Exelon Nuclear

Job Performance Measure

Verification of RCIC Standby Lineup

JPM Number: RO JPM A1.1

Revision Number: 00

Date: 08/20/2019

Developed By:	Instructor	Date
Validated By:	SME or Instructor	Date
Reviewed By:	Operations Representative	Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) 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. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 1300-01 Rev: 45
Procedure _____ Rev: _____
Procedure _____ Rev: _____

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision 00, New RO Admin JPM developed for the 2020 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC-21.

NOTE:	It is okay 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. **Manual Actuations:**
   - RCIC is in a standby lineup with suction from the CCSTs
   - Adjust the RCIC Flow Controller setpoint to 200 gpm
   - Open AO 1-1301-32, COND DRN VLV
3. **Malfunctions:**

   None
4. **Remotes:**

   None
5. **Overrides:**

   None
6. **Procedures:**
   - Markup a copy of QCOP 1300-01, RCIC System Preparation for Standby Operation, up to step F.12.
7. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
8. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Admin NSO.
- A Unit 1 startup is in progress with reactor pressure at 125 psig.
- Post Maintenance Testing (PMT) and QCOS 1300-05, RCIC Pump Operability Test are scheduled for next shift.
- QCOP 1300-01, RCIC System Preparation for Standby Operation, has been completed up to step F.12, the independent verification of the standby lineup.

INITIATING CUE

Perform QCOP 1300-01 step F.12, verification of the RCIC standby lineup. Notify the Unit Supervisor and correct if/any mispositioned components.

Provide examinee with: A marked up copy of QCOP 1300-01.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.12	**Verify open** PMP DISCH VLV	Verifies MO 1-1301-48 valve OPEN light is lit.	___	___	___
F.12	**Verify closed** PMP DISCH VLV	Verifies MO 1-1301-49 valve CLOSED light is lit.	___	___	___
F.12	**Verify closed** COND PMP ISO VLV	Verifies AO 1-1301-12 valve CLOSED light is lit.	___	___	___
F.12	**Verify closed** COND PMP ISO VLV	Verifies AO 1-1301-13 valve CLOSED light is lit.	___	___	___
F.12	**Verify open** STM LINE DRAIN ISOL VLV	Verifies AO 1-1301-34 valve OPEN light is lit.	___	___	___
F.12	**Verify open** STM LINE DRAIN ISOL VLV	Verifies AO 1-1301-35 valve OPEN light is lit.	___	___	___
EVALUATOR NOTE: The critical task is satisfied when the examinee identifies and corrects the mispositioned valve. As the Unit Supervisor, if asked, grant permission to reposition the valve.					
*F.12	**Verify closed** COND DRN VLV	●Identifies that AO 1-1301-32 valve is OPEN.● ●Places c/s to CLOSE and verifies AO 1-1301-32 valve CLOSED light is lit.●	___	___	___
F.12	**Verify open** STM SPLY ISOL VLV	Verifies MO 1-1301-16 valve OPEN light is lit.	___	___	___
F.12	**Verify open** STM SPLY ISOL VLV	Verifies MO 1-1301-17 valve OPEN light is lit.	___	___	___
F.12	**Verify closed** CCST TEST BYP	Verifies MO 1-1301-53 valve CLOSED light is lit.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.12	**Verify closed** TURB CLG WTR VLV	Verifies MO 1-1301-62 valve CLOSED light is lit.	___	___	___
F.12	**Verify closed** STM TO TURB VLV	Verifies MO 1-1301-61 valve CLOSED light is lit.	___	___	___
F.12	**Verify closed** MIN FLOW VLV	Verifies MO 1-1301-60 valve CLOSED light is lit.	___	___	___
F.12	**Verify** RCIC TURB VACU PMP is in auto	Verifies RCIC TURB VACU PMP c/s is in the AUTO position.	___	___	___
F.12	**Verify** BAROMETRIC CNDSR COND PMP is in auto	Verifies BAROMETRIC CNDSR COND PMP c/s is in the AUTO position.	___	___	___
F.12	**Verify** RCIC FLOW CONTROLLER is in auto	Verifies AUTO pushbutton is lit on FIC 1-1340-1.	___	___	___
EVALUATOR NOTE: The critical task is satisfied when the examinee identifies and corrects the RCIC Flow Controller setpoint. As the Unit Supervisor, if asked, grant permission to adjust the setpoint to 400 gpm.					
*F.12	**Verify** RCIC FLOW CONTROLLER setpoint is 400 gpm	●Identifies FIC 1-1301-1 setpoint is at 200 gpm●. ●Adjusts setpoint to 400 gpm●	___	___	___
F.12	**Verify** GOVERNOR VALVE is open	Verifies OPEN light is lit on GOVERNOR VALVE position indication.	___	___	___
F.12	**Verify** TRIP THROTTLE VLV is open	Verifies OPEN light is lit on TRIP THROTTLE VLV position indication.	___	___	___
F.12.a	**Verify** TORUS PMP SUCT VLV is closed	Verifies MO 1-1301-25 valve CLOSED light is lit.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.12.a	**Verify** TORUS PMP SUCT VLV is closed	Verifies MO 1-1301-26 valve CLOSED light is lit.	___	___	___
F.12.a	**Verify** CCST PUMP SUCT VLV is open	Verifies MO 1-1301-22 valve OPEN light is lit.	___	___	___
EVALUATOR NOTE: Step F.12.b should be N/A'd because the RCIC suction path is from the CCSTs.					
EVALUATOR NOTE: The examinee should inform you the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☒ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Verification of RCIC Standby Lineup

