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CLINTON POWER STATION

Job Performance Measure

Complete a CPS 3006.01C007,
Control Rod Withdrawal Checklist – Mode 3

JPM Number: 30060117LAF01

Revision Number: 00

Date:

Developed By:	**Instructor**	**Date**
Validated By:	**SME or Instructor**	**Date**
Reviewed By:	**Operations Representative**	**Date**
Approved By:	**Training Department**	**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		New JPM

JPM Number: 30060117LAF01

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Complete a CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3

JPM Number: 30060117LAN01 Revision Number:00

Task Number and Title:300601.17, Perform Control Rod Withdrawal Checklist – Mode 3.

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.1.23	3.9	4.0

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

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

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 20 minutes Actual Time Used: _____ minutes

References: CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3, Rev. 4c

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:_____

JPM Number: 30060117LAF01

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.

SIMULATOR SETUP CONDITIONS

- IC-83 on the ILT_EXAM_JPM_LOAD, or any IC setup with the plant in Mode 3 and the Mode Switch in the Refuel position. **Do not remove the key from the Mode Switch.**

TASK STANDARDS:

- CPS No. 3006.01C007 is completed correctly.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Copy of CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3 with Sections A & B complete. Section B will have actual dates in the future EXCEPT one date IN THE PAST, but still initialed for.
- CPS No. 9000.01, CONTROL ROOM SURVEILLANCE LOG , Rev 034 A
- CPS No. 9000.01D001, CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3 DATA SHEET Rev 049 D

PROCEDURAL/REFERENCES:

- CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3, Rev. 4c
- CPS No. 9000.01, CONTROL ROOM SURVEILLANCE LOG , Rev 034 A
- CPS No. 9000.01D001, CONTROL ROOM SURVEILLANCE LOG - MODE 1, 2, 3 DATA SHEET Rev 049 D

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 AND INITIATING CUE:

The plant is in Mode 3 and it is desired to perform control rod withdrawals. CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3, has been started in preparation for withdrawing the first rod (24-29).

The CRS directs you to initiate Table 1 of CPS No. 3006.01C007 by performing Section C steps 1 through 4.

Day 1 is today's date, and the time is 0110.

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide a MARKED UP copy of the following procedure to the student.

- CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3 with Sections A & B 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

CPS No. 3006.01C007 Control Rod Withdrawal Checklist – Mode 3

1. Enters today's date under Day 1 of Table 1

Standard: Today's date is entered under Day 1 of Table 1.

Cue: None, self revealing

Comments

SAT ☐ UNSAT ☐ Comment Number _____

2. 2.a)1)
Operator conducts an IRM channel check.

Standard: IRM channel check is completed satisfactorily using P678 charts, and the operator initials the appropriate block.

Cue: None required.

Comments Note that if section 2.b is attempted the operator will note that no rods are disarmed by checking the Full Core Display and revert back to section 2.a.

SAT ☐ UNSAT ☐ Comment Number _____

3. 2.a)2)
   Operator conducts a SDV level ATM channel check.

Standard: SDV level ATM channel check is completed satisfactorily, and the operator initials the appropriate block.

Cue: When the candidate states that he needs to obtain SDV level ATM readings, then provide the SDV level RPS ATM Cue Sheet.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

***4. 2.a)3)**
Verify that all surveillances in Section B are current.

Standard: Operator verifies that all surveillances are current EXCEPT ONE. This one should be reported to the CRS. After receiving the cue (following) the block should be initialed.

Cue: Cue that after double checking the actual dates, the date indicated is incorrect and the actual date is a date in the future.

Comments The cue makes this SAT and therefore it should be initialed.

SAT ☐ UNSAT ☐ Comment Number _____

5. 2.a)4)
   If the control rod has been withdrawn for 7 days, then insert it at least one notch, and verify accumulator pressure is ≥ 1550 psig.

Standard: No action required.

Cue: None, self revealing

Comments

SAT ☐ UNSAT ☐ Comment Number _____

6. 2.b)
   Verify all other control rods in a 5 by 5 array centered on the control rod being withdrawn are disarmed.

Standard: Block should be marked NA, because Steps 2.a)1 thru 4) are being met.

Cue:

Comments If the operator checks this, no other rods are disarmed.

SAT ☐ UNSAT ☐ Comment Number _____

Faulted Step

***7. 3.**
Verify the Reactor Mode Switch is locked in the REFUEL position.

Standard: Operator identifies that the key is still in the Mode Switch, and notifies the CRS. The operator does not initial the appropriate block until the key has been removed. Key may be placed in the Key Locker.

Cue: Acknowledge the report and tell the operator to remove the key and continue with the task.
Take the key from the operator, and notify the operator that the key will be placed in the Key Locker.

Comments To be "Locked in the REFUEL position" the reactor mode switch key must be removed from the console per ITS B 3.9.2, SR 3.9.2.1.

SAT ☐ UNSAT ☐ Comment Number _____

---

8. 4.
Verify all control rods , other than the control rod being withdrawn, are fully inserted.

Standard: Operator verifies that all the control rods are inserted, and initials the appropriate block.

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

TERMINATING CUES:

The key has been removed from the Mode Switch and Section C, Steps 1 through 4 of CPS No. 3006.01C007 have been completed.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

The plant is in Mode 3 and it is desired to perform control rod withdrawals. CPS No. 3006.01C007, Control Rod Withdrawal Checklist – Mode 3, has been started in preparation for withdrawing the first rod (24-29).

The CRS directs you to initiate Table 1 of CPS No. 3006.01C007 by performing Section C steps 1 through 4.

Day 1 is today's date, and the time is 0110.

Clinton Power Station
Job Performance Measure (JPM)

SDV Level RPS ATM Readings
(Cue Sheet for JPM Step 3)

1C11-N601A	**0”**
1C11-N601B	**-1”**
1C11-N601C	**-0.5”**
1C11-N601D	**-0.25”**

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CLINTON POWER STATION

Job Performance Measure

Verify Conditions Are Met to Enter Mode 2 From Mode 1

JPM Number: 30060106LAF01

Revision Number: 00

Date:

Developed By:	**Instructor**	**Date**
Validated By:	**SME or Instructor**	**Date**
Reviewed By:	**Operations Representative**	**Date**
Approved By:	**Training Department**	**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		New format and numbering convention, revalidated. This replaces JPM 300601.06. Revision number reset to 0.

JPM Number: 30060106LAF01

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Verify Conditions Are Met to Enter Mode 2 From Mode 1

JPM Number: 30060106LAF01 Revision Number:00

Task Number and Title:300601.06, Complete Control Room actions to perform Shifting Reactor Mode Switch to START & HOT STBY.

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.1.31	4.2	3.9

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

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

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 20 minutes Actual Time Used: _____ minutes

References: CPS No. 3006.01 Unit Shutdown Rev 33a

CPS No. 9000.06D001, HEATUP/COOLDOWN, INSERVICE LEAK & HYDROSTATIC TESTING 30 MINUTE TEMPERATURE LOG Rev 30a

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:_____

JPM Number: 30060106LAF01

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.

SIMULATOR SETUP CONDITIONS

IC-86 on the ILT_EXAM_JPM_LOAD or any other IC with the following conditions:

- Power level at 8%.
- APRM C failed to 4% power.
- MOV Test Prep Switches for DW Clg and Chill Wtr Div 1 (5050) and SSW System Div 3 (5064) in TEST.
- Keys in 4 other MOV Test Prep Switches with switches in "NORM"

TASK STANDARDS:

- Completes applicable steps of CPS 3006.01 Unit Shutdown, Section 8.6 & 8.4.7.5.
- Determines that the mode change should not be performed.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Marked up copy of CPS 3006.01, completed to step 8.6 with the exception of step 8.4.7.5.
- Copy of CPS 3006.01, Appendix C.
- Copy of CPS 9000.06D001

PROCEDURAL/REFERENCES:

- CPS 3006.01, Unit Shutdown, Rev. 33a

EVALUATOR INSTRUCTIONS:

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

JPM Number: 30060106LAF01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

A plant shutdown is in progress. You are directed to verify conditions are met to enter Mode 2 IAW CPS 3006.01, Unit Shutdown.

