Exelon Nuclear

CLINTON POWER STATION

Job Performance Measure

Reset a Recirc Flow Control Valve Lockout

JPM Number: JPM110

Revision Number: 00

Date: 02/25/09

Developed By:	**Tom Pickley**	**02/25/09**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	02/25/09	Converted from old JPM

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

1. Any power IC with Recirc in operation.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Manually lockout the B Recirc Flow Control Valve.

3. Lower the Flow Controller output to cause a 3% Servo Error.

4. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

5. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- B FCV lockout is reset IAW CPS No.3302.01 Reactor Recirculation.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

CPS 3302.01, Rev. No. 30a Reactor Recirculation

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

You are the A CRO. The plant is operating at power. The B Recirc Flow Control Valve was manually locked out to perform maintenance. The maintenance is complete. Positive plant control has been verified. No adjustment of the FCV will be needed after the lockout is reset.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Reset the Flow Control Valve lockout per 3302.01.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

CPS 3302.01, Reactor Recirculation

1	8.4.1.1 Maintain steady state power and balanced recirc loop flows, if possible, by adjusting the operable FCV.
Standard:	Examinee verifies FCV positions and DCS and determines no adjustment is necessary.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

2	8.4.1.2 Determine/correct the cause of the lockout from alarm indicators on 1H13-P614 and/or the annunciators on 1H13-P680.
Standard:	Determines that Annunciator 5003-4H is due to the manual lockout based on initiating cue.
Cue:	If asked, there are no alarms on 1H13-P614 other than those caused by the manual lockout.
Comments	The next step 8.4.1.3 is N/A. No FCV runback signal is present. SAT ☐ UNSAT ☐ Comment Number _____

***3**	**8.4.1.4** **Zero the B loop SERVO ERROR.**
Standard:	Adjusts B Flow Controller output with the slide switch to Zero the SERVO ERROR.
Cue:	
Comments	The next step 8.4.1.5 is N/A. The initiating cue stated the HPU was running. SAT ☐ UNSAT ☐ Comment Number

Clinton Power Station
Job Performance Measure (JPM)

	4	8.4.1.5 Restore HPU B to normal operation per 3302.02..
Standard:		The B RO (Booth Operator) restores the B HPU to normal operation.
Cue:		As the CRS inform the student that positive plant control has been established and the B RO is at the back panels ready to restore the B HPU to normal operation.
Comments		Cue the booth operator to restore the B HPU when needed. When hydraulics are restored 5003-1H and 3H will clear. 5003-2H will come in and clear. SAT ☐ UNSAT ☐ Comment Number _____

	***5**	**8.4.1.6** **Depress the B FCV A/B Motion Inhibit Reset.** **Verify the lead HPU becomes operational, and FCV motion is no longer inhibited.**
Standard:		Examinee depresses the B FCV Motion Inhibit Reset switch, verifies Motion Inhibit light for FCV B is OUT and annunciator 5003-4H resets.
Cue:		Inform the student as the CRS that no adjustment of the FCV will be needed after the lockout is reset.
Comments		Annunciator 5003-4H will reset when Motion Inhibit Reset is depressed. SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

The B Recirc Flow Control Valve lockout is reset.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Reset a Recirc Flow Control Valve Lockout

JPM Number: JPM110 Revision Number:00

Task Number and Title: 330201.31 Complete Control Room actions to perform FCV Lockout/Reset

K/A System	K/A Number	Importance (RO/SRO)	
202002	A4.08	3.3	3.3

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ■ Perform **Alternate Path:** ☐ Yes ■ No **SRO Only:** ☐ Yes ■ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 10 minutes Actual Time Used: _____ minutes

References: CPS 3302.01,Rev. No. 30a Reactor Recirculation

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITAL CONDITIONS

You are the A CRO. The plant is operating at power. The B Recirc Flow Control Valve was manually locked out to perform maintenance. The maintenance is complete. Positive plant control has been verified. No adjustment of the FCV will be needed after the lockout is reset.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Reset the Flow Control Valve lockout per 3302.01.

Exelon Nuclear

CLINTON POWER STATION

Job Performance Measure

Shutdown HPCS – Initiation Signal Present (Alternate Path)

JPM Number: JPM111

Revision Number: 00

Date: 02/25/09

Developed By:	**Tom Pickley**	**02/25/09**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date
SME/Instructor	Date
SME/Instructor	Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	02/25/09	Converted from old JPM

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

1. Initialize to any suitable IC where HPCS can inject to the RPV and initiate HPCS.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Insert malfunction or initiate a lesson plan to prevent HPCS Pump Min Flow Recirc Valve from closing automatically upon HPCS Pump shutdown.

3. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

4. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- High Pressure Core Spray is shutdown.
- HPCS Pump Min Flow Recirc Valve is manually closed due to failure to automatically close when HPCS Pump is secured.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- CPS No. 3309.01, HIGH PRESSURE CORE SPRAY. Rev. 16, Section 8.1.6

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

1. You are the B operator.
2. The plant is at full power.
3. HPCS has inadvertently initiated and the plant has been stabilized.
4. The initiation signal is still present.
5. IMD is troubleshooting. **Do not** depress the HPCS SEAL IN RESET push-button.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

1. You are directed to shutdown HPCS per CPS 3309.01 section 8.1.6.
2. Inform the CRS when the task is complete.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

8.1.6 Shutdown – Initiation Signal Present

---

1. During HPCS operation, verify as appropriate that 1E22-F012, HPCS Pump Min Flow To Suppr Pool:
   Opens whenever HPCS flow is < 625 gpm with HPCS discharge pressure > 145 psig, and
   Shuts whenever HPCS flow is ≥ 625 gpm.

Standard: Verifies that min flow valve is shut.

Cue:

Comments: Operation of MOV Test Prep Switch for HPCS valve operations may be used during the JPM but is not required.

SAT ☐ UNSAT ☐ Comment Number _____

***2. Shut 1E22-F004, HPCS To CNMT Outbd Isln Valve.**

Standard: The operator places control switch for 1E22-F004 to close. Observes RED light is OFF and GREEN light is ON.

Cue:

Comments: As a competency the examinee shall verify that the HPCS pump min flow valve opens whenever HPCS flow is < 625 gpm with HPCS discharge pressure > 145#.

SAT ☐ UNSAT ☐ Comment Number _____

***3. Stop HPCS Pump, 1E22-C001**

Standard: Operator places control switch for 1E21-C001 to the 'STOP' position. Observes RED light OFF, GREEN light ON.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Begins Alternate Path

The 1E22-F012, HPCS Pump Min Flow To Suppr Pool should automatically shut. The Operators are required to perform any automatic action that did not occur.

***4. Verify 1E22-F012, HPCS Pump Min Flow To Suppr Pool shuts.**

Standard: The Operator observes that 1E22-F012 has not closed, and places control switch for 1E22-F012 to close. Observes RED light is OFF and GREEN light is ON. Reports failure of valve to automatically close to CRS.

Cue: Acknowledge report.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

---

5. Return HPCS pump suction to RCIC Storage Tank per 8.1.7.2 if adequate level is available.

Standard: Observes that HPCS pump suction is still lined up to RCIC Storage Tank.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

6. Verify HPCS Pmp Rm Sply Fan, 1VY08CA stops.

Standard: Operator verifies that fan has stopped. Observes GREEN light is ON and RED light is OFF.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

7. Verify HPCS Pmp Rm Sply Fan, 1VY08CB stops

Standard: Operator verifies that fan has stopped. Observes GREEN light is ON and RED light is OFF.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

Informs the CRS when 8.1.6 is complete with the exception of 8.1.6.8.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Shutdown HPCS – Initiation Signal Present (Alternate Path)

JPM Number: JPM111 Revision Number: 00

Task Number and Title: 330901.05, Complete Control Room actions to perform HPCS Shutdown with Initiation Signal Present.

K/A System	K/A Number	Importance (RO/SRO)	
209002	A2.01	3.8	3.8

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ■ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ■ Yes ☐ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 10 minutes Actual Time Used: _____ minutes

References: CPS No. 3309.01, HIGH PRESSURE CORE SPRAY. Rev. 16, Section 8.1.6

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Clinton Power Station
Job Performance Measure (JPM)

Initial Conditions

1. You are the B operator.
2. The plant is at full power.
5. HPCS has inadvertently initiated and the plant has been stabilized.
6. The initiation signal is still present.
5. IMD is troubleshooting. **Do not** depress the HPCS SEAL IN RESET push-button.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

1. You are directed to shutdown HPCS per CPS 3309.01 section 8.1.6.
2. Inform the CRS when the task is complete.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Blowdown due to high Drywell Temperature (Alternate Path)

JPM Number: JPM107

Revision Number: 01

Date: 02/24/09

Developed By:	**T. Pickley**	**02/24/09**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor	Date
SME/Instructor	Date
SME/Instructor	Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
Rev 01	02/24/09	Updated procedure revision numbers and format

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

1. Reset the simulator to a full power IC.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Insert malfunctions, HP13D and HP13H (to 0%) to fail 2 SRV's 1B21-F041D and 1B21-F047A in the shut position.

3. Insert a manual SCRAM and complete operator actions to control level and secure the Turbine Generator after coasting down.

4. When reactor pressure and level is stable FREEZE the simulator. Verify Drywell Pressure is less than 1.5 psig.

5. Start the simulator when the operator is ready to perform the JPM.

6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

7. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

No equipment or controls will be manipulated during this evaluation, only **Simulated** Actions will occur.

