Job Performance Measure

Enter Substitute Value for RWCU Pump Flow

JPM Number: RO Admin 1

Revision Number: 00

Date: 10/13/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 9950-17 Rev: 01 Procedure QCOP 1200-03 Rev: 27 Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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 as an RO Admin JPM for the 2016 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:**
   - Remove the "B" RWCU Demin from service by inserting the following command: **irf cu10r out**
   - Throttle the MO 1-1201-133 to maintain the following:
     1) RWCU Pump discharge pressure 100 to 200 psig above reactor pressure
     2) "A" RWCU Demin flow at 230 gpm.

3. **Malfunctions:**
   None

4. **Remotes:**
   CU10R

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. This completes the setup for this JPM.

INITIAL CONDITIONS

- The “B” RWCU Demin has been isolated per QCOP 1200-03 for a backwash and precoat.
- Local flow indication for both “A” and “B” RWCU pumps are 230 and 240 gpm, respectively.
- The QNE has been notified that substitute values for RWCU pump flow are to be entered for the Core Thermal Heat Balance.

INITIATING CUE

Enter substitute values for RWCU pump flow in accordance with QCOP 1200-03 step F.3 and QCOP 9950-17.

Provide examinee with: A marked up copy of QCOP 1200-03 and a blank copy of QCOP 9950-17.

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: QCOP 9950-17 steps F.2.f –F.2.o., will be performed for each point that requires a substitute value. Per QCOP 1200-03 step F.3.b., the points are: **C121_VOL** **C121_VOL_FILT** **C122_VOL** **C122_VOL_FILT**					
*F.2.d	Select "Database Management"	From the Main Menu: Selects "Database Management"	___	___	___
*F.2.e	Select "Single Point Display-Analog" (SPAD)	From the Database Management Menu: Selects "Single Point Display-Analog" (SPAD)	___	___	___
*F.2.f	Select the "Point Name" area	Selects "Point Name" area	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___
*F.2.g-h	Select the desired Point Name (Point ID)	From the Data Point Selection Screen: Scrolls through "Point Names" field and clicks on desired point to highlight. Then clicks "OK". OR Enters the desired point in the "Point Search" field, then click "OK".	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.2.i	Verify desired point is in "Point Name" field	Verifies each point is in the "Point Name" field of SPDD.	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___
*F.2.j	Select "Change Point Attributes"	Clicks on "Change Point Attributes" button at lower portion of display.	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___
*F.2.k	Enter desired value for selected points	When the "Single Point Digital Change Attributes Display" appears, enters the following values in the "New Value" field: "230 gpm" for C121_VOL "230 gpm" for C121_VOL_FILT "240 gpm" for C122_VOL "240 gpm" for C122_VOL_FILT	 ___ ___ ___ ___	 ___ ___ ___ ___	 ___ ___ ___ ___
*F.2.l	Apply the substitute values	For each point: Clicks the "Apply" button <u>twice</u> on the bottom of display and verifies field backround turns grey.	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___
EVALUATOR NOTE: For step F.2.m, the "change description box" cannot be left blank The computer program will not proceed without at least some characters entered.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.2.m	Enter the reason for the substitute value	Enters procedure number or comment, in "change description box".	___	___	___
F.2.n	Verify correct point and value are entered	Verifies correct point and value appear in pop-up window, then selects "OK" to close window.	___	___	___
*F.2.o	Select "Done" to return to SPAD screen.	Clicks on "Done" and returns to "Single Point Display-Digital" (SPAD) screen.	___	___	___
QCOP 1200-03 F.3.b	Initials completed substitute values in QCOP 1200-03 step F.3.b.(1-4)	Initials QCOP 1200-03 step F.3.b.1 thru F.3.b.4 as each substitute value is entered for the computer points.	___	___	___
EVALUATOR NOTE: The examinee should inform you that 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 Substitute Value for RWCU Pump Flow

JPM Number: RO Admin 1 Revision Number: 00

Task Number and Title:

SR-9900-P01 (Freq: LIC=I) Given an operating reactor plant, perform the following process computer operations in accordance with the appropriate QCOP 9950 procedure:
9900.049 Enter a Substitute Value

K/A Number and Importance: **K/A:** 2.1.19 **Rating:** 3.9/3.8

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 9950-17 Rev. 1, Changing Scan Status or Point Attributes of Selected Plant Process Computer Analog and Digital Points

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

- The “B” RWCU Demin has been isolated per QCOP 1200-03 for a backwash and precoat.
- Local flow indication for both “A” and “B” RWCU pumps are 230 and 240 gpm, respectively.
- The QNE has been notified substitute values for RWCU pump flow are to be entered for the Core Thermal Heat Balance.

INITIATING CUE

Enter substitute values for RWCU pump flow in accordance with QCOP 1200-03 step F.3 and QCOP 9950-17

Job Performance Measure

Verification of SBGTS Lineup

JPM Number: RO Admin 2

Revision Number: 00

Date: 10/06/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 7500-01 Rev: 21 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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 2016 ILT NRC License 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:**
   - Place the ½ A SBGTS TRAIN MODE SELECTOR SWITCH to: 'A' PRIM.
   - Place the ½ B SBGTS TRAIN MODE SELECTOR SWITCH to: 'B' STDBY.
   - Close the 1-7503 U1 RB INLET DMPR TO SBGTS.
   - Close the 2-7503 U2 RB INLET DMPR TO SBGTS.
   - Verify all SBGTS annunciators are clear.

3. **Malfunctions:**
   None

4. **Remotes:**
   Noned

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. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Unit 1 Admin NSO.
- QCOS 7500-04, Unit 1 Standby Gas Treatment Initiation and Reactor Building Ventilation Isolation Test was completed last shift for the ½ B Standby Gas Train.
- The Unit Supervisor has requested a verification of the standby lineup for the Standby Gas Treatment System (SBGTS).

INITIATING CUE

Verify the SBGTS standby lineup and if necessary report any discrepancies to the Unit Supervisor.

Provide examinee with: A blank copy of QCOP 7500-01, Standby Gas Treatment System (SBGTS) Standby Operation and Start-Up after the examinee obtains it in the simulator.