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide a MARKED UP copy of the following procedure to the student. (Both contained in one package)

- CPS 3006.01, completed to step 8.6 with the exception of step 8.4.7.5.
- CPS 3006.01, Appendix C.

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

8.6 Shifting Reactor Mode Switch To Start & Hot Stby

***1. 8.6.1.1**
Section 8.4 completed as appropriate.

Standard: Operator checks CPS 3006.01 Section 8.4 and determines that 8.4.7.5. has not been initialed. Reports to the CRS.

Cue: Acknowledge the report as CRS and, if necessary, direct the operator to perform 8.4.7.5.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Faulted Step

***2. 8.4.7.5**

Verify IRM/APRM overlap is achieved.

☞ **Overlap between IRMs and APRMs exist when sufficient (4 channels per ITS LCO 3.3.1.1 Table functions) IRMs and APRMs concurrently have on-scale readings such that the transition between MODE 1 and MODE 2 can be made without either APRM downscale rod block (5% RTP), or IRM upscale rod block (108/125 full scale).**

Standard:

- Operator determines that APRM C is giving a downscale rod block and step 8.4.7.5. is not satisfied.
- Operator reports to the CRS that APRM C is reading 4% and has a Downscale Rod Block.

Cue: As the CRS, acknowledge report. If necesssary, direct operator to complete Section 8.6 to determine if there are any other problems.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Faulted Step

***3. 8.6.1.2**
Verify/place MOV TEST PREP switches in NORMAL.
[Listed on Appendix C]

Standard:
- Operator checks Appendix C and verifies completed entries and identifies switches on section 5050 & 5064 have not been checked.
- Operator determines that switches for DW Clg & Chill Wtr and SSW System Div 3 are in TEST, and places switches in NORMAL.

Cue: If report is made about switches being in TEST, acknowledge report as CRS. If necessary direct the operator to place the switches in Normal.

If asked, the MSIV Leakage Control MOV TPS are in "NORMAL" (Backpanel)

Comments

SAT ☐ UNSAT ☐ Comment Number _____

4. 8.6.1.3.
Prepare for use during cooldown CPS 9000.06D001, Heatup/Cooldown, Inservice Leak and Hydrostatic Testing 30 Minute Temperature Log.

Standard: Operator indicates that he will need to start CPS 9000.06D001.

Cue: Another RO will complete the Heatup/Cooldown log.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

NOTE
APRM rod blocks will occur at ≤5% with mode switch in RUN.

---

5. 8.6.2
   Insert control rods per the specified sequence to decrease reactor power to ~6 - 8%.

Standard: Operator verifies that power is ~6 - 8%.

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

6. 8.6.3.1
   Verify IRM/APRM Overlap completed per 8.4.7.

Standard: Actions per this step should have been identified in step 1, and completed in step 2 of this JPM. If the actions were not completed earlier then they should be completed now. Refer to Step 2 for standard

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number _____

---

7. 8.6.3.2
   Adjust IRM Range Switches so all operable IRMs read on scale (preferred 15 – 75)

Standard: Operator verifies that all operable IRMs are reading on scale and are in the range of 15 – 75.

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

The operator determines the Mode change should not be made.

STOP TIME: _____

JPM Number: 30060106LAF01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

A plant shutdown is in progress. You are directed to verify conditions are met to enter Mode 2 IAW CPS 3006.01, Unit Shutdown.

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Job Performance Measure

Perform a Jet Pump Operability Test per CPS No. 9041.01

JPM Number: 90410101LAN01

Revision Number: 00

Date:

Developed By:	**Instructor**	**Date**
Validated By:	**SME or Instructor**	**Date**
Reviewed By:	**Operations Representative**	**Date**
Approved By:	**Training Department**	**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		New format and numbering convention, revalidated. This replaces JPM 012202J005. Revision number reset to 0.

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Perform a Jet Pump Operability Test per CPS No. 9041.01

JPM Number: 90410101LAN01 Revision Number:03

Task Number and Title: 904101.01, Perform the Jet Pump Operability Test

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.2.12	3.0	3.4

Suggested Testing Environment: Any

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: 40 minutes Actual Time Used: _____ minutes

References: CPS No. 9041.01, Jet Pump Operability Test, Rev. 36
CPS No. 9041.01D001, Jet Pump Operability Test Data Sheet, Rev. 34

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)

READ TO THE OPERATOR

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

SIMULATOR SET-UP CONDITIONS

- None

TASK STANDARDS:

- CPS No. 9041.01, Jet Pump Operability Test, has been completed satisfactorily.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Calculator

PROCEDURAL/REFERENCES:

- CPS No. 9041.01, Jet Pump Operability Test, Rev 36
- CPS No. 9041.01D001, Jet Pump Operability Test Data Sheet, Rev. 34

EVALUATOR INSTRUCTIONS:

- Preference is to perform JPM on the simulator, but may also be performed in the Main Control Room with the plant at or near 90% power (ie>70%), and Reactor Recirc in 2 loop operation.

JPM Number: 90410101LAN01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

You are the extra RO and the CRS has directed you to perform CPS No. 9041.01, Jet Pump Operability Test, using the supplied CPS No. 9041.01, Jet Pump Operability Test and CPS 9041.01D001, Jet Pump Operability Test Data Sheet.

The computerized method of performing CPS No. 9041.01 is not available at this time.

APRM calibrations are NOT in progress.

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide the following to the student.

- CPS No. 9041.01, Jet Pump Operability Test, Rev 36
- CPS No. 9041.01D001, Jet Pump Operability Test Data Sheet, Rev. 34
- Calculator

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

5.0 **Prerequisites**

	1. 5.1, Recirculation System Status 5.1.1 Initial 5.1.1.1.1) Loop flow mismatch maintained within 5% of rated core flow (4.225 mlbm/hr) when effective core flow is ≥ 70% of rated core flow (59.15 mlbm/hr), 5.2 (Record) Record Rx power using OD-3, 3D Monicore, or APRM indication 5.3 (Initial) Notify SMngt of test start, and log Time and Date.
Standard:	Complete the following: • Check in box at 5.1.1.1.1 • N/A step 5.1.2 • Records reactor power of 96% at 5.2. • Completes all blocks of step 5.3
Cue:	Provide cue sheet for Section 5 data. Report that authorization has been granted Report that autolog entries will be made by the B operator.
Comments	This is a passive surveillance but if performed in the MCR obtain permission to access the information from the various locations. SAT ☐ UNSAT ☐ Comment Number _____

NOTE

During two-loop (single-loop) operation, steps pertaining to single-loop (two-loop) operation should have N/A in initial or data blanks.

If APRM calibrations are in progress, DCS computer points for RR Flow may be invalid. Check alternate data sources to verify values.

***2** **8.1.1**

(Record) Use computer points B33DA013 (Loop A) and B33DA014 (Loop B) to determine operating Recirculation Loop A and/or B Flow in GPM.

Standard: Record Recirc Loop A and/or B flows on CPS No. 9041.01D001

Cue: Provide Data Sheet for Section 8.1 and 8.2

Comments

SAT ☐ UNSAT ☐ Comment Number _____

***3.** **8.1.2**

(Record) Use computer points B33-DA009 (FCV 1B33-F060A) and B33-DA010 (FCV 1B33-F060B) to determine operating Recirculation FCV position.

Standard: Record positions of FCV's B33-F060A and B33-F060B on CPS N0. 9041.01D001.

Cue: Dat on previously provided data sheet.

Comments

SAT ☐ UNSAT ☐ Comment Number _____

***4. 8.1.3**

Determine the Established Recirculation Loop and/or B flow using step 8.1.3.2 as follows:

IF **RR Pumps for TWO LOOP operation are in fast speed,**

THEN **Use Figure 1a (1b) and Recirc FCV A (B) position from step 8.1.2 (x-axis value) to determine Established Recirc Loop A (B) Flow (y-axis value).**

Standard: Determine Established Recirc Loop A and B Flows and record on CPS No. 9041.01D001.

Cue:

Comments: The acceptable value ranges are indicated on the Answer key.