TASK STANDARDS:

- The evolution completed IAW EOP-3, and CPS No. 3101.01 to Manually initiate ADS with 7 Safety Relief Valves opened.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- EOP-3 R28, and CPS No. 3101.01 R20d, Main Steam

EVALUATOR INSTRUCTIONS:

- After completion of the initiating cue repeat back, take the simulator out of FREEZE.
- Amplifying cues are provided within the JPM steps.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

A transient has occurred, the reactor has scrammed. Drywell temperature is 335°F.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

You are to initiate ADS.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

CPS No. 3101.01, Main Steam or the Hard Card

***1.**	**8.2.2.3 Manually initiate ADS:** **Arm and depress <u>all</u> four** **ADS Div 1/2 Logic A&E/B&F Initiate push-buttons**.
Standard:	Rotate collars and depress ADS Div 1, Logic A&E push-buttons and Rotate collars and depress ADS Logic 2 B&F Initiate push-buttons.
Cue:	None
Comments	Logic will initiate if only ADS Div 1 and/or 2 Logic A&E and/or B&F Initiate push-buttons are operated; however, procedure requires all four.

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

CPS No. 3101.01, Main Steam

***2.**	8.2.2.4 **Verify <u>seven</u> ADS valves open using as needed:** ° SPDS ° DCS Display 122 (2H) [Acoustic Monitor Input] ° DCS Display 186 (7B) [‘A’ Solenoid Input] ° 1H13-P601/P642 Solenoid Indicator Lights ° 1H13-P866, Valve Flow Monitor Control Panel ° 1H13-P614, ADS Safety Valve Temperature recorder 1B21-R614 (Pts 1 – 7) ° Indirect indication via changes in RPV pressure, RPV level, MSL flows, & suppression pool temperatures.
Standard:	Recognizes that all seven valves have not opened and reports.
Cue:	
Comments	1B21-F041D and 1B21-F047A failed to open due to malfunction.
	SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

CPS No. 3101.01, Main Steam

***3.**	**EOP-3**	**8.2.1.3 Place keylock switch(es) for SRV(s) to OPEN to open the SRV, <u>or</u> to AUTO or OFF to shut the SRV.** Verify SRV(s) open/shut as applicable using as needed: ° SPDS ° DCS Display 122 (2H) [Acoustic Monitor Input] ° DCS Display 186 (7B) [‘A’ Solenoid Input] ° 1H13-P601/P642 Solenoid Indicator Lights ° 1H13-P866, Valve Flow Monitor Control Panel ° 1H13-P614, ADS Safety Valve Temperature recorder 1B21-R614 (Pts 1 - 7) ° Indirect indication via changes in RPV pressure, RPV level, MSL flows, & suppression pool temperatures.
Standard:		Manually opens two SRVs using keylock switches for a total of 7 SRVs open.
Cue:		Acknowledge the report of 7 SRVs open. Terminate the JPM.
Comments		(NOTE: The operator should first attempt to open the 2 ADS valves that failed to auto open.) The operator should verify the opening of the two additional valves and report back to the CRS. SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

The operator verifies that a total of seven (7) SRVs are open and reports to the CRS that seven (7) SRVs are open.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Blowdown due to high Drywell Temperature

JPM Number: JPM107 Revision Number: 01

Task Number and Title: 310101.07 Complete the Control Room actions to perform ADS Initiation (Auto/Manual)

K/A System	K/A Number	Importance (RO/SRO)	
218000	A4.01	4.4	4.4

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ■ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ■ Yes ☐ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 10 minutes Actual Time Used: _____ minutes

References: EOP-3 R28 not attached
CPS No. 3101.01 MAIN STEAM (MS, IS & ADS) R20e, Step 8.2.2

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

A transient has occurred, the reactor has scrammed. Drywell temperature is 335°F.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

You are to initiate ADS.

Exelon Nuclear

CLINTON POWER STATION

Job Performance Measure

RCIC Restart with Initiation Signal Present

JPM Number: JPM112

Revision Number: 00

Date: 02/25/09

Developed By:	**Tom Pickley**	**02/25/09**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	02/25/09	Converted from old JPM

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

1. Reset the simulator to IC-01.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Prevent HPCS from starting.

3. Trip RCIC.

4. Trip all three feedpumps.

5. Place the Mode Switch to SHUTDOWN.

6. When vessel level is below Level 2, freeze the simulator.

7. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

8. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- The evolution completed IAW 3310.01 Reactor Core Isolation Cooling System, Rev 27

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- 3310.01 Reactor Core Isolation Cooling System, Rev 27

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

Reactor water level is below Level 2. The Reactor Core Isolation Cooling Turbine was manually tripped to prevent injection.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

RCIC is now needed to help recover reactor vessel level. Restart RCIC and inject to the reactor vessel at approximately 600 gpm.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

8.1.8 RCIC restart with Initiation Signal Present

1. Open/Verify Open 1E51-F045, RCIC Turb Stm Supp Shutoff Valve

Standard: 1E51-F045, RCIC Turb Stm Supp Shutoff Valve verified open.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

***2 Reset 1E51-C002, RCIC Turbine Vlve Opr (stem) by taking its control switch to CLOSE, and verify valve shuts.**

Standard: **1E51-C002 is closed**

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

***3 Place RCIC Pump Flow Cont, 1E51-R600 in manual/minimum demand (0%).**

Standard: 1E51-R600 is in manual/minimum.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

