panel 30C042 doors are closed.)	P	Door closed and relatched using handle.
9	Direct the Unit Reactor Operator to verify RWCU isolation. (Cue: RWCU is isolated.)	S	Unit Reactor Operator is contacted to verify RWCU isolation.

STEP NO	STEP	ACT	STANDARD
10	Direct the Unit Reactor Operator to open Backup N_2 to ADS valves SV-9130A(B) in accordance with SO 16A.7.A-3. (Cue: SV-9130A(B) are open in accordance with SO 16A.7.A-3. If asked to verify proper operation of SGIG system, then report that the SGIG system is operating properly in accordance with SO 16B.8.A-3.)	S	Unit Reactor Operator is contacted to verify Backup N_2 to ADS valves SV-9130A(B) in accordance with SO 16A.7.A-3.
*11	Close Instrument Air A(B) Header Isolation valves HV-3-36B-56981A <u>AND</u> HV-3-36B-56981B. (Cue: The valve handwheels have been turned clockwise until they will turn no further.)	S	HV-3-36B-56981A and HV-3-36B-56981B handwheels turned clockwise until the resistance of the valve seats are felt at the 3B Recirc MG Set area.
12	Verify open Instrument Air Supply to DT-5695 Inlet Block valve HV-3-36B-54642. (Cue: The valve handwheel is turned slightly in the clockwise direction and then turned counterclockwise to the original position.	S	An attempt is made to turn HV-3-36B-54642 handwheel is turned slightly in the clockwise direction and then turned counterclockwise to the original position at the 3B Recirc MG Set area.
13	Verify open Instrument Air Supply to DT-5696 inlet block valve HV-3-36B-54643. (Cue: The valve handwheel is turned slightly in the clockwise direction and then turned counterclockwise to the original position.	S	An attempt is made to turn HV-3-363-54643 handwheel is turned slightly in the clockwise direction and then turned counterclockwise to the original position at the 3B Recirc MG Set area.
14	Notify the Control Room that venting is commencing and to perform more frequent monitoring of MSIV position. (Cue: Control Room acknowledges notification.)	S	Unit Reactor Operator is contacted and notified of venting and MSIV position monitoring.
*15	Simultaneously press and hold Drain Trap Bypass switches HS-3-36B-5695 <u>AND</u> HS-3-36B-5696. (Cue: HS-3-36B-5695 <u>AND</u> HS-3-36B-5696 are simultaneously depressed and held. You hear air flowing from both Drain Traps. The sound of the air flowing through the drain traps is diminishing.)	S	Drain Trap Bypass pushbuttons HS-3-36B-5695 <u>AND</u> HS-3-36B-5696 are simultaneously depressed and held at the 3B Recirc MG Set area.

STEP NO	STEP	ACT	STANDARD
16	When it is reported that all Unit 3 Outboard MSIVs are closed, then release both Drain Trap Pushbuttons HS-3-36B-5695 and HS-3-36B-5696. (Cue: You hear a report through your radio that all of the Unit 3 Outboard MSIVs are closed and both Drain Trap Pushbuttons HS-3-36B-5695(6) may be released.)	S	Drain Trap Bypass pushbuttons HS-3-36B-5695 AND HS-3-36B-5696 are released in the 3B Recirc MG Set area.
17	Inform Control Room Supervisor of task completion. (Cue: Control Room Supervisor acknowledges report. Outboard MSIVs are closed.)	S	Task completion reported using telephone, hand held radio or GAI-TRONICS page system.

Under "ACT" P - must perform
S - must simulate

I. TERMINATING CUE

When the Unit 3 outboard MSIVs are closed, the Control Room Supervisor should be informed. The evaluator will then terminate the exercise.

TASK CONDITIONS/PREREQUISITES

1. Unit 3 has just been manually scrammed (by placing the Mode Switch in "Shutdown").

2. RPV level is -175 inches (Group 1 isolation signal is present).

3. All outboard MSIVs failed to isolate.

4. Proper operation of SGIG system has been verified in accordance with SO 16B.8.A-3, "Backup Seismic Instrument Nitrogen System Routine Inspection".

5. Radiological conditions do <u>NOT</u> allow entry into the Outboard MSIV Room.

INITIATING CUE

The Control Room Supervisor directs you to close the Unit 3 outboard MSIVs in accordance with AO 1A.2-3, "Closing a Stuck Open Outboard Main Steam Isolation Valve", beginning with step 4.1.