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	Reports the ½ A SBGTS TRAIN MODE SELECTOR SWITCH is in PRIM.	Recognizes the ½ A SBGTS is improperly selected as PRIM (Primary) instead of STBY (Stand-by).	___	___	___
CUE:	**As Unit Supervisor, acknowledge the report, and direct the examinee to "complete the lineup verification."**				
*F.1.b	Reports the ½ B SBGTS TRAIN MODE SELECTOR SWITCH is in STBDY.	Recognizes the ½ B SBGTS is improperly selected as STBY (Standby) instead of PRIM (Primary).	___	___	___
*F.1.c (1)	Reports the 1-7503 U1 RB INLET DMPR TO SBGTS is mispositioned.	Recognizes the 1-7503 is CLOSED (green light lit) and should be in the OPEN (red light lit) position.	___	___	___
*F.1.c (2)	Reports the 2-7503 U2 RB INLET DMPR TO SBGTS is mispositioned.	Recognizes the 2-7503 is CLOSED (green light lit) and should be in the OPEN (red light lit) position.	___	___	___
F.1.c. (3)	Verifies ½ -7505A INLET DMPR is CLOSED.	Verifies ½ -7505A INLET DMPR is closed. -green light lit. -red light out	___	___	___
F.1.c. (4)	Verifies ½ -7505B INLET DMPR is CLOSED.	Verifies ½ -7505B INLET DMPR is closed. -green light lit. -red light out	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.1.c. (5)	Verifies the ½ -7504A TURB BLDG CLG AIR DMPR is OPEN.	Verifies the ½ -7504A TURB BLDG CLG AIR DMPR is OPEN. -red light lit -green light out	___	___	___
F.1.c. (6)	Verifies the ½ -7504B TURB BLDG CLG AIR DMPR is OPEN.	Verifies the ½ -7504B TURB BLDG CLG AIR DMPR is OPEN. -red light lit -green light out	___	___	___
F.1.c. (7)	Verifies ½ -7507A SBGTS FAN DISCH DMPR is CLOSED.	Verifies ½ -7507A is CLOSED. -green light lit -red light out	___	___	___
F.1.c. (8)	Verifies ½ -7507B SBGTS FAN DISCH DMPR is CLOSED.	Verifies ½ -7507B is CLOSED. -green light lit -red light out	___	___	___
F.1.c. (9)	Verifies ½ -7509 XTIE DMPR is OPEN.	Verifies ½ -7509 is OPEN. -red light lit -green light out	___	___	___
F.1.c. (10)	Verifies ½ -7503A SBGTS AIR HTR is OFF.	Verifies ½ -7503A is OFF. -OFF light lit -ON light out	___	___	___
F.1.c. (11)	Verifies ½ -7503B SBGTS AIR HTR is OFF.	Verifies ½ -7503B is OFF. -OFF light lit -ON light out	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.1.c. (12)	Verifies ½ -7506A, 1/2 A SBGTS FAN is OFF.	Verifies ½ -7506A, is OFF. -OFF light lit -ON light out	___	___	___
F.1.c. (13)	Verifies ½ -7506B, 1/2 B SBGTS FAN is OFF.	Verifies ½ -7506B, is OFF. -OFF light lit -ON light out	___	___	___
F.1.c. (14)	Verifies Instrument Air is available to AO ½ -7510A and AO ½ -7510B SBGT OUTLET VLVS.	Dispatches EO to verify Instrument Air is valved into AO ½ -7510A and AO ½ -7510B SBGT valves.	___	___	___
CUE:	**As EO, report: "Instrument Air is valved into AO ½-7510A and AO ½ -7510B Standby Gas Train A and B Outlet Valves."**				
F.1.c. (15)	Verify all applicable SBGTS alarms are cleared.	Verifies all applicable SBGTS annunciators at the 912-5 panel are clear.	___	___	___
CUE:	**As the Unit Supervisor, inform the examinee that: "Another NSO will realign the SBGTS Trains to the correct lineup."**				
EVALUATOR NOTE: The examinee should inform you that 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 SBGTS Lineup

JPM Number: RO Admin 2 Revision Number: 00

Task Number and Title:

SR-7500-P01 (Freq: LIC=B) Given SBGTS in a standby lineup, perform the monthly SBGTS monthly operability test and return SBGTS to a standby line up in accordance with QCOS 7500-05.

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 7500-01 Rev. 21, Standby Gas Treatment System (SBGTS) Standby Operation and Start-Up.

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 10 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 Unit 1 Admin NSO.
- QCOS 7500-04, Unit 1 Standby Gas Treatment Initiation and Reactor Building Ventilation Isolation Test was completed last shift for the ½ B Standby Gas Train.
- The Unit Supervisor has requested a verification of the standby lineup for the Standby Gas Treatment System (SBGTS).

INITIATING CUE

Verify the SBGTS standby lineup and if necessary report any discrepancies to the Unit Supervisor.

Job Performance Measure

Print Reading Exercise

JPM Number: RO Admin 3

Revision Number: 00

Date: 10/15/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QOS 5600-01 Rev: 54 Procedure 4E-1466 Sh.3 Rev: AP Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision 00, This JPM was developed new for the 2012 ILT NRC Exam.

Revision 01, Reformatted to latest JPM template. Used on 2016 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Simulator not required for this JPM.

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:**

   None

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. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Clearance Order Writer.
- QOS 5600-01, Turbine Control Valve (TCV) Fast Closure Scram Instrument Channel Functional Test was being performed.
- When #3 TCV went closed during this test, NONE of the expected responses were received:
    - o DEHC did NOT indicate FAST CLOSURE DETECTED.
    - o Expected Annunciator 901-5 A-13, CHANNEL A/B TURB-GEN LOAD MISMATCH EHC LOW PRESS, did NOT alarm.
    - o The Test Box indicating light did NOT illuminate.
    - o The two sets of associated relay contacts did NOT open.

INITIATING CUE

Reference electrical schematics 4E-1464 through 4E-1467.

Identify the following:

1) The RELAY associated with TCV #3 in the Turbine Generator Load Rejection RPS Logic.

2) The FUSE that would have to be removed to deenergize the relay identified in Part 1.

Provide Examinee with: A blank copy of QOS 5600-01, when/if it is obtained for reference.

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 NOTES: **A blank copy of QOS 5600-01 is provided upon request.** **This JPM is performed in the Simulator where the QOS and other necessary reference material can be obtained.** **The relay number can be determined from either the QOS or Schematic Drawing 4E-1466 Sheet 3.** **The fuse number can be determined from 4E-1466 Sheet 3 but not the QOS.** **Do NOT allow the candidate to mark on electrical drawings.**					
*Part 1	Correctly identify the number of the TCV Fast Closure RPS relay associated with TCV #3.	Relay 590-121B identified.	___	___	___
*Part 2	Correctly identify the number of the fuse that would have to be removed to deenergize the relay identified in Part 1.	Fuse 590-725B identified.	___	___	___
EVALUATOR NOTE: The examinee should inform you that 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: Print Reading Exercise

JPM Number: RO Admin 3 Revision Number: 01

Task Number and Title:

SRN-EPR-K10 (Freq: LIC=I N=B) Given an Electrical Drawing:

a. Locate a given component

b. Determine the component power supply

K/A Number and Importance: **K/A:** 2.2.41 **Rating:** 3.5/3.9

Suggested Testing Environment: Simulator

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

Reference(s): QOS 5600-01, Rev. 54, Turbine Control Valve Fast Closure Scram Instrument Channel Functional Test

IR1294079, (Dated 11/23/11) "Relay 590-123C did not drop out when pressure switch opened"

4E-1466 Sheet 3, Schematic Drawing RPS CH B Scram and Aux Trip Relays

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 Clearance Order Writer.
- QOS 5600-01, Turbine Control Valve (TCV) Fast Closure Scram Instrument Channel Functional Test was being performed.
- When #3 TCV went closed during this test, NONE of the expected responses were received:
    - o DEHC did NOT indicate FAST CLOSURE DETECTED.
    - o Expected Annunciator 901-5 A-13, CHANNEL A/B TURB-GEN LOAD MISMATCH EHC LOW PRESS, did NOT alarm.
    - o The Test Box indicating light did NOT illuminate.
    - o The two sets of associated relay contacts did NOT open.

INITIATING CUE

Reference electrical schematics 4E-1464 through 4E-1467.

Identify the following:

1) The RELAY associated with TCV #3 in the Turbine Generator Load Rejection RPS Logic.

2) The FUSE that would have to be removed to deenergize the relay identified in Part 1.

Job Performance Measure

ARM Trip Unit Set Point Check

JPM Number: RO Admin 4

Revision Number: 00

Date: 10/04/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 1800-01 Rev: 15 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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.

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:**

   Adjust test potentiometer to mid position such that no alarm (high or low) occurs when the Trip Check pushbutton is depressed.