	***4.**	**Open 1E51-C002, RCIC Turbine Trip Vlv Opr (stem).**
Standard:	Both red lights for 1E51-C002 are on.	
Cue:		
Comments	Steam is now admitted to the RCIC turbine. The turbine speed should increase.	
	SAT ☐ UNSAT ☐ Comment Number _____	

	***5**	**When turbine governor valve is limiting turbine speed, adjust RCIC Pump Flow Cont, 1E51-R600 to maintain:** **☞Avoid AUTO when < 450 gpm (see Precaution 4.10)** **1) RCIC turbine speed > 1500 rpm**
Standard:	Speed in raised to greater than 1500 rpm. Raises flow to approximately 600 gpm.	
Cue:		
Comments		
	SAT ☐ UNSAT ☐ Comment Number _____	

	6. If desired to feed to the RPV, open/verify open 1E51-F013, RCIC Pump Disch to Rx Outbd Isol Valve.
Standard:	1E51-F013 is open and feed is established to the reactor vessel. The operator adjusts 1E51-R600 as necessary to inject at approximately 600 gpm.
Cue:	F013 is already open.
Comments	The operator may place the controller in AUTO.
	SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

RCIC is injecting to the reactor vessel.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ■ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: RCIC Restart with Initiation Signal Present

JPM Number: JPM112 Revision Number: 00

Task Number and Title: 331001.08 RCIC Restart with injection signal present

K/A System	K/A Number	Importance (RO/SRO)	
295031	EA 1.05	4.3	4.3
217000	A2.01	3.8	3.7

Suggested Testing Environment: Simulator

Actual Testing Environment: ■ Simulator ☐ Plant ☐ Control Room

Testing Method: ■ Simulate ☐ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ☐ Yes ■ No

Time Critical: ☐ Yes ☐ No

Estimated Time to Complete: 10 minutes Actual Time Used: _____ minutes

References: 3310.01 Reactor Core Isolation Cooling System, Rev 27

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

Reactor water level is below Level 2. The Reactor Core Isolation Cooling Turbine was manually tripped to prevent injection.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

RCIC is now needed to help recover reactor vessel level. Restart RCIC and inject to the reactor vessel at approximately 600 gpm.

Exelon Nuclear

CLINTON POWER STATION

Job Performance Measure

Place RHR Loop B in the Containment Spray Mode – Alternate Path

JPM Number: JPM207

Revision Number: 00

Date: 07/17/2007

Developed By:	**George M. Vaught**	**07/17/2007**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	07/17/2007	Updated numbering convention. Old JPM number: 33120106LSF02.

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Reset the simulator to an IC developed for this JPM with Drywell pressure > 1.68 PSIG and Containment pressure at approximately 2.2 PSIG. This condition can be reached with a 25% Main Steam Line "A" rupture in the Drywell and a Drywell partial failure.

2. Open and execute Simulator Lesson Plan JPM207 to perform the following:

   - Insert malfunction to prevent 1E12-F028B from opening when Containment Spray Pushbutton is depressed.

   - Deletes 1E12-F028B malfunction when operator manually opens valve.

3. Freeze the simulator.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

4. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

5. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- RHR Loop B is running in the Containment Spray Mode per CPS No 3312.01, Residual Heat Removal.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None.

PROCEDURAL/REFERENCES:

- CPS No. 3312.01 Residual Heat Removal, rev. 38a.

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- All pre-job briefings are completed.

INITIAL CONDITIONS:

You are an extra RO.

The plant has scrammed.

Five minutes ago Drywell pressure exceeded 1.68 PSIG and Containment pressure is now above 2.2 PSIG and Containment spray is required.

Clinton Power Station
Job Performance Measure (JPM)

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.

Start 'B' RHR Loop in the Containment Spray Mode using the Containment Spray Manual Initiate pushbutton per hard card.

PRM-1RIX-PR039 is in service.

Inform the CRS when the task is complete.

Note to Evaluator: As soon as operator repeats basic condition and cue, unfreeze simulator.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

Clinton Power Station
Job Performance Measure (JPM)

***1)** **[Manual Initiation only]**
Arm and Depress CNMT SPRAY A(B) MANUAL INITIATION push-button for desired division.

Standard: Operator rotates collar on CNMT SPRAY B MANUAL INITIATION switch to the ARM position and depresses pushbutton.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

***2)**

BEGINS ALTERNATE PATH

Verify CNMT Spray valve alignment: (for Automatic Initiation only, after LPCI/LPCS has run for 10 minutes)

1E12-F042A(B), LPCI Fm RHR A(B) Shutoff Valve	Shut
1E12-F028A(B), RHR A(B) To CNMT Spray A(B) Shutoff Vlv	**OPEN**
1E12-F014A(B), SSW Inlet RHR A(B) Hx Valve	OPEN
1E12-F068A(B), RHR A(B) Hx SSW Outlet Valve	OPEN
1E12-F003A(B), RHR A(B) Hx Outlet Valve	OPEN
1E12-F047A(B), RHR A(B) Hx Inlet Valve	OPEN
1E12-F048A(B), RHR A(B) Hx Bypass Valve	Shut
1SX082A(B), RHR A(B) Hx MU Cond Inlet Vlv	Shut
1E12-F024A(B), RHR A(B) Test Valve To Suppr Pool	Shut