SAT ☐ UNSAT ☐ Comment Number _____

***5. 8.1.4**

(Record) For each operating Recirc Loop A and/or B, calculate the % deviation of the indicated loop flow from the established loop flow using the data sheet formula.

Standard: Calculate percent deviation for both loops and record on CPS No. 9041.01D001.

Cue:

Comments: The acceptable value ranges are indicated on the Answer key.

SAT ☐ UNSAT ☐ Comment Number _____

8.2 Indicated Total Core Flow versus Established Total Core Flow

***6. 8.2.1**

(Record) Use computer point B33NA001 to determine Indicated Total Core Flow.

Standard: Record total Jet Pump Flow on CPS No. 9041.01D001.

Cue:

Comments The acceptable value ranges are indicated on the Answer key.

SAT ☐ UNSAT ☐ Comment Number

---

7. **8.2.2**

(Record) Calculate the Total Recirc Flow, sum of Loop A and B Flow from step 8.1.1 using the data sheet formula.

Standard: Calculate and record Total Recirc Flow on CPS No. 9041.01D001

Cue:

Comments The acceptable value ranges are indicated on the Answer key.

SAT ☐ UNSAT ☐ Comment Number

***8. 8.2.3**

(Record) Determine and record the Established Total Core Flow value per 8.2.3.1 or 8.2.3.2 below.

1. For TWO LOOP operation, using Figure 2a and the Total Recirc Flow from step 8.2.2 as the x-axis value, determine the Established Total Core Flow.

Standard: Determine and record the Established Total Core Flow on CPS No. 9041.01D001.

Cue:

Comments: The acceptable value ranges are indicated on the Answer key.

SAT ☐ UNSAT ☐ Comment Number

***9. 8.2.4**

(Record) Calculate the percent deviation in Total Core Flow from Established Core Flow using the data sheet formula.

Standard: Calculate and record percent deviation on CPS No. 9041.01D001.

Cue:

Comments: The acceptable value ranges are indicated on the Answer key.

SAT ☐ UNSAT ☐ Comment Number

8.3 Indicated Jet Pump Flow/dP Versus Established Jet Pump Flow/dP

***10.** **8.3.1**

(Record) Using computer points B33NA009 - 028, or P619 indications, record for each jet pump for the operating loops, the indicated diffuser-to-lower plenum Jet Pump flow or Jet Pump dP.

Standard: Record Jet Pump Flows using computer points on CPS No. 9041.01D001

Cue: Provide Data Sheet for Section 8.3

Comments

SAT □ UNSAT □ Comment Number

Clinton Power Station
Job Performance Measure (JPM)

NOTE

For TWO LOOP operation, if the results of steps 8.1.4 and 8.2.4 are acceptable, the surveillance results are acceptable, and steps 8.3.2, 8.3.3, 8.3.4 may be omitted (N/A'd).

For SINGLE LOOP operation, these steps should be performed for the operating jet pumps, but acceptance criteria has not been established.

---

11. 8.3.2

(Record) Calculate the Average Jet Pump Flow for each recirc loop using Formula #1 or Average Jet Pump dP (P619 dP meter scales are in %) for each recirc loop using Formula #2.

Standard: Not required due to steps 8.1.4 and 8.2.4 are acceptable Steps 8.3.2, 8.3.3, 8.3.4 may be omitted

Cue:

Comments

SAT ☐ UNSAT ☐ Comment Number

	12.	8.4 (Initial) If an Engineering evaluation was performed, are jet pumps OPERABLE.
Standard:		Engineering evaluation is not performed
Cue:		
Comments		Step can be NA'd SAT ☐ UNSAT ☐ Comment Number

	13.	8.5 (Initial) Notify SMngt at test completion.
Standard:		Notify SMngt at test completion.
Cue:		Acknowledge completion.
Comments		The student will need to provide procedure and D001. SAT ☐ UNSAT ☐ Comment Number

TERMINATING CUES:

CPS No. 9041.01, Jet Pump Operability Test, completed satisfactorily.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Data Sheet for Section 5

Reactor Power	96%
Loop A Flow	38.0 Mlbm/Hr
Loop B Flow	38.6 Mlbm/Hr

Clinton Power Station
Job Performance Measure (JPM)

Data for Section 8.1 and 8.2

	INDICATED Loop A Flow	32053 gpm *
	INDICATED Loop B Flow	32608 gpm *
B33-DA009	B33-F060A Recirc FCV Position	LVDT 61%
B33-DA010	B33-F060B Recirc FCV Position	LVDT 61%
B33NA001	Indicated Total Core Flow	77.0 Mlbm/Hr

*** The number given to the applicant through this data sheet were different from the numbers given in the answer key. The indicated flows in the answer key were 30, 500 for Loop A and 30, 608 for Loop B. This happened because the answer key was changed to allow for an answer band depending on how the applicant pulled data off the graphs provided. When the indicated flows were changed on the answer key the numbers on the data sheet were not corrected.**

Clinton Power Station
Job Performance Measure (JPM)

Jet Pump Flow for Section 8.3

Jet Pump Number	
JP 1	3.99
JP 2	3.99
JP 3	3.73
JP 4	3.77
JP 5	3.80
JP 6	3.81
JP 7	3.73
JP 8	3.76
JP 9	3.73
JP 10	3.66
JP 11	4.10
JP 12	4.10
JP 13	3.86
JP 14	3.85
JP 15	3.99
JP 16	3.91
JP 17	3.86
JP 18	3.81
JP 19	3.80
JP 20	3.80

Clinton Power Station
Job Performance Measure (JPM)

Initiating Cue

You are the extra RO and the CRS has directed you to perform CPS No. 9041.01, Jet Pump Operability Test, using the supplied CPS No. 9041.01, Jet Pump Operability Test and CPS 9041.01D001, Jet Pump Operability Test Data Sheet.

The computerized method of performing CPS No. 9041.01 is not available at this time.

APRM calibrations are NOT in progress.

JET PUMP OPERABILITY TEST DATA SHEET

SCOPE OF REVISION:

- Incorporated Temp Change 33a:
  Recirc Loop Flow for B pump to 7900 gpm per ECR 368217.
- Due to statistical differences between indicated
  RVDT/LVDT data readings during CPS 2214.01:
  1) Added separate Figures 1c & 1d for LVDT position indication.
  2) Distinction between use of FCV Position via RVDT or LVDT added.

CONTINUOUS USE

ORIGINATOR: *Thomas J. Landin* **CLASS CODE:** *SNND1*

SQR: *Kenneth Sheffield* **APPROVAL DATE:** *02/03/05*

CURRENT CHANGES TO GENERAL REVISION

	Change #	*Date*	*List of Affected Pages*
❶			
❷			
❸			
❹			
❺			

JET PUMP OPERABILITY TEST DATA SHEET

☞ Procedure normally performed via Appendix A: Performance of Computerized CPS 9041.01D001. Refer to 2.1.7 criteria.

PREREQUISITES		**Initial**
5.1.1	RR system in TWO LOOP operation with: (place check mark in appropriate box)	___DC___
	1. Fast speed pumps and either:	
	1) Loop flow mismatch maintained within 5% of rated core flow (4.225 mlbm/hr) when effective core flow is ≥ 70% of rated core flow (59.15 mlbm/hr),	☑
	OR	
	2) Loop flow mismatch maintained within 10% of rated core flow (8.45 mlbm/hr) when effective core flow is < 70% of rated core flow (59.15 mlbm/hr).	☐
	2. Slow speed pumps with FCVs full open (~ 90% indicated).	☐
5.1.2	RR system in SINGLE LOOP operation with: (place check mark in appropriate box)	____N/A_
	Circle operating loop:	**A** or **B**
	1. The operating pump in fast speed and its associated FCV at the desired position,	☐
	OR	
	2. The operating pump is in slow speed with its associated FCV full open (~ 90% indicated).	☐
5.2	Reactor power using OD-3, 3D Monicore or APRM.	__96__ %
5.3	SMngt notified of test start.	
	Time __XX:YY_____ Date __XX/YY/ZZ_____	___DC____ Performer

JET PUMP OPERABILITY TEST DATA SHEET (cont'd)

8.1 **Indicated Recirc Loop Flow versus Established Loop Flow based on FCV Position**

8.1.1 Record INDICATED Loop A Flow. ___30500 gpm

Record INDICATED Loop B Flow. ___30608 gpm

B33DA013 (Loop A) and B33DA014 (Loop B) are normally used. If these points are unavailable, see procedure step, and make a note about which alternate method is used in the COMMENTS/DEFICIENCIES section.