JPM Number: RO JPM A1.1 Revision Number: 00

Task Standard:

Review the RCIC lineup in accordance with QCOP 1300-01 and correct misaligned components.

Task Number and Title:

SR-1300-P05: (Freq: LIC=I) Given a reactor plant being started up, warmup the RCIC lines and align the system for standby in accordance with QCOP 1300-01.

K/A Number and Importance: **K/A:** 2.1.31 **Rating:** 4.6/4.3

Suggested Testing Environment: Simulator

Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s):

QCOP 1300-01 Rev. 45, RCIC System Preparation for Standby Operation

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

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

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

SRRS: 3D.105 (when utilized for operator initial or continuing training)

INITIAL CONDITIONS

- You are the Admin NSO.
- A Unit 1 startup is in progress with reactor pressure at 125 psig.
- Post Maintenance Testing (PMT) and QCOS 1300-05, RCIC Pump Operability Test are scheduled for next shift.
- QCOP 1300-01, RCIC System Preparation for Standby Operation, has been completed up to step F.12, the independent verification of the standby lineup.

INITIATING CUE

Perform QCOP 1300-01 step F.12, verification of the RCIC standby lineup. Notify the Unit Supervisor and correct if/any mispositioned components.

Exelon Nuclear

Job Performance Measure

Evaluate License Maintenance Requirements

JPM Number: RO JPM A1.2

Revision Number: 03

Date: 08/20/2019

Developed By: _____ _____
Instructor Date

Validated By: _____ _____
SME or Instructor Date

Reviewed By: _____ _____
Operations Representative Date

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 9 and 13 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, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) 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. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure OP-AA-105-102 Rev: 14
Procedure _____ Rev: _____
Procedure _____ Rev: _____

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision 00, This JPM was developed from Bank JPM RO A.1.b for ILT Certification Exam 03-1 IAW NUREG 1021, Rev. 9.

Revision 01, This JPM was revised to incorporate procedure changes to OP-AA-105-102, Rev. 9, and to update format.

Revision 02, Revised to updated applicable dates and to provide an SRO with a completed tracking log for review.

Revision 03, Revised for use on 2020 NRC Initial RO License Exam.

INITIAL CONDITIONS

Today is December 27, 2019.

NSO coverage is needed on Unit 2 for January 2nd, on day shift.

NSO Verne Gagne (Employee ID 123579) has been assigned as a clearance order writer since the beginning of the fourth quarter 2019.