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. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Admin NSO.
- ARM 20 (1B SJAE AREA), 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 20 (1B SJAE AREA), on the 901-11 panel. Notify the Unit Supervisor when the test is 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	-Locates ARM 20 on the 901-11 panel. -Depresses and holds the TRIP CHECK pushbutton.	___	___	___
*F.1.b	**Adjust** the PWR SPLY AREA MON until the HIGH lamp is lit.	-Locates the associated PWR SPLY AREA MON -Slowly turns the TRIP CHECK ADJUST knob in the clockwise direction until the HIGH lamp on ARM 20 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 20 label plate.	___	___	___
F.1.b. (2)	**Verify** high radiation alarm annunciates.	Verifies annunciator 901-3 D-1, TURB BLDG HI RADIATION, is in alarm.	___	___	___
CUE:	**As the Unit NSO, inform the examinee that "annunciator 901-3 D-1, TURB BLDG HI RADIATION, is in alarm."**				
*F.1.c	**Adjust** the PWR SPLY AREA MON until the LOW lamp is lit.	-Locates the associated PWR SPLY AREA MON -Slowly turns the TRIP CHECK ADJUST knob in the counter-clockwise direction until the LOW lamp on ARM 20 Trip Unit is lit.	___	___	___
F.1.c. (1)	**Verify** downscale alarm annunciates.	Verifies annunciator 901-3 F-1, AREA MONITOR DOWNSCALE, is in alarm.	___	___	___

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 20.	___	___	___
F.1.e	**Verify** ARM Trip Unit resets	-Verify HIGH lamp on ARM 20 Trip Unit is NOT lit -Verify LOW lamp on ARM 20 Trip Unit is NOT lit.	___	___	___
F.1.f	**Verify** 901-3 panel annunciators are clear.	-Verify annunciator 901-3 D-1 resets and clears. -Verify annunciator 901-3 F-1 resets and clears.			
CUE:	**As the Unit NSO, inform the examinee that "annunciators 901-3 D-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 Admin 4 Revision Number: 00
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:** 2.3.05 **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. 15, Operation of ARM Indicator/Trip Units

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 10 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

- You are the Admin NSO.
- ARM 20 (1B SJAE AREA), 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 20 (1B SJAE AREA), on the 901-11 panel. Notify the Unit Supervisor when the test is complete.

Job Performance Measure

Perform Call Out to Fill Shift Position

JPM Number: 2016.SRO Admin 1

Revision Number: 02

Date: 10/02/15

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure OP-AA-112-101 Rev: 11 Procedure SY-AA-102-201 Rev: 09 Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision 02, Developed for 2016 ILT NRC exam. Updated to new format and procedure changes. Name changed to accurately reflect the content of the JPM.

Previous versions:

Revision 00, This JPM was developed IAW guidelines established in NUREG 1021 Rev. 9 Supplement 1, ES-301 and Appendix C. This JPM meets the criteria of ES-301 D.3 for "Administrative Topics."

This JPM was developed NEW for the 2009 ILT NRC Exam.

Revision 01, Revised to incorporate procedure changes.

SRRS: 3D.105 There are no retention requirements for this section.

JPM SETUP INSTRUCTIONS

1. This is an Administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify the following information is available for the Initiating Cue:
   - The current shift schedule
3. Verify the following information is available for JPM performance:
   - QAP 0300-03, Rev. 41, Operations Shift Staffing
   - Tech Spec 5.2, Organization
   - OP-AA-112-101, Rev.11, Shift Turnover and Relief
   - SY-AA-102-201, Rev.9, “Call-Outs for Unscheduled Work”
4. Copy of SY-AA-102-201, Call-Outs For Unscheduled Work.
5. List of phone numbers for STA #1, STA #2, and STA #3.
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. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Shift Manager.
- Unit 1 and Unit 2 are at full power.
- The STA's wife is expecting a baby. He has permission from the Operations Director to leave if necessary to join his wife.
- At 0200 the STA departs the site when his wife calls him home because she has gone into labor.
- There are no other STA qualified supervisors on shift.

INITIATING CUE

If required, identify the staffing adjustments that need to be made, the time constraints involved and perform the callout per SY-AA-102-201, Attachment 1.

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
*QAP 0300-03 C.1.d	Determine that the STA position must be staffed for both Units in Mode 1, 2, or 3.	The requirement for STA staff position manning is identified.	___	___	___
*T. S. 5.2.2.b.	Determine that the STA position must be staffed in a time not to exceed 2 hours.	The requirement to fill the STA staff position within 2 hours is identified.	___	___	___
ROLE PLAY:	**When requested, as Shift Supervisor provide a list containing the phone numbers of the STAs available to work AND a blank copy of SY-AA-102-201.**				
ROLE PLAY:	**During the simulated phone calls provide the requested information listed below per SY-AA-102-201, Attachment 1** **STA #1** **Alcohol consumed in last 5 hrs?** ***NO*** **Are you Fit For Duty?** ***YES*** **Will you violate Work Hour Restrictions?** ***NO*** **Comment:** ***Can report On-Site by 0500*** **STA #2** **Alcohol consumed in last 5 hrs?** ***NO*** **Are you Fit For Duty?** ***YES*** **Will you violate Work Hour Restrictions?** ***YES. I worked overtime on Shift 3 and I have only had four hours off.*** **Comment:** ***Can report On-Site by 0300*** **STA #3** **Alcohol consumed in last 5 hrs?** ***NO*** **Are you Fit For Duty?** ***YES*** **Will you violate Work Hour Restrictions?** ***NO*** **Comment:** ***Can report On-Site by 0330***				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*T.S. 5.2.2.b	Directs STA # 3 to report to work.	The STA position can be vacant for 2 hours per T. S. 5.2.2.b.	___	___	___
ROLE PLAY:	**As STA #3, acknowledge the request and state that you will report to work.**				

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Perform Call Out to Fill Shift Position

JPM Number: 2016.SRO Admin 1 Revision Number: 02

Task Number and Title: SS-S-08 Operations Shift Staffing

K/A Number and Importance: **K/A:** 2.1.5 **Rating:** 2.9*/3.9

Suggested Testing Environment: Classroom

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

Reference(s): QAP 0300-03 Rev. 41, Operations Shift Staffing
Tech Spec 5.2, Organization
OP-AA-112-101 Rev. 11, Shift Turnover and Relief
SY-AA-102-201 Rev. 9, "Call-Outs for Unscheduled Work"

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 05 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

- You are the Shift Manager.
- Unit 1 and Unit 2 are at full power.
- The STA's wife is expecting a baby. He has permission from the Operations Director to leave if necessary to join his wife.
- At 0200 the STA departs the site when his wife calls him home because she has gone into labor.
- There are no other STA qualified supervisors on shift.

INITIATING CUE

If required, identify the staffing adjustments that need to be made, the time constraints involved and perform the callout per SY-AA-102-201, Attachment 1.

SRRS: 3D.105 There are no retention requirements for this section.

Exelon Nuclear

Job Performance Measure

Review QOS 0005-S01 for Start of Daily Refueling Activities

JPM Number: SRO Admin 2

Revision Number: 01

Date: 10/3/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QOS 0005-S01 Rev: 182 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision 01, Developed for 2016 ILT NRC exam. Updated from SRO-26-I use don the 2009 ILT NRC exam. Revisions included clarifying Elements and updating to the most recent revision of QOS 0005-S01.

Previous Revisions

Revision 00, This JPM is developed IAW guidelines established in NUREG 1021 Rev 9 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.

This is a new JPM that was developed for the 2009 NRC Initial License exam.

SRRS: 3D.105 There are no retention requirements for this section.

JPM SETUP INSTRUCTIONS

1. This is an Administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify the following information is available for the Initiating Cue:
   - QOS 0005-S01 properly completed for the week except for following errors:
     - Section 11.c. Channel count rate $\geq$ 3 cps is incorrectly checked
     - Section 51.a.4 is inappropriately checked as completed within 7 days.
     - Section 33 shows SRM Channel 23 at 2 cps on Sunday shift 3.
3. This completes the setup for this JPM.

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- You are the Unit Supervisor on Unit 1 during a refueling outage.
- Today is Shift 3 on Sunday April 3rd.
- Core alterations were suspended for three days during the week for scheduled outage work.
- That work has been completed and the second fuel shuffle can begin.
- The Mode switch is locked in REFUEL.
- All control rods are fully inserted.
- The Refueling cavity is flooded.
- Communications have been established and tested satisfactorily earlier in the shift.
- The following core alteration surveillances were completed satisfactorily:
    - SRM Functional Test QCIS 0700-09; completed 3/30 at 0600 hrs. SRM signal to noise ratios are: SRM 21-15:1, SRM 22-17:1, SRM 23 -14:1, SRM 24 -12:1.
    - IRM Functional Test QCIS 0700-09; completed 4/01 at 1000 hrs
    - SRM/IRM Detector Not Full In Functional Test QCOS 0700-01; completed 4/02 at 1600 hrs
    - Refuel interlocks operable per QCFHP 0500-08; completed 3/26 at 0400 hrs
    - One Rod out Interlock operable per QCOS 0300-17; completed 4/02 at 2300 hrs

INITIATING CUE

Review QOS 0005-S01 Sections, 11, 16, 25, 33, 38, 39, and 51 for Start of Daily Refueling Activities.