8.1.2 Record Recirc FCV position:

O B33-F060A: B33DA009: ☐ RVDT ☑ LVDT; or ☐ P680 __61___ %

O B33-F060B: B33DA010: ☐ RVDT ☑ LVDT; or ☐ P680 __61___ %

8.1.3.1 If slow speed Recirc Pumps, then use the following:

	ESTABLISHED		ESTABLISHED	
O	Loop A Flow	7000 gpm	Loop B Flow	7900 gpm

O 8.1.3.2 If fast speed Recirc Pumps, using Figure 1a(1b) [RVDT] or 1c(1d) [LVDT], and the FCV position from step 8.1.2, determine the following:

ESTABLISHED		ESTABLISHED	
Loop A Flow	28500+-250 gpm	Loop B Flow	29000+-250 gpm

O 8.1.3.3 If in SINGLE LOOP, using Figure 1e(1f) [RVDT] or 1g(1h) [LVDT] and the FCV position from step 8.1.2, determine the following:

ESTABLISHED		ESTABLISHED	
Loop A Flow	N/A___ gpm	Loop B Flow	_N/A__ gpm

8.1.4 Determine Loop Flow % Deviation using ESTABLISHED loop flow (step 8.1.3.1, or 8.1.3.2, or 8.1.3.3), and INDICATED loop flow (step 8.1.1) (If using engineering judgment N/A this step.):

$$\frac{(\text{INDICATED}) - (\text{ESTABLISHED})}{(\text{ESTABLISHED})} \times 100 = \text{Loop Flow \% Deviation}$$

Recirc Loop A	Loop Flow % Deviation	Acceptance Value
(30500) gpm - (28500+-250) gpm / (28500+-250) gpm X 100	= 6.1 to 8.0%	± 10%

Recirc Loop B	Loop Flow % Deviation	Acceptance Value
(30608) gpm - (29000+-250) gpm / (29000+-250) gpm X 100	= 4.6 to 6.5 %	± 10%

JET PUMP OPERABILITY TEST DATA SHEET (cont'd)

8.2 **Indicated Total Core Flow versus Established Total Core Flow**

8.2.1 Record Indicated Total Core Flow using computer point B33NA001 (or recorder B33-R613, JET PUMP FLOW/CORE PLATE dP).

Indicated Total Core Flow: _77.0___ mlbm/hr

8.2.2 Calculate Total Recirc Loop Flow:

Loop A flow gpm (step 8.1.1)	+	Loop B flow gpm (step 8.1.1)	= Total Recirc Loop Flow
(30500) gpm	+	(30608) gpm	= 61108 gpm

8.2.3 Determine and record Established Total Core Flow using Figure 2 curve(s) and Total Recirc Loop Flow from step 8.2.2.

Established Total Core Flow: 78+-1 mlbm/hr

8.2.4 Calculate Core Flow % Deviation using Established Total Core Flow (step 8.2.3), and Indicated Total Core Flow (step 8.2.1) (If using engineering judgment, N/A this step):

$$\frac{\text{(INDICATED) - (ESTABLISHED)}}{\text{(ESTABLISHED)}} \times 100 = \text{Core Flow \% Deviation}$$

	Core Flow % Deviation	Acceptance Value
$\frac{(77.0)\ \text{mlbm/hr} - (78+-1)\ \text{mlbm/hr}}{(78+-1)\ \text{mlbm/hr}} \times 100 =$	__0 to –2.5 %	± 10%

8.3 **Indicated Jet Pump Flow/dP Versus Established Jet Pump Flow/dP**

8.3.1 Determine Jet Pump Flow % Deviation from average using Formula #1, or Jet Pump dP % Deviation from average using Formula #2 (P619 dP meter scales are in %) for each Jet Pump in each operating loop, and record on Table 1 (computer generated spreadsheet for the calculated values may be used) (If using engineering judgment N/A step 8.3.4.):

Table 1: JP FLOW/dP and DEVIATION DATA TABLE

Jet Pump (JP) Number	8.3.1 Jet Pump Flow (mlbm/hr)	8.3.3 Jet Pump % DEV Flow	8.3.1 Jet Pump dP (%)	8.3.3 Jet Pump % DEV dP	8.3.4 Initial
JP 1	3.96	N/A	N/A	N/A	N/A
JP 2	3.96	N/A	N/A	N/A	N/A
JP 3	3.73	N/A	N/A	N/A	N/A
JP 4	3.77	N/A	N/A	N/A	N/A
JP 5	3.80	N/A	N/A	N/A	N/A
JP 6	3.81	N/A	N/A	N/A	N/A
JP 7	3.73	N/A	N/A	N/A	N/A
JP 8	3.76	N/A	N/A	N/A	N/A
JP 9	3.73	N/A	N/A	N/A	N/A
JP 10	3.66	N/A	N/A	N/A	N/A
Sum 1 - 10	37.85		N/A		
8.3.2 AVERAGE JP FLOW	N/A	**8.3.2 AVERAGE JP dP**	N/A		
JP 11	4.10	N/A	N/A	N/A	N/A
JP 12	4.10	N/A	N/A	N/A	N/A
JP 13	3.86	N/A	N/A	N/A	N/A
JP 14	3.85	N/A	N/A	N/A	N/A
JP 15	3.99	N/A	N/A	N/A	N/A
JP 16	3.91	N/A	N/A	N/A	N/A
JP 17	3.86	N/A	N/A	N/A	N/A
JP 18	3.81	N/A	N/A	N/A	N/A
JP 19	3.80	N/A	N/A	N/A	N/A
JP 20	3.80	N/A	N/A	N/A	N/A
Sum 11 - 20	39.08		N/A		
8.3.2 AVERAGE JP FLOW	N/A	**8.3.2 AVERAGE JP dP**	N/A		

8.4 If an Engineering evaluation was performed, are jet pumps OPERABLE? (N/A if not performed.) Attach copy of any justification.

YES / NO

_____
Reactor Engineer

8.5 SMngt notified of the completion of the test.

__XX/YY/ZZ XX:YY DC
Date / Time Initial

JET PUMP OPERABILITY TEST DATA SHEET

SUPPLEMENTAL REVIEW SHEET

Corrective Action Taken

NOTE

Since refueling activities (fuel assembly replacement or shuffle, as well as any modifications to fuel support orifice size or core plate bypass flow) can affect the relationship between core flow, jet pump flow, and recirculation loop flow, these relationships may need to be re-established each cycle. Similarly, initial entry into extended single recirculation loop operation may also require establishment of these relationships. During the initial weeks of operation under such conditions, while baselining new "established patterns", engineering judgment of the daily surveillance results is used to detect significant abnormalities which could indicate a jet pump failure.

Under the above conditions, engineering judgment may be used to satisfy the following criteria.

Jet pump operability in an operating loop is verified when at least two of the following criteria are satisfied for each operating loop: [ITS SR 3.4.3.1]

1. *Recirculation loop drive flow versus flow control valve position differs by ≤10% from established patterns. [step 8.1.4, ITS LCO 3.4.3.1 (a)]*
2. *Recirculation loop drive flow versus total core flow differs by ≤10% from established patterns. [step 8.2.4, ITS LCO 3.4.3.1 (b)]*
3. *Each jet pump diffuser to lower plenum differential pressure differs by ≤20% from established patterns, or each jet pump flow differs by ≤10% from established patterns. [step 8.3.4, ITS LCO 3.4.3.1 (c)]*

Operability Requirements:

ITS LCOs: 3.4.3.1 (a) 3.4.3.1 (b) 3.4.3.1 (c)

ORM ORs: None

ODCM ORs: None

As applicable:

Initiated Condition Report No. _____

Initiated Work Document No. _____

Comments/Deficiencies

_____

_____

_____

_____

_____

_____

_____

_____

Review and Approval

SMngt Review: _____
(Signature) (Date)

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Determine Expected Dose Operator
Would Receive While Performing an LLRT

JPM Number: 99555501NAN01

Revision Number: 00

Date:

Developed By:	**Instructor**	**Date**
Validated By:	**SME or Instructor**	**Date**
Reviewed By:	**Operations Representative**	**Date**
Approved By:	**Training Department**	**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		New format and numbering convention, revalidated. This replaces JPM 033299J006. Revision number reset to 0.