Standard: Operator verifies CNMT spray realignment by observing:

GREEN light ON and RED light OFF for 1E12-F042B
RED light ON and GREEN light OFF for 1E12-F028B
RED light ON and GREEN light OFF for 1E12-F014B
RED light ON and GREEN light OFF for 1E12-F068B
RED light ON and GREEN light OFF for 1E12-F003B
RED light ON and GREEN light OFF for 1E12-F047B
GREEN light ON and RED light OFF for 1E12-F048B
GREEN light ON and RED light OFF for 1SX082B
GREEN light ON and RED light OFF for 1E12-F024B

Examinee recognizes 1E12-F028B does not OPEN and manually OPENS 1E12-F028B.

Cue: Acknowledge reports as applicable.

Comments **The only CRITICAL portion of this STEP is finding and opening 1E12-F028B. 1E12-F048B will cycle shut and open 10 minutes post LOCA.**

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

3) Verify flow to CNMT spray spargers on RHR Pump A(B) Flow meter, 1E12-R603A(B).

Standard: Operator verifies required Containment Spray flow on 1E12-R603B Between 3500-4000 gpm.

.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

4) Verify cooling water flow through RHR A(B) Hx on SSW To RHR A(B) Hx Flow meter, 1E12-R602A(B)

Standard: Operator verifies cooling water flow on 1E12-R602B

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

5) Place/verify SX A(B) PRM 1RIX-PR038(039), Shutdown Service Water A(B) Effluent (SX) in service

Standard: Given in cue, operator may check AR/PR.

Cue: If AR/PR is checked: PRM-1RIX-PR039 is in service.

Comments Given in cue that PRM-1RIX-PR039 is in service.

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

TERMINATING CUES:

RHR B is operating in the Containment Spray mode**.**

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Place RHR Loop B in the Containment Spray Mode – Alternate Path

JPM Number: JPM207 Revision Number: 00

Task Number and Title: 331201.06 / CNMT Spray Manual or Automatic Initiation

K/A System	K/A Number	Importance (RO/SRO)	
226001	A4.03	3.5	3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: ■ Simulator ☐ Plant ☐ Control Room

Testing Method: ■ Simulate ☐ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ■ Yes ☐ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 5 minutes Actual Time Used: _____ minutes

References: CPS No. 3312.01 Residual Heat Removal, rev. 38a.

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

You are an extra RO.

The plant has scrammed.

Five minutes ago Drywell pressure exceeded 1.68 PSIG and Containment pressure is now above 2.2 PSIG and Containment spray is required.

Initiating Cue

CAUTION

- All pre-job briefings are completed.

Start 'B' RHR Loop in the Containment Spray Mode using the Containment Spray Manual Initiate pushbutton per hard card.

PRM-1RIX-PR039 is in service.

Inform the CRS when the task is complete.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Crosstie 480V Busses O & P with O Supplying

JPM Number: JPM103

Revision Number: 00

Date: 02/25/09

Developed By:	**Tom Pickley**	**02/25/09**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____	_____
SME/Instructor	Date
_____	_____
SME/Instructor	Date
_____	_____
SME/Instructor	Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	02/25/09	New JPM

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Reset the simulator to an IC with a normal bus lineup.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

3. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- 480V Busses O & P are crosstied with O Supplying per 480 Vac Distribution, 3502.01 R 9a.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- 480 Vac Distribution, 3502.01 R 9a

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- Do NOT allow examinee to shine any type light into a panel.
- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

The plant electrical busses are in a normal lineup.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Crosstie 480V Busses O & P with O Supplying.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

3502.01 480 VAC DISTRIBUTION

***8.1.4.2 Close the 480V Tie Breaker to the associated 480V Substation.**

Standard:	Closes 480 V Bus O & P Tie BKR 0AP91E.
Cue:	None
Comments	None
	SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

*** 8.1.4.3**	**Open the 480V Main Breaker to the associated 480V Substation, and verify the substation is energized.**
Standard:	Opens 480 V Bus P MN BKR 0AP92E.
Cue:	None
Comments	None
	SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

480V Busses O & P are crosstied with O Supplying.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Crosstie 480V Busses O & P with O Supplying

JPM Number: JPM103 Revision Number: 00

Task Number and Title: 350201.04, Transfer a 480V Bus Paralleling Method.

K/A System	K/A Number	Importance (RO/SRO)	
262001	A4.04	3.6	3.7

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ■ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ☐ Yes ■ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 10 minutes Actual Time Used: _____ minutes

- References: 480 Vac Distribution, 3502.01 R 9a**.**

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

The plant electrical busses are in a normal lineup.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Crosstie 480V Busses O & P with O Supplying.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Use OD-7 to verify Shutdown Criteria

JPM Number: JPM104

Revision Number: 00

Date: 02/23/09

Developed By:	**Tom Pickley**	**02/23/09**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 and 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____	_____
SME/Instructor	Date
_____	_____
SME/Instructor	Date
_____	_____
SME/Instructor	Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	02/23/09	New JPM

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Reset the simulator to a full power IC.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Drive a 4 Rod gang into 02 and insert malfunctions to stick these 4 rods.