Contact the Fuel Handling Supervisor when your review has been completed, and authorize the start of fuel moves OR state why fuel moves cannot be allowed.

(Provide prepared exam copy of QOS 0005-S01 to the examinee when the Initiating Cue is acknowledged.)

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.

SRRS: 3D.105 There are no retention requirements for this section.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
11	Verify SRMs are operable.	Sunday Shift 3 already completed for steps (a) and (b). Step 11.(c), SRM count rates ≥ 3 cps is CHECKED IN ERROR.	___	___	___
16	Ensure Reactor Water Level indications are entered and verify readings are within 12 inches of each other.	Sunday Shift 3 already completed. Both indicators reading >60 inches with Refueling cavity flooded.	___	___	___
25.b.	Verify Rx Coolant Circulation.	Sunday Shift 3 already completed. One loop of shutdown Cooling in service.	___	___	___
33	Checks SRM counts and channel check within 1 decade of each other.	Sunday Shift 3 already completed. All channels are within 1 decade. May recognize that SRM 23 is reading only 2 cps.	___	___	___
38	Ensure Reactor Water Level indications are entered and verify readings are within 12 inches of each other.	Sunday Shift 3 already completed. All 4 indicators reading >60 inches with Refueling cavity flooded.	___	___	___
39	Ensure Reactor Water Level indications are entered and verify readings are within 12 inches of each other.	Sunday Shift 3 already completed. All 4 indicators reading >60 inches with Refueling cavity flooded.	___	___	___
51.a.1	Verify SRM Functional completed within 7 days prior to the start of core alterations.	Sunday Shift 3 checked per turnover information.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
51.a.2	Verify IRM Functional completed within 7 days prior to the start of core alterations.	Sunday Shift 3 checked per turnover information.	___	___	___
51.a.3	Verify SRM/IRM Detector not Full In Functional completed within 7 days prior to the start of core alterations.	Sunday Shift 3 checked per turnover information.	___	___	___
*51.a.4	Verify Refueling Interlock test completed within 7 days prior to the start of core alterations.	Recognizes Sunday Shift 3 is CHECKED IN ERROR. Performance of QCFHP 0500-08 has exceeded 7 days from the given Initial Conditions.	___	___	___
CUE:	**If contacted to perform QCFHP 0500-08, as the Fuel Handling Supervisor, state: "You will brief the crew and start the surveillance".**				
51.a.5	Verify Rx water level > 23 ft above the top of the RPV flange.	Sunday Shift 3 checked per turnover information.	___	___	___
51.a.6	Verify Rx Mode Switch locked in Refuel with any control rod withdrawn.	Sunday Shift 3 marked N/A per turnover information.	___	___	___
51.a.7	Verify One-Rod-Out interlock is operable within 7 days prior to the start of control rod withdrawal.	Sunday Shift 3 checked per turnover information.	___	___	___
51.a.8	Verify Direct Communications have been established.	Sunday Shift 3 checked per turnover information.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*51.a.9	Verify Operable fully-inserted SRM detector reading of ≥3 cps or ≥0.7 cps with a signal to noise ratio [3] 20/1 located in the core quadrant where Core Alterations will be performed.	Recognizes Sunday Shift 3 block is CHECKED IN ERROR. SRM 23 reading was 2 cps and signal to noise ratio is < 20/1 per the turnover.	___	___	___
CUE:	**If contacted to investigate and troubleshoot SRM 23, as the Instrument Maintenance Supervisor state you will:** **"Prepare a package and start work as soon as possible".**				
51.a.10	Verify all control rods fully inserted.	Sunday Shift 3 checked per turnover information.	___	___	___
51.a.11	Verify withdrawn control rod accumulator pressures >940 psig once per 7 days.	Sunday Shift 3 marked N/A per turnover information.	___	___	___
EVALUATOR NOTE: The examinee should report to the FHS that: · **"The requirements of QOS 0500-S01 are NOT satisfied and Refueling activities EXCEPT for performance of QCFHP 0500-08 are NOT authorized".** · **"Also, SRM 23 is inoperable, which prevents fuel movement in the associated quadrant of the core.**					
EVALUATOR NOTE: After acknowledging the report, the examinee should inform that the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Review QOS 0005-S01 for Start of Daily Refueling Activities

JPM Number: 2016 SRO Admin 2 Revision Number: 01

Task Number and Title: SRL-805-K20 Given refueling equipment related operability status OR parameter indications, various plant conditions, and a copy of Tech Specs, DETERMINE if the Conduct of Refueling related Tech Spec LCOs have been met.

K/A Number and Importance: **K/A:** 2.1.36 **Rating:** 4.1

Suggested Testing Environment: Simulator

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

Reference(s):
QOS 0005-S01, Rev 182, "Operations Department Weekly Summary of Daily Surveillances"

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 Unit Supervisor on Unit 1 during a refueling outage.
- Today is Shift 3 on Sunday April 3rd.
- Core alterations were suspended for three days during the week for scheduled outage work.
- That work has been completed and the second fuel shuffle can begin.
- The Mode switch is locked in REFUEL.
- All control rods are fully inserted.
- The Refueling cavity is flooded.
- Communications have been established and tested satisfactorily earlier in the shift.
- The following core alteration surveillances were completed satisfactorily:
    - SRM Functional Test QCIS 0700-09; completed 3/30 at 0600 hrs. SRM signal to noise ratios are: SRM 21-15:1, SRM 22-17:1, SRM 23 -14:1, SRM 24 -12:1.
    - IRM Functional Test QCIS 0700-09; completed 4/01 at 1000 hrs
    - SRM/IRM Detector Not Full In Functional Test QCOS 0700-01; completed 4/02 at 1600 hrs
    - Refuel interlocks operable per QCFHP 0500-08; completed 3/26 at 0400 hrs
    - One Rod out Interlock operable per QCOS 0300-17; completed 4/02 at 2300 hrs

INITIATING CUE

Review QOS 0005-S01 Sections, 11, 16, 25, 33, 38, 39, and 51 for Start of Daily Refueling Activities.

Contact the Fuel Handling Supervisor when your review has been completed, and authorize the start of fuel moves OR state why fuel moves cannot be allowed.

SRRS: 3D.105 There are no retention requirements for this section.

Job Performance Measure

Review a Fire Impairment Permit Requiring Compensatory Actions

JPM Number: 2016.SRO Admin 3

Revision Number: 00

Date: 10/5/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure OP-MW-201-007 Rev: 07 Procedure QCAP 1500-01 Rev: 34 Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision 00: Developed for 2016 ILT NRC exam. This is a modified Bank JPM. Also revised to the new template and current procedures.

AD-SRO-6 Revsions:

Revision 01, This is a LORT Bank JPM (AD-SRO-6) that was used on the 2011 ILT NRC License Exam. Updated Fire Permit information.

SRRS: 3D.105 There are no retention requirements for this section.

SIMULATOR SETUP INSTRUCTIONS

1. NOTE: This JPM may be conducted in any appropriate setting; i.e., simulator, classroom, Control Room, provided that the following procedures are available to the candidate:
   - OP-MW-201-007, FIRE PROTECTION SYSTEM IMPAIRMENT CONTROL
   - QCAP 1500-01, ADMINISTRATIVE REQUIREMENTS FOR FIRE PROTECTION
2. Verify the following for this JPM setup:
   - A current revision of OP-MW-201-007 Attachment 1 "Fire Protection Impairment Permit" is filled out as follows:

   1) Fill out Section I Initiator:" of the Fire Protection Permit as follows:

Initiator: "IMD Supervisor"	Station: "Quad"	Unit: "00"
Name: "A. Smith"	Phone: "X 2210"	Dept/Co: "IMD/Exelon"
Sch. Start Date: "current"	Bldg: "RX"	EPN#:
Sch. End Date: "current + 1"	Elev: "595"	Door #:
AR/WR/OOS#: "WO 1607822"		Det. Zone: "
		Pent #:

Do NOT check the Structural fireproofing OR Wall Penetration boxes.