JPM Number: 99555501NAN01

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Determine Expected Dose Operator Would Receive While Performing LLRT

JPM Number: 99555501NAN01 Revision Number:00

Task Number and Title:995555.01, Complete in-plant radiological practices for High Radiation Zone

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.3.10	2.9	3.3

Suggested Testing Environment: Any

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 No. RP-AA-203, Exposure Control and Authorization, Rev. 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:_____

JPM Number: 99555501NAN01

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:

- Expected dose is determined and operators, who would not exceed their dose limit, are selected.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Radiation survey map of the Containment Steam Tunnel
- Simplified drawing of penetration 1MC-061
- RP-AA-203, Exposure Control and Authorization
- Calculator

PROCEDURAL/REFERENCES:

- CPS No. RP-AA-203, Exposure Control and Authorization, Rev. 2

EVALUATOR INSTRUCTIONS:

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

JPM Number: 99555501NAN01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

You are part of a team that is responsible for performing LLRTs during a refueling outage. You have been given the responsibility to set up for a test on RWCU LLRT 1MC-061. This will require you and one other member of your team to perform tasks in the Containment Steam Tunnel approximately 30cm from 1G33-F053. The tasks are estimated to take 90 minutes to complete.

The SRO in charge of the LLRTs has asked you to determine the following:

- The expected maximum dose to each team member under the stated conditions, and
- Which member(s) of the team could assist you without requiring a Dose Level Extension Form.

The following is a list of LLRT Team Members and their exposure history.

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: Mid West ROG (EXCEPT CPS)	Annual TEDE Dose: Clinton Station
John	0 mrem	245 mrem	1547 mrem
Tim	261 mrem	89 mrem	1319 mrem
Paul	154 mrem	0 mrem	1625 mrem

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide the following to the student.

- Simplified drawing of penetration 1MC-061
- RP-AA-203
- Calculator

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

1. Locates survey map of the Containment Steam Tunnel

Standard: Describes the locations where survey maps can be found.

Cue: When operator describes where survey maps are located, provide him with a copy of the Containment Steam Tunnel map.

Comments: Survey maps may be found in the following locations:

- Service Building entrance to the RCA
- R & S line near the Maintenance Area
- Radiation Protection Desk
- Access Control Point

SAT ☐ UNSAT ☐ Comment Number _____

2.	Determines the Dose Rate near 1G33-F053
Standard:	Dose Rate determined to be 200 mr/hr @ 30 cm from valve 1G33-F053, and/or 150 mr/hr in the area around 1G33-F053.
Cue:	None
Comments	Maximum dose is calculated using the dose rate at 30cm (work area as stated in initiating cue) or 200 mr/hr.

SAT ☐ UNSAT ☐ Comment Number _____

***3.**	**Calculates maximum expected dose.**
Standard:	Expected maximumdose calculated to be 300mrem.
Cue:	None
Comments	

SAT ☐ UNSAT ☐ Comment Number _____

***4 Determines which operators could assist without requiring a Dose Level Extension Form.**

Standard: Operator determines that Tim could assist.

Cue: None

Comments: The Admin Limit that would require a Dose Level Extension Form is 2000 mr/yr.

This table shows the calculations for the correct dose rate of 200mr/hr:

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: Mid West ROG (EXCEPT CPS)	Annual TEDE Dose:CPS	Total Received @ **300 mrem**
John	0 mrem	245 mrem	1547 mrem	2092
Tim	**261 mrem**	**89 mrem**	**1319 mrem**	**1969**
Paul	154 mrem	0 mrem	1625 mrem	2079

This table shows the calculations if the incorrect dose rate of 150mr/hr were to be used:

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: MWROG	Annual TEDE Dose:CPS	Total Received @ **225 mrem**
John	0 mrem	245 mrem	1547 mrem	2017
Tim	**261 mrem**	**89 mrem**	**1319 mrem**	**1894**
Paul	154 mrem	0 mrem	1625 mrem	2004

SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

Operator(s) has been named to assist in the LLRT tasks.

Clinton Power Station
Job Performance Measure (JPM)

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

You are part of a team that is responsible for performing LLRTs during a refueling outage. You have been given the responsibility to set up for a test on RWCU LLRT 1MC-061. This will require you and one other member of your team to perform tasks in the Containment Steam Tunnel approximately 30cm from 1G33-F053. The tasks are estimated to take 90 minutes to complete.

The SRO in charge of the LLRTs has asked you to determine the following:

- Expected maximum dose that you would receive.
- Which member(s) of the team could assist you without requiring a Dose Level Extension Form.

The following is a list of LLRT Team Members and their exposure history.

Name	Annual TEDE Dose: Non ROG	Annual TEDE Dose: Mid West ROG (EXCEPT CPS)	Annual TEDE Dose: Clinton Station
John	0 mrem	245 mrem	1547 mrem
Tim	261 mrem	89 mrem	1319 mrem
Paul	154 mrem	0 mrem	1625 mrem

Exelon SM
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CLINTON POWER STATION

Job Performance Measure

Verify Conditions are met to Enter Mode 2

JPM Number: 30010101SAN01

Revision Number: 00

Date:

Developed By:		
	Instructor	**Date**
Validated By:		
	SME or Instructor	**Date**
Reviewed By:		
	Operations Representative	**Date**
Approved By:		
	Training Department	**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		New format and numbering convention, revalidated. This replaces JPM 300101.0101. Revision number reset to 0.

JPM Number: 30010101SAN01

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Verify Conditions are met to Enter Mode 2

JPM Number: 30010101SAN01 Revision Number:00

Task Number and Title: 300101.01, Complete Control Room actions to perform preparation for startup and approach to critical.

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.1.31	4.2	3.9

Suggested Testing Environment: Any

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

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

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 30 minutes Actual Time Used: _____ minutes

References: CPS 3001.01, Approach to Critical, Rev. 24A
CPS 3001.01C001, Preparation for Startup Checklist, Rev. 17
CPS 3001.01C002, Mode 2 Checklist, Rev. 15B

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: _____

_____

_____

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_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

JPM Number: 30010101SAN01

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.

SIMULATOR SET-UP CONDITIONS

- None

TASK STANDARDS:

- Does not enter Mode 2 due to discrepancies not in compliance with Technical Specification.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Copy of completed CPS 3001.01, Approach to Critical, Rev. 24A
- Copy of completed CPS 3001.01C001, Preparation for Startup Checklist, Rev. 17
- Copy of completed CPS 3001.01C002, Mode 2 Checklist, Rev. 15B

PROCEDURAL/REFERENCES:

- CPS 3001.01, Approach to Critical, Rev. 24A
- CPS 3001.01C001, Preparation for Startup Checklist, Rev. 17
- CPS 3001.01C002, Mode 2 Checklist, Rev. 15B

EVALUATOR INSTRUCTIONS:

- Present the completed copy of CPS 3001.01, CPS 3001.01C001, and CPS 3001.01C002 to the operator when the Initiating Cue is presented.
- Amplifying cues are provided within the JPM steps.

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

You have taken the shift as the CRS in Mode 4. Review the procedures CPS 3001.01, Approach to Critical, CPS 3001.01C001, Preparation for Startup Checklist, CPS 3001.01C002, Mode 2 Checklist, and identify **ALL** actions required to support placing the plant into Mode 2.

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide a MARKED UP copy of the following procedures to the student.