3. Override the following Pushbuttons to prevent checking rod positions.
   - ALL Rods
   - One selection number of each stuck rod
   - Selected Group
   - Selected Half

4. Place the Mode switch in S/D and stabilize the plant.

5. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

6. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- Rod Control And Information System, 3304.02, R 17b.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None.

PROCEDURAL/REFERENCES:

- Rod Control And Information System, 3304.02, R 17b.

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

The plant scrammed from rated power. Immediate actions except verification of Shutdown Criteria have been completed.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Verify SHUTDOWN CRITERIA is met.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

3304.02, Rod Control And Information System

(Steps 8.2.11.1 - 4 may be performed independently and in any order.)

***8.2.11.1**	**Full Core Display, Depresses the "ALL RODS" pushbutton**
Standard:	Depresses the "ALL RODS" pushbutton. Determines that not all "Full In" LEDs are lit and that actual rod positions cannot be obtained.
Cue:	None
Comments	None
	SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

8.2.11.2	On either RACC panel 1H13-P651 or P652, determine if all rods are full in by observing the LED representing "all rods full in." This LED will be lit when all rods are fully inserted.
Standard:	Either or both RACC panels are simulated to be checked.
Cue:	• Neither "all rods full in" LEDs are lit
Comments	▪ These are back panels in the MCR that are not in the simulator.
	SAT ☐ UNSAT ☐ Comment Number _____

8.2.11.3	Transient Test (TT) Channel 291 will indicate all rods which are fully inserted. This indication is from Div 1 only; a value of 10 volts indicates rods full in, and a value of ~ 0 volts indicates all rods not full in.
Standard:	Determines all rods are not full in
Cue:	• TT Channel 291 shows a value of 0 volts
Comments	▪ TT is not available
	SAT ☐ UNSAT ☐ Comment Number _____

8.2.11.4	To determine Rod Position using OD-7, must reset the scram per 4100.01, Reactor Scram
Standard:	Determines the scram must be reset.
Comments:	• Reset the scram
	SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

4100.01, Reactor Scram, Appendix A

A.1 If Fuel failure occurred or is suspected,
Then …

Standard:	Does not perform the isolations
Cue:	Fuel failure has not occurred
Comments	• None

SAT ☐ UNSAT ☐ Comment Number _____

***A.2 Place all 4 BYP DISCH VOL HI LVL DIV 1(2, 3&4) bypass switches to bypass.**

Standard:	Bypass switches are placed in bypass.
Cue:	None
Comments	• None

SAT ☐ UNSAT ☐ Comment Number _____

***A.3 Reset Reactor Scram and ARI/RPT trips.**

Standard:	Depresses the scram reset and ARI reset pushbuttons.
Cue:	None
Comments	None

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

A.4	Verify the Scram Discharge Volume Vent and Drain Valves open.
Standard:	Valves are verified opening
Cue:	None
Comments	• None SAT ☐ UNSAT ☐ Comment Number _____

***A.5**	**Determine Control Rod positions using 3D/OD-7 after the Control Rods settle to '00'**
Standard:	Determines that Shutdown Criteria is met.
Cue:	JPM is complete
Comments	None SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

Operator determines that Shutdown Criteria is or is not met.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Use OD-7 to verify Shutdown Criteria

JPM Number: JPM104 Revision Number: 00

Task Number and Title: 330402.26, Use Alternate Means of Determining Control Rod Positions.

K/A System	K/A Number	Importance (RO/SRO)	
214000	A4.02	3.8	3.8

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ■ Perform **Faulted:** ☐ Yes ☐ No **Alternate Path:** ■ Yes ☐ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 15 minutes Actual Time Used: _____ minutes

References: Rod Control and Information System, 3304.02, R17b

Reactor Scram, 4100.01, R19c

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

The plant scrammed from rated power. Immediate actions except verification of Shutdown Criteria have been completed.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

Verify SHUTDOWN CRITERIA is met.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Startup Continuous Containment Purge Unfiltered

JPM Number: 106

Revision Number: 01

Date: 05/14/09

Developed By:	**Tom Pickley**	**05/14/2009**
	Instructor	**Date**
Validated By:	**T. French**	**7/1/2009**
	SME or Instructor	**Date**
Reviewed By:	**J. Lucas**	**7/1/2009**
	Operations Representative	**Date**

Clinton Power Station
Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Current Procedure Rev. _____ Date: _____

Procedure Rev. Referenced _____ Date: _____

- If the Current Procedure Rev. and the Procedure Rev. Referenced are different then revise the JPM.

_____ 9. Pilot test the JPM:

a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Clinton Power Station
Job Performance Measure (JPM)

Revision Record (Summary)

Revision	Date	Description
00	03/14/07	New Revision
01	05/14/09	Updated procedure revision

Clinton Power Station
Job Performance Measure (JPM)

Simulator Setup Instructions

(This page is applicable only to JPMs performed in the Simulator.)