The Operations department is working a hybrid 8-hour/12-hour schedule.

During the past quarter Verne has covered the following shifts:

- One complete 12-hour day shift as the Unit 2 Assist NSO on October 9th.
- Five 8-hour afternoon shifts as Unit 1 NSO on November 15th through the 19th.
- Split two 12-hour midnight shifts, working six hours as the Unit 2 NSO and the other six hours as a clearance order writer during a weekend outage on November 29th and 30th.
- Split 8-hour day shifts working four hours as the Unit 1 Assist NSO and the other four hours as a clearance order writer on December 6th, 7th, 8th, 9th, 10th, 13th, and 14th.
- All shifts were logged by the Shift Manager.

The remainder of the time, Verne worked 8-hour shifts on days as clearance order writer Monday through Friday.

INITIATING CUE

You are to complete OP-AA-105-102 Attachment 1, Active License Tracking Log and evaluate his standing as an active licensed RO, and determine his ability to assume shift for January 2nd, 2020. Give an explanation for your determination.

Provide examinee with: Blank copy of OP-AA-105-102, NRC Active License Maintenance.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system. Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: ONLY full shifts, either 8 or 12 hours with turnovers count towards shift coverage time allowed.					
*OP-AA-105-102	Reviews requirements to maintain active license.	Recognizes fact that Verne ●does NOT have the minimum number of required hours of shift watch● to maintain his active license.	___	___	___
*OP-AA-105-102	Reviews requirements to maintain active license.	Determines Verne is NOT eligible to stand shift on January 2nd, 2020 due to ●not having the minimum number of required shifts.●	___	___	___
CUE:	**When candidate has determined that Verne will not be eligible to assume the shift, ask them what additional requirements Verne needs to be able to stand the shift on January 2nd, 2020.**				
*OP-AA-105-102	Reviews requirements to maintain active license.	Determines that a ●minimum of one more complete eight or twelve-hour shift is needed● to fulfill the requirements to maintain Verne's license active.	___	___	___
EVALUATOR NOTE: When the candidate determines that Verne cannot assume the shift for January 2nd, 2020 and has determined the correct amount of time needed to maintain their license active, inform candidate that the JPM is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Evaluate License Maintenance Requirements

JPM Number: RO JPM A1.2 Revision Number: 03

Task Standard:

Review the shift coverage for the previous quarter and IDENTIFY that the required number of shifts and total hours worked DO NOT fulfill the requirements to maintain an active license, AND determine the additional shift(s) that are required to be worked to be eligible to stand watch as an NSO on January 2, 2020.

Task Number and Title: NUREG 1021 Licensing Requirements

K/A Number and Importance: **K/A:** 2.1.4 **Rating:** 3.3/3.8

Suggested Testing Environment: Simulator

Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s): OP-AA-105-102 Rev. 14, NRC Active License Maintenance

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

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

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

Today is December 27, 2019.

NSO coverage is needed on Unit 2 for January 2nd, on day shift.

NSO Verne Gagne (Employee ID 123579) has been assigned as a clearance order writer since the beginning of the fourth quarter 2019.

The Operations department is working a hybrid 8-hour/12-hour schedule.

During the past quarter Verne has covered the following shifts:

- One complete 12-hour day shift as the Unit 2 Assist NSO on October 9th.
- Five 8-hour afternoon shifts as Unit 1 NSO on November 15th through the 19th.
- Split two 12-hour midnight shifts, working six hours as the Unit 2 NSO and the other six hours as a clearance order writer during a weekend outage on November 29th and 30th.
- Split 8-hour day shifts working four hours as the Unit 1 Assist NSO and the other four hours as a clearance order writer on December 6th, 7th, 8th, 9th, 10th, 13th, and 14th.
- All shifts were logged by the Shift Manager.

The remainder of the time, Verne worked 8-hour shifts on days as clearance order writer Monday through Friday.

INITIATING CUE

You are to complete OP-AA-105-102 Attachment 1, Active License Tracking Log and evaluate his standing as an active licensed RO, and determine his ability to assume shift for January 2nd, 2020. Give an explanation for your determination.