- Copy of completed CPS 3001.01, Approach to Critical, Rev. 24A
- Copy of completed CPS 3001.01C001, Preparation for Startup Checklist, Rev. 17
- Copy of completed CPS 3001.01C002, Mode 2 Checklist, Rev. 15B

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

1. Reviews:
   1) CPS 3001.01 Approach to Critical
   2) CPS 3001.01C001, Preparation for Startup Checklist
   3) CPS 3001.01C002, Mode 2 Checklist

Standard: Operator begins review of completed:
1) CPS 3001.01 Approach to Critical
2) CPS 3001.01C001, Preparation for Startup Checklist
3) CPS 3001.01C002, Mode 2 Checklist

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number _____

2. RCIC Inoperable

Standard: Operator recognizes that RCIC Inoperability does not impact plant startup, LCO 3.5.3. and N/A's Step 9.10 of CPS 3001.01C001.

Cue: None

Comments: Not required to be Operable until 150 psig.

SAT ☐ UNSAT ☐ Comment Number _____

***3. RHR B NOT in Standby**

Standard: Operator identifies that RHR B must be placed in Standby to enter Mode 2.

Cue: If asked, RHR "B" is operating in Shutdown Cooling.

Comments: RHR B NOT in Standby does not satisy LCOs for ECCS, Containment Spray, and Suppression Pool Cooling:
ITS 3.5.1 Action A.1
ITS 3.6.1.7 Action A.1
ITS 3.6.2.3 Action A.1
LCO 3.0.4 requires the LCO to be met for mode change.

SAT UNSAT Comment Number

***4.**	**RHR B Test Prep Switch in TEST**
Standard:	Operator identifies that RHR B Test Prep Switch must be in NORMAL.
Cue:	None
Comments	ORM 2.5.2 Action 3.5.2 NOT satisfied.
	SAT UNSAT Comment Number

TERMINATING CUES:

Does not enter Mode 2 due to discrepancies.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Initiating Cue

You have taken the shift as the CRS in Mode 4. Review the procedures CPS 3001.01, Approach to Critical, CPS 3001.01C001, Preparation for Startup Checklist, CPS 3001.01C002, Mode 2 Checklist, and identify **ALL** actions required to support placing the plant into Mode 2.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Review and Approve a Jet Pump Operability Test

JPM Number: 90410101SAF01

Revision Number: 00

Date:

Developed By:		
	Instructor	**Date**
Validated By:		
	SME or Instructor	**Date**
Reviewed By:		
	Operations Representative	**Date**
Approved By:		
	Training Department	**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		New format and numbering convention, revalidated. This replaces JPM 033342J001. Revision number reset to 0.

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Review and Approve a Jet Pump Operability Test

JPM Number: 90410101SAF01 Revision Number:00

Task Number and Title: 904101.01, Perform the Jet Pump Operability Test

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.2.12	3.0	3.4

Suggested Testing Environment: Any

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: 25 minutes Actual Time Used: _____ minutes

References: CPS No. 9041.01, Jet Pump Operability Test, Rev. 36
CPS No. 9041.01D001, Jet Pump Operability Test Data Sheet, Rev. 34

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: _____

JPM Number: 90410101SAF01

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

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

SIMULATOR SET-UP CONDITIONS

- None

TASK STANDARDS:

- CPS No. 9041.01, Jet Pump Operability Test, has been reviewed satisfactorily.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Completed copy of CPS 9041.01, Jet Pump Operability Test
- Completed copy of CPS 9041.01D001, Jet Pump Operability Test Data Sheet that contains calculation error at step 8.1.4. Do not complete section 8.3.2-4 based on the assumption that sections 8.1.4 and 8.2.4 are satisfactory.
- Calculator

PROCEDURAL/REFERENCES:

- CPS 9041.01, Jet Pump Operability Test, Rev. 36
- CPS 9041.01D001, Jet Pump Operability Test Data Sheet, Rev. 34

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

JPM Number: 90410101SAF01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

Review the supplied CPS 9041.01, Jet Pump Operability Test and CPS 9041.01D001, Jet Pump Operability Test Data Sheet for acceptability.

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide the following to the student.

- Completed copy of CPS 9041.01, Jet Pump Operability Test
- Completed copy of CPS 9041.01D001, Jet Pump Operability Test Data Sheet that contains calculation error at step 8.1.4. Do not complete section 8.3.2-4 based on the assumption that sections 8.1.4 and 8.2.4 are satisfactory.
- Calculator

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

5.0 Prerequisites

1. Reviews Section 5, PREREQUISITES, to determine if proper blocks are filled out.
   5.1, Recirculation System Status
   5.1.1 Initial
   5.1.1.1.1) Loop flow mismatch maintained within 5% of rated core flow (4.225 mlbm/hr) when effective core flow is ≥ 70% of rated core flow (59.15 mlbm/hr),
   5.2 (Record) Record Rx power using OD-3, 3D Monicore, or APRM indication
   5.3 (Initial) Notify SMngt of test start, and log Time and Date.

Standard: Determines that all the proper squares are complete.

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number _____

Faulted Step

8.1 Indicated Recirc Loop Flow versus Established Loop Flow based on FCV Position

☞ Procedure may be performed via Appendix A: Performance of Computerized CPS 9041.01D001, Refer to 2.1.7. criteria.

***2. Reviews Section 8.1 to determine if it is completed correctly.**

Standard: Determines that Step 8.1.4 has been incorrectly calculated for Recirc Loop B and that the correct "Loop Flow % Deviation" for Recirc Loop B would be outside the Acceptance Value.

Cue: If operator immediately wants to return the document to the originator request that he complete the review to determine if there are any other problems.

Comments B Loop Flow % Deviation should actually be 11.2%

SAT ☐ UNSAT ☐ Comment Number _____

8.2 Indicated Total Core Flow versus Established Total Core Flow

---

3. Reviews Section 8.2 to determine if it is completed correctly.

Standard: Determines that Step 8.2.4 has been completed correctly.

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number

8.3 Indicated Jet Pump Flow/dP versus Established Jet Pump Flow/dP

	4. Reviews Section 8.3.1 to determine if it is completed correctly. (Record) Using computer points B33NA009 – 028, or P619 indications, record for each jet pump for the operating loops, the indicated diffuser-to-lower plenum Jet Pump flow or Jet Pump dP.
Standard:	Determines that Step 8.3.1 is completed correctly.
Cue:	None
Comments	
	SAT □ UNSAT □ Comment Number

NOTE

For TWO LOOP operation, if the results of steps 8.1.4 and 8.2.4 are acceptable, the surveillance results are acceptable, and steps 8.3.2, 8.3.3, 8.3.4 may be omitted (N/A'd).

For SINGLE LOOP operation, these steps should be performed for the operating jet pumps, but acceptance criteria has not been established.

	***5.**	**Reviews Steps 8.3.2, 8.3.3, and 8.3.4 to determine if they have been completed correctly.**
Standard:		Determines from NOTE preceding Step 8.3.2 that because Step 8.1.4 is not within the Acceptance Value, Steps 8.3.2, 8.3.3, 8.3.4 need to be completed.
Cue:		If operator wants to return the document to the originator request that he complete the review to determine if there are any other problems.
Comments		
		SAT ☐ UNSAT ☐ Comment Number

	6.	Reviews Step 8.4, to determine if it has been completed correctly.
Standard:		Determines that Step 8.4 was completed correctly.
Cue:		None
Comments		Step may be N/A'd
		SAT ☐ UNSAT ☐ Comment Number

7.	Reviews Steps 8.5 to determine if it has been completed correctly.
Standard:	Determines that Step 8.5 was completed correctly.
Cue:	None
Comments	
	SAT ☐ UNSAT ☐ Comment Number

***8.**	**Signs for Review and Approval**
Standard:	Determines that because Step 8.1.4 was completed incorrectly and Steps 8.3.2, 8.3.3, and 8.3.4 are not completed, CPS 9041.01D001 should **not** be signed.
Cue:	None
Comments	
	SAT ☐ UNSAT ☐ Comment Number

Clinton Power Station
Job Performance Measure (JPM)

TERMINATING CUES:

Problems with CPS 9041.01, Jet Pump Operability Test, have been identified and test is not signed off.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Initiating Cue

Review the supplied CPS 9041.01, Jet Pump Operability Test and CPS 9041.01D001, Jet Pump Operability Test Data Sheet for acceptability.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Authorize an Emergency Dose For a Life-Saving Action

JPM Number: 99777703SAN01

Revision Number: 00

Date: 06/13/05

Developed By:	**GD Setser**	**6/13/05**
	Instructor	**Date**
Validated By:		
	SME or Instructor	**Date**
Reviewed By:		
	Operations Representative	**Date**
Approved By:		
	Training Department	**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		New format and numbering convention, revalidated. This replaces JPM 997777.0303. Revision number reset to 0.