Impairment Description: "Perform QCIS 7600-04 Unit 0 Standby Diesel Generator Cardox Fire Protection Functional Test."

   2) Fill out section II. "FIRE MARSHAL REVIEW" of the Fire Protection Impairment Permit as follows:

   a. Fire Zone(s): 9.3 / For Barriers: Check the "Functional" box.
   b. Technical Requirement Manual? Check the "Yes" box. "QCAP 1500-01"
   c. Mark "None" in the Fire Watch Required: block and "N/A" below.
   d. Check the "NO" box for Additional Compensatory Measures.
   e. Fire Detector Operability Check Required? Check the "NO" box.
   f. NEIL Notification Required? Check the "NO" box.
   g. Fire Marshal Instructions: "Return to operable status in 14 days"
   h. Restoration/Testing Requirements: "Completion of Work Package. PMT per Work Package".
   i. Sign and date as Fire Marshal for Authorization Block.

3. This completes the setup for this JPM.

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- You are the Operations Field Supervisor.
- An Instrument Maintenance Supervisor has submitted a fire permit to allow performance of QCIS 7600-04, "Unit 0 Standby Diesel Generator Cardox Fire Protection Functional Test".
- The Instrument Maintenance Supervisor has informed you that this surveillance will render the Cardox System inoperable.

INITIATING CUE

Review Fire Protection Impairment Permit 1234. Approve the permit OR explain the reason(s) why you cannot.

Provide examinee with: A copy of fire permit 1234, OP-MW-201-007, Attachment 1.

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.

SRRS: 3D.105 There are no retention requirements for this section.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: When requested (located), provide a copy of QCAP 1500-01, OP-MW-201-007, or Fire Pre-Plan. The sequence of providing the reference material may vary by examinee. The examinees may perform the verification steps in any order.					
	Obtains Procedures.	Obtains a copy of QCAP 1500-01.	___	___	___
NOTE: The examinee may perform the following steps in any order.					
Att. J	Determines effect of disabling the Cardox for ½ EDG.	Reviews QCAP 1500-01 Att. J and determines ½ EDG Cardox is a required EFP Cardox system.	___	___	___
CUE: If the examinee states he cannot approve the permit because of errors, prompt him to explain all of the errors on the permit to you. **The following errors are built into the permit:** The Fire Protection Permit was filled out improperly in section II. "FIRE MARSHAL REVIEW" as follows: · None is marked in the "Fire Watch Required:" block **(should be marked "hourly" with performed by marked as "IMD").** · NO is checked in the box for "Additional Compensatory Measures" **(should be marked "YES" and a Description of the additional Compensatory Measures should be included i.e., "backup suppression established or verified.")**					
*D.3.c.(2)	Determines hourly fire watch established within one hour.	Reviews QCAP 1500-01 step D.3.c.(2) and determines an hourly fire watch must be conducted if this permit is approved.	___	___	___
*D.3.c.(4)	Determines backup suppression required within one hour.	Reviews step D.3.c.(4) and determines backup suppression will also be required. (page 15 of 93)	___	___	___

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

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STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Attach. 1	Determines that the Fire Watch Performed By field must be filled in "IMD" or other appropriate department.	Recognizes the "N/A" is not correct for this field.	___	___	___
EVALUATOR NOTE: The examinee may choose to correct the provided impairment. This is acceptable.					
	Reviews the permit for accuracy and Notifies the Evaluator of his conclusions.	The examinee reviews the permit for accuracy IAW OP-MW-201-007 "FIRE PROTECTION SYSTEM IMPAIRMENT CONTROL" step 4.4 and determines the fire impairment permit cannot be approved as written because the Fire Protection Permit was filled out improperly in section II. "FIRE MARSHAL REVIEW" **None** is marked in the "Fire Watch Performed By:" block **(should be marked "YES" and a Description of the additional Compensatory Measures should be included i.e., "backup suppression required").**	___	___	___
CUE: After the examinee explains why he cannot approve the fire permit as written, as the IM Supervisor requesting the permit state that: **"You will rewrite the permit and bring it back for approval on the next shift".**					
EVALUATOR NOTE: The examinee should inform you that the task is complete.					

JPM Stop Time: _____

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

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JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Review a Fire Impairment Permit Requiring Compensatory Actions

JPM Number: SRO Admin 3 Revision Number: 00

Task Number and Title: S-4100-K32 (Freq: LIC=B) Given Fire Protection Systems operability status OR key parameter indications, various plant conditions and a copy of QCAP 1500-01, ANALYZE Fire Protection administrative operability requirements and DETERMINE required compensatory actions and reporting requirements, if any.

K/A Number and Importance: **K/A:** 2.1.25 **Rating:** 3.9/4.2

Suggested Testing Environment: Simulator

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

Reference(s): QCAP 1500-01, Administrative Requirements For Fire Protection, Rev. 34
OP-MW-201-007, Fire Protection System Impairment Control, Rev. 7

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 12.5 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)

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INITIAL CONDITIONS

- You are the Operations Field Supervisor.
- An Instrument Maintenance Supervisor has submitted a fire permit to allow performance of QCIS 7600-04, “Unit 0 Standby Diesel Generator Cardox Fire Protection Functional Test”.
- The Instrument Maintenance Supervisor has informed you that this surveillance will render the Cardox System inoperable.

INITIATING CUE

Review Fire Protection Impairment Permit 1234. Approve the permit OR explain the reason(s) why you cannot.

Job Performance Measure

Determine Status of the Service Water Radiation Monitor

JPM Number: 2016 SRO Admin 4

Revision Number: 00

Date: 10/05/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOS 1700-04 Rev: 13 Procedure QCAN 901(2)-3 G-2 Rev: 05 Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision 00, Developed for 2016 ILT NRC exam.

SRRS: 3D.105 There are no retention requirements for this section.

SIMULATOR SETUP INSTRUCTIONS

- This is an Admin JPM. It may be conducted in a variety of settings, provided the needed reference material is available.

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.

This completes the setup for this JPM.

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- You are the Unit 1 Unit Supervisor.
- Main Control Room annunciator 901-3 G-2 is in alarm.
- An EO has been dispatched and has reported MCC 17-1-1 breaker 18 is ON.
- A Chemistry Technician has been dispatched and reports:
  - Low flow confirmed via sight glass FI 1-1741-25.
  - 1-3999-542, SERVICE WATER RADIATION MONITOR INLET ISOLATION VALVE verified OPEN
  - EDUCTOR INLET PRESSURE is 15 psig
  - OUTLET PRESSURE is 3 psig.

INITIATING CUE

Based on the field reports, determine the status of the Service Water Radiation Monitor.

Complete any required paper work and forward to the Shift Manager for review.

(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.