Exelon Nuclear

Job Performance Measure

Enter a Control Rod Substitute Position

JPM Number: RO JPM A2

Revision Number: 00

Date: 10/20/2019

Developed By: _____ _____
Instructor Date

Validated By: _____ _____
SME or Instructor Date

Reviewed By: _____ _____
Operations Representative Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) 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. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 9950-07 Rev: 04
Procedure QCOP 0207-01 Rev: 30
Procedure _____ Rev: _____

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision 00, New RO Admin JPM developed for the 2020 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC-21.

NOTE:	IF another at power IC is used, the appropriate rod must be selected and the cues changed to accurately reflect the new conditions. Verify the IC used is compatible with this and other JPMs that are scheduled to be run concurrently.

2. **Manual Actuations:**
   - Verify rod sequence 6PHESD is installed.
   - Select control rod M-10 on the Rod Select Matrix.
   - Enter the following two commands to override the RPIS input to the PPC for control rod M-10:

     set ycpos_cr123_1o=TRUE

     set ycpos_cr123_1v= -99

   - Verify RWM indication is ?? for M-10 and annunciator 901-5 B-3, ROD WORTH MON BLOCK, is in alarm.
   - Verify position 14 is displayed for control rod M-10 on the Full Core Display
   - Deselect the control rod and clear annunciator 901-5 B-3.
3. **Malfunctions:**

   None
4. **Remotes and Overrides:**

   None
5. Prepare the following:

   QCOP 9950-07 with steps C.1, F.1.a., and F.1.b. signed off.

   QCOP 9950-07 Attachment B (Blank)
6. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the NSO.
- During the previous shift, annunciator 901-5 B-3, ROD WORTH MIN BLOCK, alarmed and the NSO reported position indication on the RWM for control rod M-10 was lost.
- Instrument Maintenance and the QNE were notified.
- Alternate position indication is available on the Full Core Display and a digital readout in the Aux Electric Room at the 901-27 panel per IM Work Package #0037465.
- After troubleshooting, Instrument Maintenance and IT has informed the Shift manager that full indication on the RWM can be restored in approximately 10 hours.
- The QNE has requested that control rod remain at position 14 with a substitute position installed on the RWM.

INITIATING CUE

Install a substitute position of 14 for control rod M-10 on the RWM and complete QCOP 9950-07, Attachment B steps 1. thru 8d. as the preparer/installer.

Provide examinee with: A blank copy of QCOP 9950-07 with Attachment B.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.1.a	Documents information for substitute position on Attachment B steps 1 through 6	Fills out QCOP 9950-07 Attachment B as follows: Step 1. Unit: 1 Date: current Step 2. Rod ID: M-10 Step 3 Position: 14 Step 4 Reason: Lost indication for position 14 Step 5 Alternate Indication Used: Full Core Display and/or Digital Readout in Aux Electric Room Step 6 Signs as preparer	___	___	___
F.1.b	Obtains a review of Attachment B steps 1 through 5	Requests a QNE review of steps 1 thru 5. Verifies Reviewer signs step 7	___	___	___
EVALUATOR ROLE PLAY: As the QNE/Reviewer, sign step 7 of QCOP 9950-07 Attachment B.					
F.1.c	Obtains Unit Supervisor authorization to enter a substitute position	- Obtains Unit Supervisor authorization to install position 14 for control rod M-10. - Verifies Unit Supervisor signs and dates step 8.b. on Attachment B.	___	___	___
EVALUATOR ROLE PLAY: As the Unit Supervisor, when requested, sign and date step 8.b on Attachment B.					
EVALUATOR NOTE/ ROLE PLAY: If the examinee asks the Unit Supervisor for the expected duration time, then reply that the **"expected duration is 10 hours"**. However, a common short duration entry is < 24 hrs. which is acceptable.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.1.d	Record expected duration of substitute position	Records 10 hrs. on step 8 of Attachment B.	___	___	___
*F.1.e	**Select** SECONDARY FUNCTIONS	At the 901-5 panel: Selects SECONDARY FUNCTIONS from the RWM Primary Display screen.	___	___	___
*F.1.f	**Select** the Control Rod on the RWM	On the RWM Full Core Display: Selects M-10. Verifies Control Rod M-10 is enclosed in a blue box.	___	___	___
*F.1.g	**Select** SUBSTITUTE POSITION function	Selects SUBSTITUTE POSITION box on the RWM Verifies “Rod M-10 Substitute Position” message is displayed at the lower left area of the RWM screen.	___	___	___
*F.1.h	**Select and Apply** the desired Substitute Control Rod position	Selects position “14” from the Display. Selects “APPLY” button on the Display.	___	___	___
F.1.i	**Verify** Substitute Position is installed	Returns to the RWM Primary Display and selects Control Rod M-10 on the Rod Select Matrix. Verifies the following on the RWM: - Position “14” is displayed in yellow for Control Rod M-10 - Rod status displayed below the bounds is SUBST	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.1.j	Document installation of Substitute Position	Signs "Installed By" line in step 8 of Attachment B.	___	___	___
F.1.k	Obtain verification of installation	Requests an independent verification of Substitute Position installation.	___	___	___
EVALUATOR ROLE PLAY: As the Unit Supervisor, state: **"Another NSO will verify the Substitute Position installation. The TCC Tracking Log does not require an update due to the expected short duration."**					
EVALUATOR NOTE: The examinee should inform you the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☒ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Enter a Control Rod Substitute Position