JPM Number: 99777703SAN01

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Authorize an Emergency Dose for a Life-Saving Operation

JPM Number: 99777703SAN01 Revision Number:00

Task Number and Title: 997777.03, Complete Emergency Plan activities performed by an SRO.

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.3.4		3.1

Suggested Testing Environment: Any

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

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

Time Critical: ☐ Yes ■ No

Estimated Time to Complete: 20 minutes Actual Time Used: _____ minutes

References: EP-AA-113, Rev 006, PERSONNEL PROTECTIVE ACTIONS
EP-AA-113-F-02, Rev A, AUTHORIZATION FOR EMERGENCY EXPOSURE

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: _____

_____

_____

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_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

Clinton Power Station
Job Performance Measure (JPM)

READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to perform, 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 life saving operation is authorized**.**

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- Copy of EP-AA-113, Rev 006, PERSONNEL PROTECTIVE ACTIONS
- Copy of EP-AA-113-F-02, Rev A, AUTHORIZATION FOR EMERGENCY EXPOSURE partially completed.

PROCEDURAL/REFERENCES:

- EP-AA-113, Rev 006, PERSONNEL PROTECTIVE ACTIONS
- EP-AA-113-F-02, Rev A, AUTHORIZATION FOR EMERGENCY EXPOSURE

EVALUATOR INSTRUCTIONS:

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

JPM Number: 99777703SAN01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

An emergency life saving operation must be performed. The operation will take 12 to 15 minutes in a 200 Rem/hr field. John Smith, age 45, is seeking approval to perform the life saving operation. This volunteer has never received an emergency exposure.

Command and Control has **NOT** been transferred to the TSC.

As the Shift Emergency Director perform the actions needed to authorize the life saving operation.

For Examiner: Once the examinee has read and understands the cue, as John Smith provide him a partially completed EP-AA-113-F-02, Rev A, AUTHORIZATION FOR EMERGENCY EXPOSURE.

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

EP-AA-113, Rev 006, PERSONNEL PROTECTIVE ACTIONS
4.3 Emergency Exposure Limits.

	1.	4.3.1.1 ASSURE that the emergency exposure is for a bona fide emergency involving risk of life or limb, or the destruction of valuable property.
Standard:		Determine bona fide emergency exists.
Cue:		None required, this stated in initiating cue.
Comments		Provide examinee copy of EP-AA-113, Rev 006, PERSONNEL PROTECTIVE ACTIONS if/when requested. If not verbalized, may be verified via placekeeping marks when complete. Not critical due to being provided in the initiating cue. SAT ☐ UNSAT ☐ Comment Number _____

Clinton Power Station
Job Performance Measure (JPM)

	***2**	**4.3.1.2 DETERMINE if emergency exposure limits in excess of 5 Rem TEDE (EPA-400 lower limits) are required for Exelon emergency workers.**
Standard:		**Determines that emergency exposures in excess of 5 Rem TEDE ARE required.**
Cue:		• None required
Comments		Information given in cue of radiation field and exposure time indicates that the worker will receive 40 REM at the lowest end of the time and 50 REM at the high end. May be verified via verbalization or by checking the "25 REM TEDE" box on F-02 in this or later steps.
		SAT ☐ UNSAT ☐ Comment Number _____

	3.	4.3.1.3 If emergency exposure is less than 5 Rem TEDE (EPA-400 lower limits), then OBTAIN approval as appropriate: - TSC Radiation Protection Manager for onsite Exelon personnel - EOF Radiation Protection Manager for Exelon field team personnel
Standard:		Determined to be not applicable.
Cue:		None required
Comments		
		SAT ☐ UNSAT ☐ Comment Number _____

	4.	4.3.2.1 For exposures at or above 5 Rem TEDE (EPA-400 lower limits), COMPLETE an Authorization for Emergency Exposure (EP-AA-113-F-02).
Standard:		Completed in remaining steps..
Cue:		None required
Comments		The block for actual exposure level of 25 REM TEDE may be checked at this point.
		SAT ☐ UNSAT ☐ Comment Number _____

	***5.**	**4.3.2.2 INFORM emergency personnel (volunteers) before the fact of possible health effects at the anticipated exposure level using Attachment 1, Emergency Worker Exposure Limits and Associated Risks.**
Standard:		**INFORMS worker using Attachment 1 as follows:** **Provides brief to the include the following elements:** **At 50 Rem exposure 2% of the population will see reddening of the skin, loss of appetite, nausea, fatigue and diarrhea.** **Approximate cancer risk resulting in premature death based on your age is 5.3/1000 persons exposed and the average number of years of life lost (if premature death occurs) is 15.**
Cue:		Answer questions the examinee may ask but do not provide leading information.
Comments		Items listed are the minimum needed.
		SAT ☐ UNSAT ☐ Comment Number _____

	***6.**	**4.3.2.3 OBTAIN emergency worker's acknowledge that they have volunteered and understand the associated risks. Acknowledgement should be in writing on Authorization for Emergency Exposure Form if possible OR verbally for teams in the field,**
Standard:		**Worker has signed F-02 at the "Emergency Worker Signature" block**
Cue:		As John Smith, sign the F-02.
Comments		
		SAT ☐ UNSAT ☐ Comment Number _____

	***7.**	**4.3.3.1 OBTAIN and DOCUMENT Station Emergency Director approval, by signature, for the use of the emergency dose limits above 5 Rem TEDE (EPA-400 lower limits) on the Authorization for Emergency Exposure form.**
Standard:		**As Shift Emergency Director, signs the completed F-02 for the Station Emergency Director**
Cue:		None required
Comments		RP management review should be N/A as determined in step 3. Block for exposure level must also be checked prior to approval.
		SAT ☐ UNSAT ☐ Comment Number _____

TERMINATING CUES:

Emergency exposure for a Life-saving action has been properly authorized.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Initiating Cue

An emergency life saving operation must be performed. The operation will take 12 to 15 minutes in a 200 Rem/hr field. John Smith, age 45, is seeking approval to perform the life saving operation. This volunteer has never received an emergency exposure.

Command and Control has **NOT** been transferred to the TSC.

As the Shift Emergency Director perform the actions needed to authorize the life saving operation.

Exelon SM
Nuclear

CLINTON POWER STATION

Job Performance Measure

Complete a NARS Form and Make the Required Notifications

JPM Number: 99999924SAN01

Revision Number: 00

Date:

Developed By:		
	Instructor	**Date**
Validated By:		
	SME or Instructor	**Date**
Reviewed By:		
	Operations Representative	**Date**
Approved By:		
	Training Department	**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		New format and numbering convention, revalidated. This replaces JPM 999999.24. Revision number reset to 0.

JPM Number: 99999924SAN01

Clinton Power Station
Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Complete a NARS Form and Make the Required Notifications

JPM Number: 99999924SAN01 Revision Number:00

Task Number and Title: 999999.24, Preparation of Notification Form

K/A System	K/A Number	Importance (RO/SRO)	
Generic	2.4.38	2.2	4.0

Suggested Testing Environment: Any

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

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

Time Critical: ■ Yes ☐ No

Estimated Time to Complete: 30 minutes Actual Time Used: _____ minutes

References: EP-AA-1003, Radiological Emergency Plan Annex for Clinton Station, Rev. 6
EP-AA-111, Emergency Classification and Protective Action Recommendations, Rev. 10
EP-AA-111-F-07, Clinton Plant Based PAR Flowchart, Rev B
EP-MW-114-100, Midwest Region Offsite Notifications, Rev. 5

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: _____

JPM Number: 99999924SAN01

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.