SRRS: 3D.105 There are no retention requirements for this section.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
QCAN 901(2)-3 G-2 1.c	Verify EDUCTOR INLET PRESSURE is 25-35 psig AND OUTLET PRESSURE is 5-10 psig.	Directs actions per QCAN to correct abnormal eductor pressure.	___	___	___
EVALUATOR NOTE: Provide a copy of QCAN 901(2)-3 G-2 when located by the examinee.					
CUE:	**Throttling of the 1-1799-201 and 1-3999-545 has had no effect on pressures. EDUCTOR INLET PRESSURE is 15 psig EDUCTOR OUTLET PRESSURE is 3 psig.**				
*QCAN 901(2)-3 G-2 3	Evaluates operability of the Service Water Radiation Monitor	Determines Service Water Radiation Monitor is INOP. AND Refers to QCOS 1700-04	___	___	___
EVALUATOR NOTE: Provide a copy of QCOS 1700-04 when located by the examinee.					
H.1.a	H.1. Record the following information on Attachment A.	Records the following information on Attachment A: a. Unit Number, date, time, and Issue Report number, if applicable.	___	___	___
CUE:	**"IR will be prepared by the Unit 2 Unit Supervisor."**				
H.1.b	H.1. Record the following information on Attachment A.	Records the following information on Attachment A: b. Instrument being declared inoperable and the date/time of being declared inoperable.	___	___	___

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

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: Current date and time are acceptable.					
H.1.c	H.1. Record the following information on Attachment A.	Records the following information on Attachment A: c. Reason for inoperability.	___	___	___
*H.1.d	Records information on Attachment A.	Records the following information on Attachment A: d. Date and time 30 days from time that instrument was declared inoperable.	___	___	___
*H.2	Notify Chemistry to perform LCO requirements per CY-QC-130-650, and record on Attachment A.	Notifies Chemistry AND Records the date, time, and person contacted	___	___	___
CUE:	**As Chemistry contact A. Smith, acknowledge the report.**				
H.3	Review outage report actions for accuracy.	Forwards the Outage Report to the Shift Manager for review	___	___	___
CUE:	**As the Shift Manager, "I will review the Outage Report."**				

JPM Stop Time: _____

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

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Determine Status of the Service Water Radiation Monitor

JPM Number: 2016 SRO Admin 4 Revision Number: 00

Task Number and Title: S-1701-K41 (Freq: LIC=B) Given Process Radiation Monitoring System operability status OR key parameter indications, various plant conditions and a copy of the Offsite Dose Calculation Manual (ODCM), DETERMINE if ODCM operability requirements are met and required actions, if any.

K/A Number and Importance: **K/A:** 272000 K3.01 **Importance:** 3.2/3.8

Suggested Testing Environment: Simulator/Classroom

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

Reference(s): QCAN 901(2)-3 G-2 Rev. 5, QCOS 1700-04 Rev. 13

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 Unit 1 Unit Supervisor.
- Main Control Room annunciator 901-3 G-2 is in alarm.
- An EO has been dispatched and has reported MCC 17-1-1 breaker 18 is ON.
- A Chemistry Technician has been dispatched and reports:
  - Low flow confirmed via sight glass FI 1-1741-25.
  - 1-3999-542, SERVICE WATER RADIATION MONITOR INLET ISOLATION VALVE verified OPEN
  - EDUCTOR INLET PRESSURE is 15 psig
  - OUTLET PRESSURE is 3 psig.

INITIATING CUE

Based on the field reports, determine the status of the Service Water Radiation Monitor.
Complete any required paper work and forward to the Shift Manager for review.

SRRS: 3D.105 There are no retention requirements for this section.

Job Performance Measure

Determine Protective Action Recommendations (PARS)

JPM Number: 2016 SRO Admin 5

Revision Number: 00

Date: 10/05/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/03/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure EP-MW-114-100 Rev: 16 Procedure EP-AA-111-F-06 Rev: G Procedure EP-AA-1006 Add. 3 Rev: 01
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision 00: Developed for 2016 NRC ILT Exam. Based on 2012 NRC Exam JPM. This JPM is new as it changes the Initial Conditions and the PARs flow chart was radically changed from the one used in the 2012 JPM.

SRRS: 3D.105 There are no retention requirements for this section.

SIMULATOR SETUP INSTRUCTIONS

Provide examinee with:

1.) Utility Message #1 NARS form completed as follows:

Utility Message 1 State Message N/A

Block #1. Status = Drill/Exercise
Block #2. Station = Quad Cities
Block #3. Onsite Condition = Site Area Emergency
Block #4. Accident Classified: Time = "T_0 -30 minutes"
Date = "today"
EAL# = "FS1"
Block #4. Accident Terminated: Time:=N/A, Date:=N/A
Block #5. Release Status = None
Block #6. Type of Release = N/A
Block #7. Wind Direction = 180 degrees
Block #8. Wind Speed: Meters/Sec = 2.24
Miles/Hr = 5.0
Block #9. Recommended Actions = None
Block #10. Additional Information = None

Verified with [provide signature]

Approved by [provide SM signature]

Block #11 Transmitted By [provide name] Phone Number [309-227-2210]
Time/Date "T_0 -20 minutes/Today"

Block #12 Received By [provide name] Organization =
IEMA, Time/Date: "T_0 -20 minutes/Today"

Initial and Final blocks checked for Quad Cities NARS Code 43

Initial Roll Call complete block on back Time/Date "T_0 -18 minutes/Today"

2.) A marked up Hot EAL Board with the condition for a General Emergency circled.

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- Unit 1 was operating at 100% rated power when a transient occurred that caused an automatic scram.
- The Emergency Plan was activated and a Site Area Emergency (FS1) was classified 30 minutes ago due to high Drywell radiation of 700 R/hr.
- 20 minutes ago Transmission of NARS (**Utility Message #1**) was completed (see attached)
- All plant personnel have been notified of the classification level, reason for the classification, and the TSC and OSC have been activated.
- The TSC is **NOT** at minimum staffing and the TSC has **NOT** assumed Command and Control.
- The Shift Communicator has performed Emergency Response Organization (ERO), Emergency Notification System (ENS), and Emergency Response Data System (ERDS) activation, and the NARS notification.
- The Shift Emergency Director has upgraded the classification to a General Emergency (FG1) based on:
    - Loss of RCS (DW Radiation >100R/hr)
    - Loss of Fuel Clad (DW Radiation >6.65E+02 R/hr)
    - Potential Loss of Containment (DW Radiation >1.55E+03 R/hr)
- There has been **NO** Change in release status, or meteorological data since message #1 was sent
- T_0 is the current time. T_0 is _____ (Use the Simulator Clock)
- **THIS IS AN EXERCISE**
- **THIS JPM IS TIME CRITICAL**

INITIATING CUE

As the Shift Emergency Director, prepare the necessary form(s) that would allow the Shift Communicator to complete the required State and Local notifications.

Provide examinee with:

- A copy of EP-MW-114-100-F01 “Nuclear Accident Reporting System (NARS) Form” Utility Message #1 form completely filled out as a Site Area Emergency
- EP-MW-114-100 “Midwest Region Off-Site Notifications”
- A blank copy of EP-MW-114-100-F01 “Nuclear Accident Reporting System (NARS) Form”
- EP-AA-111-F-06 Rev G, Quad Cities Plant Based PAR Flowchart.

SRRS: 3D.105 There are no retention requirements for this section.

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.

SRRS: 3D.105 There are no retention requirements for this section.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: The following step (NARs completion) must be completed within 15 minutes from the time the examinee acknowledges the initiating cue.					
NARS form	Fills out Utility Message Number.	Records Utility Message #2.	___	___	___
NARS form	Fills out State Message Number.	Records N/A for State Message Number.	___	___	___
Block #1	Fills out block #1 information regarding Status.	Records [B] Drill/Exercise in block #1.	___	___	___
*Block #2	Fills out block #2 information regarding Station.	Records [F] Quad Cities in block #2.	___	___	___
*Block #3	Fills out block #3 information regarding onsite condition.	Records [D] General Emergency.	___	___	___
*Block #4	Fills out block #4 information regarding Accident Classified & Accident Terminated.	Records Accident Classification as Time= Classification time Date= today's date EAL=FG1 Records N/A for Accident Terminated in Time and Date space.	___	___	___
Block #5	Fills out block #5 information regarding Release Status.	Records [A] None.	___	___	___
Block #6	Fills out block #6 information regarding Type of Release.	Records [A] N/A.	___	___	___
CUE:	**If the examinee inquires about the current meteorological conditions, state: "Meteorological conditions have not changed."**				
*Block #7	Fills out block #7 information regarding Wind Direction.	Records 180 degrees.	___	___	___
*Block #8	Fills out block #8 information regarding Wind Speed.	Records [A] Meters/Sec = 2.24 and [B] Miles/Hr = 5.0	___	___	___