JPM Number: RO JPM A2 Revision Number: 00

Task Standard:

Substitute a rod position into the RWM and complete QCOP 9950-07, Attachment B as the preparer/installer.

Task Number and Title:

SR-0207-P02: (Freq: LIC=I) Given an operating reactor, perform the following RWM operations in accordance with QCOP 0207-01 and QCOP 0207-02.

0207.007 Enter a substitute position to RWM for rod with bad RPIS data M (901(2)-5)

K/A Number and Importance: **K/A:** 2.2.14 **Rating:** 3.9/4.3

Suggested Testing Environment: Simulator

Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s): QCOP 0207-01 Rev. 30, Rod Worth Minimizer Operation

QCOP 9950-07 Rev. 04, Plant Process Computer Control Rod Positions - Substitutions

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

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

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

SRRS: 3D.105 (when utilized for operator initial or continuing training)

INITIAL CONDITIONS

- You are the NSO.
- During the previous shift, annunciator 901-5 B-3, ROD WORTH MIN BLOCK, alarmed and the NSO reported position indication on the RWM for control rod M-10 was lost.
- Instrument Maintenance and the QNE were notified.
- Alternate position indication is available on the Full Core Display and a digital readout in the Aux Electric Room at the 901-27 panel per IM Work Package #0037465.
- After troubleshooting, Instrument Maintenance and IT has informed the Shift manager that full indication on the RWM can be restored in approximately 10 hours.
- The QNE has requested that control rod remain at position 14 with a substitute position installed on the RWM.

INITIATING CUE

Install a substitute position of 14 for control rod M-10 on the RWM and complete QCOP 9950-07, Attachment B steps 1. thru 8d. as the preparer/installer.

Exelon Nuclear

Job Performance Measure

ARM Trip Unit Set Point Check

JPM Number: RO JPM A3

Revision Number: 01

Date: 08/20/2019

Developed By: _____ _____
Instructor Date

Validated By: _____ _____
SME or Instructor Date

Reviewed By: _____ _____
Operations Representative Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

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 9 and 13 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, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) 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. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 1800-01 Rev: 17
Procedure _____ Rev: _____
Procedure _____ Rev: _____

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision 00, Developed for the 2016 ILT NRC Exam as an RO Admin JPM.

Revision 01, Updated JPM for use on 2020 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC-21.

NOTE:	It is okay 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. **Manual Actuations:**

   Depress Trip Check pushbutton for ARM 16 and if necessary using the TRIP CHECK ADJUST knob, adjust the reading between the HIGH and LOW set points.