SIMULATOR SET-UP CONDITIONS

- None

TASK STANDARDS:

- NARS Form is filled out correctly and Notifications made within the required time.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

- A copy of FG1 (Page CL 3-25) and Fission Product Barrier Matrix (Page CL 3-8) from EP-AA-1003, Radiological Emergency Plan Annex for Clinton Station
- A copy of EP-AA-111, Emergency Classification and Protective Action Recommendations
- A copy of EP-AA-111-F-07, Clinton Plant Based PAR Flowchart
- A copy of EP-MW-114-100, Midwest Region Offsite Notifications
- EP-MW-114-100-F-01, Nuclear Accident Reporting System (NARS) Form

PROCEDURAL/REFERENCES:

- EP-AA-1003, Radiological Emergency Plan Annex for Clinton Station, Rev. 6
- EP-AA-111, Emergency Classification and Protective Action Recommendations, Rev. 10
- EP-AA-111-F-07, Clinton Plant Based PAR Flowchart, Rev B
- EP-MW-114-100, Midwest Region Offsite Notifications, Rev. 5

EVALUATOR INSTRUCTIONS:

- Amplifying cues are provided within the JPM steps.

JPM Number: 99999924SAN01

Clinton Power Station
Job Performance Measure (JPM)

INITIAL CONDITIONS AND INITIATING CUE:

You are the Shift Manager.
A LOCA has occurred in the plant.
RPV Level is less than –187 inches.
Containment Pressure is 15 psig.
The inboard and outboard MSIVs on the D Main Steam Line have failed to shut manually.
Wind direction is varying between 280 and 284 degrees
Wind speed is 10 mph.
No release of radioactive materials has occurred.
An EAL initial classification of General Emergency as EAL FG1 **has just been declared.**

You are to complete the NARS Form, EP-MW-114-100-F-01, and make the required notifications. Report when the task is complete. **This JPM is time critical.**

NOTE TO EVALUATOR

When the Initiating Cue has been read by the student and acknowledged, provide a copy of the following procedures to the student.

- A copy of FG1 (Page CL 3-25) and Fission Product Barrier Matrix (Page CL 3-8) from EP-AA-1003, Radiological Emergency Plan Annex for Clinton Station
- EP-AA-111, Emergency Classification and Protective Action Recommendations
- EP-AA-111-F-07, Clinton Plant Based PAR Flowchart
- EP-MW-114-100, Midwest Region Offsite Notifications
- EP-MW-114-100-F-01, Nuclear Accident Reporting System (NARS) Form

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

1. UTILITY MESSAGE NO. _____

Standard: 1

Cue: None

Comments **START TIME FOR NEXT SECTION:_____ (Time Critical)**
(Same as JPM Start Time)

SAT ☐ UNSAT ☐ Comment Number _____

2. STATE MESSAGE NO. _____

Standard: N/A

Cue: None

Comments

SAT ☐ UNSAT ☐ Comment Number _____

3. 1. STATUS
[A] ACTUAL
[B] DRILL/EXERCISE

Standard: Either

Cue: None

Comments

SAT UNSAT Comment Number

***4.** **2. STATION**
[A] BRAIDWOOD [C] CLINTON [E] LASALLE [G] ZION
[B] BYRON [D] DRESDEN [F] QUAD CITIES

Standard: [C] CLINTON

Cue: None

Comments

SAT UNSAT Comment Number

***5.** **3. ONSITE CONDITION**
[A] UNUSUAL EVENT
[B] ALERT
[C] SITE AREA EMERGENCY
[D] GENERAL EMERGENCY
[E] RECOVERY
[F] TERMINATED

Standard: [D] GENERAL EMERGENCY

Cue: None

Comments

SAT UNSAT Comment Number

***6.** **4. ACCIDENT CLASSIFIED**
TIME (3[A-E]):_____
DATE (3[A-E]): _____
EAL#: _____

ACCIDENT TERMINATED
TIME (3[F]): _____
DATE (3[F]): _____

Standard: ACCIDENT CLASSIFIED
Present Date and Time when Cue was acknowledged.
EAL#: FG1

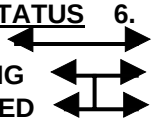
ACCIDENT TERMINATED
Time and Date: N/A

Cue: None

Comments

SAT UNSAT Comment Number

***7.** **5. RELEASE STATUS 6.**
[A] NONE
[B] OCCURRING
[C] TERMINATED



Standard: [A] NONE

Cue: None

Comments

SAT UNSAT Comment Number

***8.** **6. TYPE OF RELEASE**
[A] NOT APPLICABLE
[B] GASEOUS
[C] LIQUID

Standard: [A] NOT APPLICABLE

Cue: None

Comments

SAT UNSAT Comment Number

***9.**	**7.** **WIND DIR** _____ **(DEGREES FROM)**	
Standard:	280 – 284 (DEGREES FROM)	
Cue:	None	
Comments	Operator May just indicate 280	
	SAT UNSAT	Comment Number
***10.**	**8.** **WIND SPEED** **[A] METERS/SEC:_____** **[B] MILES/HR:_____**	
Standard:	9. WIND SPEED [A] METERS/SEC:_____ [B] MILES/HR: 10	
Cue:	None	
Comments		
	SAT UNSAT	Comment Number

***11.** **9. RECOMMENDED ACTIONS**
UTILITY RECOMMENDATION
[A] NONE (UE, Alert, and SAE Only)
----------(GE Only)----------
[B] SHELTER ILLINOIS SUB AREAS:_____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS
[C] SHELTER IOWA SUB AREAS:_____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS
[D] EVACUATE ILLINOIS SUB AREAS:_____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS
[E] SHELTER IOWA SUB AREAS:_____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

Standard: Determines Protective Action Recommendation using EP-AA-111 & EP-AA-111-F-07

[D] EVACUATE ILLINOIS SUB AREAS:_____ 1, 3, 4_____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

Cue: None

Comments: Given wind speed encompasses 2 sectors.

SAT UNSAT Comment Number

12. 10. ADDITIONAL INFORMATION

Standard: None

Cue: None

Comments

SAT UNSAT Comment Number

***13. MAKE THE NOTIFICATION**

Standard: Dial NARS Code 36

Cue: You receive a "beep" and the following agencies respond as on line:
Illinois EMA
DeWitt Co. Sheriff
Illinois REAC
DeWitt Co. EOC

Comments

SAT UNSAT Comment Number

***14. CONDUCT A ROLL CALL**

Standard: Checks off each agency as they respond.

Cue: Acknowledge each agency on line.

Comments May be done in conjunction with step 13.

SAT UNSAT Comment Number

***15.**	**FILL IN TIME AND DATE OF ROLL CALL**		
Standard:	Time and Date of Roll Call is filled in on Page 2 of the NARS Form.		
Cue:	None		
Comments	**STOP TIME FOR TIME CRITICAL PORTION OF JPM:_____ (<15 Minutes)**		
	SAT	UNSAT	Comment Number

***16.**	**READ THE NARS MESSAGE**		
Standard:	Message is correctly read		
Cue:	Acknowledge the message		
Comments	Compare with provided Answer Key		
	SAT	UNSAT	Comment Number

17.	11. TRANSMITTED BY:	
Standard:	Completes Block 11. with Name. Phone Number Calling from, and Time/Date.	
Cue:	None	
Comments		
	SAT	UNSAT Comment Number

18.	12. RECEIVED BY:	
Standard:	Asks for name of the IEMA representative and enters information on the NARS Form	
Cue:	Give the operator the name “Ken Evans”	
Comments		
	SAT	UNSAT Comment Number

19. REPEAT THE ROLL CALL

Standard: Operator checks off each agency as they respond

Cue: Respond as roll is called.

Comments

SAT UNSAT Comment Number

20. ASK if there are any questions about the information provided.

Standard: Answers any questions.

Cue: None

Comments

SAT UNSAT Comment Number

21. STATE "NARS communication is complete."

Standard: States that NARS communication is complete.

Cue: None

Comments

SAT UNSAT Comment Number

Clinton Power Station
Job Performance Measure (JPM)

TERMINATING CUES:

NARS Form is correctly filled out and Notification is made within the required time.

STOP TIME: _____

Clinton Power Station
Job Performance Measure (JPM)

Initiating Cue

You are the Shift Manager.
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Containment Pressure is 15 psig.
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Report when the task is complete. **This JPM is time critical.**