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

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
	Refers to EP-AA-111-F-06, "Quad Cities PAR Flow Chart", to determine proper PARs.	Obtains and uses EP-AA-111-F-06, **Page 1** "Initial Protective Action Recommendation ONLY" to determine: · Classification is General Emergency? = Yes · Is this the Initial PAR? = Yes · Is there a Loss of Primary Containment? = No · Is there a Hostile Action event in progress? = No · Is the PAR being made from the Control Room = Yes	___	___	___
*Block #9	Fills out block #9 information regarding Recommended Actions.	Utilizes EP-AA-111-F-06, "Quad Cities PAR Flow Chart", and determines PARs of "Evacuate per Table 3 (below)" [D] Illinois sub-areas 1,2 [E] Iowa sub-areas 1,2,3,5 Records the information on the NARS form	___	___	___
Block #10	Fills out block #10 information regarding Additional Information.	Records NONE.	___	___	___
NARS form	Submits NARS form for verification.	Submits NARS form for verification.	___	___	___

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

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	**When the examinee submits the NARS form for verification, sign the form on the Verified With line, and state: "The verification is complete", and return the form to the examinee.**				
NARS form	Signs on the Approved By line and submits NARS form for transmittal.	Submits NARS form for transmittal	___	___	___
CUE:	**Acting as the Shift Communicator, when the examinee submits the NARS form for transmittal, state:** **"I will transmit it immediately."** **Inform the examinee the task is complete.**				
EVALUATOR NOTE: The examinee must have submitted form filled out for transmittal no later than 15 minutes after classification of the event.					

JPM Stop Time: _____

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

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Determine Protective Action Recommendations (PARS)

JPM Number: 2016 SRO Admin 5 Revision Number: 00

Task Number and Title:

S-EP-P02 (Freq: LIC=A) (ILT-MP): Given an event, determine the public Protective Action Recommendation in accordance with EP-AA-111.

K/A Number and Importance: **K/A:** 2.4.44 **Rating:** 4.4

Suggested Testing Environment: Simulator

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

Reference(s): EP-AA-111-F-06 Rev G, QUAD CITIES PLANT BASED PAR FLOWCHART.
EP-AA-1006 Addendum 3, Rev. 1, QUAD CITIES STATION ANEX.
EP-MW-114-100 Rev. 16, MIDWEST REGION OFFSITE NOTIFICATIONS
EP-MW-114-100-F-01, Rev. H, NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 15 Minutes to Notify **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

- Unit 1 was operating at 100% rated power when a transient occurred that caused an automatic scram.
- The Emergency Plan was activated and a Site Area Emergency (FS1) was classified 30 minutes ago due to high Drywell radiation of 700 R/hr.
- 20 minutes ago Transmission of NARS (**Utility Message #1**) was completed (see attached)
- All plant personnel have been notified of the classification level, reason for the classification, and the TSC and OSC have been activated.
- The TSC is **NOT** at minimum staffing and the TSC has **NOT** assumed Command and Control.
- The Shift Communicator has performed Emergency Response Organization (ERO), Emergency Notification System (ENS), and Emergency Response Data System (ERDS) activation, and the NARS notification.
- The Shift Emergency Director has upgraded the classification to a General Emergency (FG1) based on:
    - Loss of RCS (DW Radiation >100R/hr)
    - Loss of Fuel Clad (DW Radiation >6.65E+02 R/hr)
    - Potential Loss of Containment (DW Radiation >1.55E+03 R/hr)
- There has been **NO** Change in release status, or meteorological data since message #1 was sent.
- T_0 is the current time. T_0 is _____ (Use the Simulator Clock)
- **THIS IS AN EXERCISE**
- **THIS JPM IS TIME CRITICAL**

INITIATING CUE

As the Shift Emergency Director, prepare the necessary form(s) that would allow the Shift Communicator to complete the required State and Local notifications.

SRRS: 3D.105 There are no retention requirements for this section.

Exelon Nuclear

Job Performance Measure

Perform One-Rod-Out Interlock Surveillance

JPM Number: 2016 ILT NRC JPM a

Revision Number: 01

Date: 09/29/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOS 0300-17 Rev: 12 Procedure QCOP 0207-02 Rev: 11 Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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 new for the 2011 ILT NRC Exam.

Revision 01, This JPM was revised for the 2016 ILT NRC Exam. Originally titled JPM LS-078-I. Designated step to "verify ROD OUT BLOCK annunciator does not clear" as critical.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the Simulator to IC 8.
   (Any Shutdown IC in which the Mode Switch can be placed in REFUEL)

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. Go to RUN.
3. Lock the Mode Switch in REFUEL.
4. Verify the RWM is NOT bypassed.
5. Cycle the Rod Select Power Switch to verify no rod is selected. Leave switch in OFF.
6. Verify the REFUEL PERMIT light is ON.
7. Verify ROD OUT BLOCK annunciator (901-5, C-3) is ON.
8. Acknowledge annunciators as necessary.
9. Provide a current revision of the following procedures, signed off as follows:
   - QCOS 0300-17
     - Initial steps D.1 thru D.7, N/A steps D.8-D.9, Initial steps D.10-D.11.
     - Steps H.4.b and H.11.b marked N/A.
   - QCOP 0207-02 with Prerequisite C.1 signed off and C.2 marked N/A.
10. Provide Equipment Status Tag filled out as follows:
    - “Rod Worth Minimizer in Bypass”
11. 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.
12. This completes the setup for this JPM.

INITIAL CONDITIONS

- Preparations are being made to begin refueling operations.
- The Mode Switch is locked in REFUEL.
- All Prerequisites have been completed for QCOS 0300-17, One-Rod-Out Interlock Surveillance.
- The Unit Supervisor has reviewed steps of QCOS 0300-17 and identified the Not-Applicable (N/A) steps.
- All QCOP 0207-02 prerequisites have been completed for bypassing the Rod Worth Minimizer (RWM).
- The Equipment Status Tag has been prepared.

INITIATING CUE

Perform the One-Rod-Out Interlock Surveillance, QCOS 0300-17.

EVALULATOR: Provide the prepared support material:

- QCOS 0300-17
- QCOP 0207-02
- Equipment Status Tag

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
H.1	QCOP 0207-02 referenced for bypassing RWM.	Bypass the RWM per QCOP 0207-02.	___	___	___
QCOP 0207-02 F.1.f	Initial the reason that the RWM is being bypassed.	Initials step F.1. f. (Performing a Procedure or Test which specifically references bypassing the RWM).	___	___	___
QCOP 0207-02 F.1.f (1)/(2)	Fills in Procedure/Test # and Step#.	Fill in Procedure# as "QCOS 0300-17" and Step# as "H.1."	___	___	___
QCOP 0207-02 F.2.a	Attaches the Equipment Status Tag to the ROD MOVEMENT CONT SWITCH.	Attaches the prepared Equipment Status Tag to the ROD MOVEMENT CONT SWITCH on the 901-5 panel.	___	___	___
QCOP 0207-02 *F.2.b	RWM MODE SELECT switch selected to BYPASS.	Places the RWM MODE SELECT switch to BYPASS and records the date and time.	___	___	___
EVALUATOR NOTE: The ROD OUT BLOCK annunciator will clear when a rod is selected.					
*H.2	Select a Control Rod.	Selects a peripheral Control Rod.	___	___	___
H.3	"Rod Out Permit" light is verified ON.	Verify "Rod Out Permit" light is lit on the 901-5 panel.	___	___	___
*H.4.a	Withdraw the selected Control Rod.	Withdraws the selected Control Rod one (1) notch.	___	___	___
*H.5	ROD SELECT POWER switch placed in OFF.	Turn ROD SELECT POWER switch to OFF.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: The ROD OUT BLOCK annunciator will alarm when the Rod Select Power switch is placed to OFF.					
*H.6	ROD SELECT POWER switch placed in ON.	Turn ROD SELECT POWER switch to ON.	___	___	___
*H.7	Select a second Control Rod.	Selects a peripheral Control Rod on the opposite side of the core.	___	___	___
*H.8	Verifies Control Rod withdrawal block can NOT be cleared.	Verifies annunciator 901-5 C-3, "ROD OUT BLOCK" cannot be cleared by depressing the annunciator RESET pushbutton OR the alarm is NOT in reflash.	___	___	___
H.9	ROD SELECT POWER switch placed in OFF.	Turn ROD SELECT POWER switch to OFF.	___	___	___
H.10	ROD SELECT POWER switch placed in ON.	Turn ROD SELECT POWER switch to ON.	___	___	___
H.11.a	Withdrawn Control Rod fully inserted.	Inserts the withdrawn Control Rod to Position 00 using the ROD MOVEMENT CONT switch.	___	___	___
CUE:	**As Unit Supervisor, inform the examinee that:** **"Another NSO will perform step H.12."**				
EVALUATOR NOTE: The examinee should inform you that the task is complete.					
EVALUATOR NOTE: Remove the Equipment Status Tag from the Rod Motion Control Switch at the end of the JPM.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Perform One-Rod-Out Interlock Surveillance