3. **Malfunctions:**

   None

4. **Remotes:**

   None

5. **Overrides:**

   None

6. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
7. Provide a PMT worksheet.
8. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Admin NSO.
- ARM 1-1805-16 (HPCI CUBICLE), has just been returned to service by Instrument Maintenance department.
- The Post Maintenance Test (PMT) requires an operational check of the upscale and downscale set points.
- The Unit NSO will acknowledge and reset the 901-3 panel alarms.

INITIATING CUE

Perform QCOP 1800-01 step F.1 for ARM 1-1805-16 (HPCI CUBICLE) on the 901-11 panel. Sign off the test in the PMT Binder when complete.

Provide examinee with: A blank copy of QCOP 1800-01.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.1.a	**Depress** and **hold** TRIP CHECK pushbutton	At the 901-11 panel: ●Depresses and holds the TRIP CHECK pushbutton for ARM 16.●	___	___	___
*F.1.b	**Check** ARM upscale trip setpoint	At the associated PWR SPLY AREA MON on the 901-11 panel: ●Slowly turns the TRIP CHECK ADJUST knob in the clockwise direction until the HIGH lamp on ARM 16 Trip Unit is lit.●	___	___	___
F.1.b. (1)	**Verify** ARM set point label is correct.	Verify alarm set point is adjusted to the set point indicated on the ARM 16 label plate.	___	___	___
F.1.b. (2)	**Verify** high radiation alarm annunciates.	Verifies annunciator 901-3 A-1, RX BLDG HI RADIATION, is in alarm.	___	___	___
CUE:	**As the Unit NSO, inform the examinee that "annunciator 901-3 A-1, RX BLDG HI RADIATION, is in alarm."**				
*F.1.c	**Check** ARM downscale trip setpoint.	At the associated PWR SPLY AREA MON on the 901-11 panel: ●Slowly turns the TRIP CHECK ADJUST knob in the counter-clockwise direction until the LOW lamp on ARM 16 Trip Unit is lit.●	___	___	___
F.1.c. (1)	**Verify** downscale alarm annunciates.	Verifies annunciator 901-3 F-1, AREA MONITOR DOWNSCALE, is in alarm.	___	___	___

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	**As the Unit NSO, inform the examinee that "annunciator 901-3 F-1, AREA MONITOR DOWNSCALE, is in alarm."**				
*F.1.d	**Reset** ARM Trip Unit	Release TRIP CHECK pushbutton ●Depress RESET pushbutton on ARM 16.●	___	___	___
F.1.e	**Verify** ARM Trip Unit resets	Verify HIGH lamp on ARM 16 Trip Unit is NOT lit Verify LOW lamp on ARM 16 Trip Unit is NOT lit.	___	___	___
F.1.f	**Verify** 901-3 panel annunciators are clear.	Verify annunciator 901-3 A-1 resets and clears. Verify annunciator 901-3 F-1 resets and clears.	___	___	___
*	Initial and date the applicable PMT item in the PMT Binder.	●Initial and date the PMT Binder.●	___	___	___
CUE:	**As the Unit NSO, inform the examinee that "annunciators 901-3 A-1, and 901-3 F-1 have reset and cleared."**				
EVALUATOR NOTE: The examinee should inform you the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☒ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: ARM Trip Unit Set Point Check

JPM Number: RO JPM A3 Revision Number: 01

Task Standard:

Perform QCOP 1800-01 Step F.1 for an ARM and complete PMT documentation.

Task Number and Title:

SR-1800-P03: (Freq: LIC=I) Given a reactor plant, test the high and low trip levels of an ARM trip/indicating unit in accordance with QCOP 1800-01.

K/A Number and Importance: **K/A:** 2.3.5 **Rating:** 2.9/2.9

Suggested Testing Environment: Simulator

Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s): QCOP 1800-01 Rev. 17, Operation of ARM Indicator/Trip Units

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

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

EVALUATION SUMMARY:

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

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

Comments: _____

_____

_____

_____

_____

_____

_____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

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