1. Initialize to any suitable IC with Containment Ventilation secured and CCP ready for startup. Override the CCP Joystick in the "Manual" position.

> **NOTE:** It is permissible to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs if applicable.

3. This completes the setup for this JPM.

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

TASK STANDARDS:

- CCP is running in the unfiltered mode per CPS No. 3408.01 section 8.2.1.1 revision 16f.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- None

PROCEDURAL/REFERENCES:

- CPS No. 3408.01, Containment Building/Drywell HVAC revision 16f

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.
- Do NOT allow examinee to shine any type light into a panel.
- All pre-job briefings are completed.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS:

You are the B RO.

Containment Ventilation has been secured per CPS 3408.01, Section 8.1.3.

There are no isolation signals present.

ITS Bases for SR 3.6.5.3.2 has been evaluated.

Radiation Protection has been notified.

Containment temperatures are rising requiring CCP to be started.

INITIATING CUE:

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

You are directed to startup Continuous Containment Purge in the Unfiltered Mode Automatic per CPS 3408.01 section 8.1.1.1. Use the "A" fans. Report when the task is complete.

START TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in BOLDED letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

8.1.1.1 Startup Continuous Containment Purge Unfiltered (Auto)

.1 Check that the Containment Building/Drywell HVAC System is stopped per section 8.1.3 or 8.2.2 of this procedure.

Standard: No action necessary. Addressed in initial conditions.

Cue: None necessary

Comments

SAT ☐ UNSAT ☐ Comment Number _____

.2 Verify no isolation signals are present, or reset per section 8.3.1

Standard: No action necessary. Addressed in initial conditions.

Cue: None necessary

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

3	During Modes 1, 2, or 3, verify the following are closed: 1) 1VR001A CNMT BLDG SPLY OUT BD ISOL VLV, 2) 1VR001B CNMT BLDG SPLY IN BD ISOL VLV, 3) 1VQ004A CNMT BLDG EXH/PRG OUTBD ISOL VLV, 4) 1VQ004B CNMT BLDG EXH/PRG INBD ISOL VLV, 5) 1VR002A CNMT BLDG SPLY OUTBD ISOL BYP VLV, 6) 1VR002B CNMT BLDG SPLY INBD ISOL BYP VLV, 7) 1VQ006A CNMT BLDG EXH OUTBD ISOL BYP VLV, 8) 1VQ006B CNMT BLDG EXH INBD ISOL BYP VLV, 9) 1VQ002 DW PRG INBD ISL VLV, 10) 1VQ005 DW HD PRG EXH ISOL VLV 11) Document verification in the Auto Log.
Standard:	Operator verifies that all valves are closed GREEN lights ON and RED lights OFF.
Cue:	CRS will document in the Autolog.
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

4.	Verify/Place C/S In AUTO after close: [1H13-P800 Section 5043]: 1) CNMT BLDG SPLY OUTBD ISOL VLV, 1VR006A. 2) CNMT BLDG SPLY INBD ISOL VLV, 1VR006B. 3) CNMT BLDG EXH/PRG INBD ISOL VLV, 1VR007B. 4) CNMT BLDG EXH/PRG OUTBD ISOL VLV, 1VR007A.
Standard:	Operator verifies/places C/S In AUTO after close for each valve.
Cue:	
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

***5.**	**Place the control switch for 1VQ003 DW PRG CNMT EXH INBD ISOL VLV in the OPEN position.** **1) Check that 1VQ003 DW PRG CNMT EXH INBD ISOL VLV fully opens.**
Standard:	The operator places control switch for 1VQ003 to OPEN. Observes RED light is ON and GREEN light is OFF.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

6.	Place CNMT BLDG SPLY FAN 1VR06CA/CB SELECTOR switch to 06CA LEAD or 06CB LEAD.
Standard:	The operator places/verifies the selector switch to the 06CA LEAD position.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

7.	Place CNMT BLDG EXH FAN 1VR07CA/CB SELECTOR switch to 07CA LEAD or 07CB LEAD.
Standard:	The operator places/verifies the selector switch to the 07CA LEAD position.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

8.	Place the CNMT CONTINUOUS PRG MODE switch in UNFILT.
Standard:	The operator places the CNMT CONTINUOUS PRG MODE switch in UNFILT. The operator determines that the Auto Mode is not working
Cue:	If asked for direction, ask the operator for a recommendation.
Comments	The operator should recommend and proceed to the "Manual" Startup Section 8.2.1.1.

SAT ☐ UNSAT ☐ Comment Number _____

8.2.1.1 Startup Continuous Containment Purge Unfiltered (Manual Operation)

***9.**	**Place the CNMT CONTINUOUS PRG MODE switch in MANUAL.**
Standard:	The operator places the CNMT CONTINUOUS PRG MODE switch in MANUAL.
Cue:	
Comments	The Manual startup repeats the previously performed steps. The operator just needs to ensure they have been performed.

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

***10.**	**Open CNMT BLDG SPLY OUTBD ISOL VLV 1VR006A.**
Standard:	The operator places the Control Switch for CNMT BLDG SPLY OUTBD ISOL VLV, 1VR006A to OPEN.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

***11.**	**Open CNMT BLDG SPLY INBD ISOL VLV 1VR006B.**
Standard:	The operator places the Control Switch for CNMT BLDG SPLY INBD ISOL VLV, 1VR006B to OPEN.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

***12.**	**Open CNMT BLDG EXH/PRG INBD ISOL VLV 1VR007B.**
Standard:	The operator places the Control Switch for CNMT BLDG EXH/PRG INBD ISOL VLV, 1VR007B to OPEN.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

***13.**	**Open CNMT BLDG EXH/PRG OUTBD ISOL VLV 1VR007A.**
Standard:	The operator places the Control Switch for CNMT BLDG EXH/PRG OUTBD ISOL VLV, 1VR007A to OPEN.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

***14.**	**Open HVAC STACK INLET VLV 1VR010.**
Standard:	The operator places the Control Switch for HVAC STACK INLET VLV, 1VR010 to OPEN.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

***15.**	**Start CNMT BLDG EXH FAN, 1VR07CA.**
Standard:	The operator places the Control Switch for CNMT BLDG EXH FAN, 1VR07CA to START.
Cue:	
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

16.	Verify CNMT BLDG EXH FAN ISOL VLV, 1VR009A (1VR009B) opens.
Standard:	The operator verifies that CNMT BLDG EXH FAN ISOL VLV, 1VR009A opens, RED light ON and GREEN light OFF.
Cue:	
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

***17.**	**Start CNMT BLDG SPLY FAN 1VR06CA.**
Standard:	The operator places the Control Switch for CNMT BLDG SPLY FAN 1VR06CA to START.
Cue:	
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

18.	Verify CNMT BLDG OUTSIDE AIR SPLY INLT VLV 1VR005 opens.
Standard:	The operator verifies that CNMT BLDG OUTSIDE AIR SPLY INLT VLV, 1VR005 opens, RED light ON and GREEN light OFF.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

19.	Verify CNMT BLDG SPLY FAN ISOL VLV 1VR004A opens.
Standard:	The operator verifies that CNMT BLDG SPLY FAN ISOL VLV, 1VR004A opens, RED light ON and GREEN light OFF.
Cue:	
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

20.	If outside temperature is less than 65°F, Verify on/turn on CCP Heating Coil 1VR05A at CCP Local Control Panel 1PL17J.
Standard:	No action is necessary, outside temperature is 73°F.
Cue:	AR/PR or Met Tower indicates outside air temperature is 73°F.
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

21.	At the CCP local control panel, 1PL17J, start/verify running Transfer Fan 1VR12C.
Standard:	The operator directs the plant operator to report on the Transfer Fan status.
Cue:	Field operator reports Transfer Fan 1VR12C is running.
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

22.	Check that Primary Containment to Secondary Containment differential pressure stabilizes between –0.25 and +0.25 psid.
Standard:	Operator verifies that pressure stabilizes between –0.25 and +0.25 psid by having area operator check local panels 0PL39JA and 0PL39JB locate on 719’ el. Control Bldg.
Cue:	As area operator report that pressure has stabilized at –0.20 psid
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

23.	Check that Drywell to Primary Containment differential pressure stabilizes between -0.2 and +1.0 psid.
Standard:	Operator describes process of verifying that pressure stabilizes between –0.2 and +1.0 psid by comparing Drywell Pressure to ATMs 1E12-N662A, B, C, D, Containment Pressure.
Cue:	Containment Pressure read at ATM is 0.0 psig.
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

24.	Reports to the CRS that CCP is in the Unfiltered Mode.
Standard:	CCP is running in the unfiltered mode.
Cue:	
Comments	
	SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

Continuous Containment Purge is running in the Unfiltered Mode.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Startup Continuous Containment Purge Unfiltered-Automatic

JPM Number: 106 Revision Number: 01

Task Number and Title: 340801.49, Complete Control Room actions to Startup Continuous Containment Purge Unfiltered Mode (Manual) of the Containment Building/Drywell HVAC System.

K/A System	K/A Number	Importance (RO/SRO)	
288000	A4.01	3.1	2.9

Suggested Testing Environment: Simulator,

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ■ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ■ Yes ☐ No

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 15 minutes Actual Time Used: _____ minutes

References: CPS No. 3408.01, Containment Building/Drywell HVAC revision 16a.

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Initial Conditions

You are the B RO.

Containment Ventilation has been secured per CPS 3408.01, Section 8.1.3.

There are no isolation signals present.

ITS Bases for SR 3.6.5.3.2 has been evaluated.

Radiation Protection has been notified.

Containment temperatures are rising requiring CCP to be started.

Initiating Cue

CAUTION

- All pre-job briefings are completed.
- Do NOT shine any type light into a panel.

You are directed to startup Continuous Containment Purge in the Unfiltered Mode Automatic per CPS 3408.01 section 8.1.1.1. Use the "A" fans. Report when the task is complete.