JPM Number: 2016 ILT NRC JPM a Revision Number: 01

Task Number and Title:

SR-0280-K20, Given a Reactor Manual Control System (RMCS)/ Rod Position Information System (RPIS) operating mode and various plant conditions, EVALUATE the following Reactor Manual Control System (RMCS)/Rod Position Information System (RPIS) indications/responses and DETERMINE if the indication/ response is expected and normal:

c. Movement control Indicating lights, (1) Rod Out Permissive

e. Refuel Permissive

K/A Number and Importance: **KA:** 2.1.44 **Rating:** 3.9/3.8

Suggested Testing Environment: Simulator

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

Reference(s): QCOS 0300-17, Rev. 12, "One-Rod-Out Interlock Surveillance"

QCOP 0207-02, Rev. 11, "Rod Worth Minimizer Bypass Control"

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:

The task is successfully completed when the examinee demonstrates the One-Rod Out Interlock is functional by operating the RMCS and RWM in accordance with QCOS 0300-17.

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

- Preparations are being made to begin refueling operations.
- The Mode Switch is locked in REFUEL.
- All Prerequisites have been completed for QCOS 0300-17, One-Rod-Out Interlock Surveillance.
- The Unit Supervisor has reviewed steps of QCOS 0300-17 and identified the Not-Applicable (N/A) steps.
- All QCOP 0207-02 prerequisites have been completed for bypassing the Rod Worth Minimizer (RWM).
- The Equipment Status Tag has been prepared.

INITIATING CUE

Perform the One-Rod-Out Interlock Surveillance, QCOS 0300-17.

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

Exelon Nuclear

Job Performance Measure

Injecting Standby Coolant
(Engineered Safety Feature)

JPM Number: 2016 ILT NRC JPM b

Revision Number: 00

Date: 10/02/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/04/16 Date
Approved By:	Raymond J. Venci/S/	02/05/16

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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
RJV/S/	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 3200-09 Rev: 17 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision 00, Developed for the 2016 ILT NRC Exam IAW NUREG 1021 Rev. 10

SRRS: 3D.105 There are no retention requirements for this section.

SIMULATOR SETUP INSTRUCTIONS

1. **RESET** the Simulator to IC-20.

> 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. **OVERRIDE** the 1A FR ISOL VLV closed light OFF: **ior lohs13206a1 off**
3. **OVERRIDE** both CCST level indications to 2.0 feet:

   ior aoli033403 2

   ior aoli033404 2
4. **OVERRIDE** the HW Level Control Switch to "HAND": **ior dihs13340108 hand**
5. **VERIFY** the HW Level Control Switch in **"AUTO"**.
6. **DIAL** "NORM COND REJ" (AO 1-3303) to **0%**.
7. **DIAL** "EMERG COND REJ" (AO 1-3304) to **0%**.
8. **Place** the 1B Cond Makeup Pump in **PTL**.
9. **VERIFY** at least one Service Water pump is operating.
10. **OVERRIDE** LFFRV "SLOW/FAST OPEN" pushbuttons OFF:

    ior difc10643ios off

    ior difc10643iof off
11. **Prevent** LP ECCS injection:

    imf cs01a (trip 1A CS pump)

    imf cs01b (trip 1B CS pump)

    irf rh22br open (open breaker for RHR 29B vlv)
12. **Trip Latch** the HPCI turbine.
13. **Inhibit** ADS.
14. **Insert** a manual reactor scram, place the Mode Switch to **Shutdown,** and allow RPV water level to stabilize.
15. **Close** the 1A FW REG ISOL valve.
16. **TRIP ALL** RFP's and **verify** discharge valves MO 1-3201A/B/C are **OPEN**.
17. **VERIFY** 1B FW REG ISOL valve is **OPEN**.
18. **PLACE** all three FRV controllers in **MANUAL** and **CLOSE ALL** three FRVs.
19. **VERIFY ONLY** the 1B and 1C Condensate/Condensate Booster pumps are operating. Adjust AO 1-3401 accordingly to maintain pump amps in the green band.

SIMULATOR SETUP INSTRUCTIONS

20. **Verify ONLY** 3 Condensate Demins are on-line.
21. **Set trigger** for 1B FRV lockup when the valve opens with the following commands:

    trgset 1 "fwv1642b.gt.0.02"

    trg 1 "imf fw08b"
22. **Set trigger** to RESET the 1B FRV lockup when the RESET pushbutton is depressed with the following:

    trgset 2 "zdihs10640303b"

    trg 2 "dmf fw08b"
23. **INSERT** a 0.5% break in the 1A Recirc pump discharge pipe: **imf rr11a 0.5**.
24. **Verify** RPV water level lowers to < -142 in.
25. **Open** all 5 ADS valves and leave switches in MAN.
26. **Verify** RPV pressure is < 300 psig. (use ADS valves as necessary)
27. **Hang** OOS tags on:

    a) 1A FW REG ISOL valve

    b) 1A FRV Controller
28. **OPEN SimView** and set variable **cnmliq = 250000**. Verify Hotwell level is approx. 14 in.
29. **Acknowledge** annunciators.
30. Take a snapshot or save to any open IC.
31. 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.
32. This completes the setup for this JPM.

INITIAL CONDITIONS

- Unit 1 was operating at 50% power with the 1A FRV OOS when a large LOCA occurred.
- QGA 100 and QGA 200 actions are ongoing.
- The US has determined that Alternate Injection Systems are needed to restore RPV water level.
- Hotwell makeup sources are currently inadequate for continued use of the Condensate System as an RPV injection source.

INITIATING CUE

Initiate Standby Coolant in accordance with QCOP 3200-09 and maximize injection.

Report to the Unit Supervisor when the Condensate System is injecting.

Provide examinee with: A blank copy of QCOP 3200-09.

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.2.a	Verify at least one Service Water Pump operating.	Verifies at least one Service Water Pump is operating by observing indications on the 912-1 panel.	___	___	___
*F.2.b	Open MO 1-3303, COND DEMIN BYPASS VLV.	Places the switch for the MO 1-3303 valve to the OPEN position and verifies: - OPEN light lit - CLOSED light out	___	___	___
*F.2.c	Open MO 1-3901, STNBY COOLNT SPLY VLV.	Places the switch for the MO 1-3901 valve to the OPEN position and verifies: - OPEN light lit - CLOSED light out	___	___	___
*F.2.d	Open MO 1-3902, STNBY COOLNT SPLY VLV.	Places the switch for the MO 1-3902 valve to the OPEN position and verifies: - OPEN light lit - CLOSED light out	___	___	___
CUE:	**If Chemistry is contacted to obtain hotwell samples state:** **"Samples will be drawn for hotwell and condensate. Results will be available in 30 minutes."**				
F.2.e	Manually control Condenser Hotwell level between 30 inches and 50 inches by operation of MO 1-3901.	Monitors Hotwell level on Recorder 1-3340-6 on the 901-7 panel and reports when Hotwell level is rising.	___	___	___
F.3	Verify <u>two</u> Condensate/Condensate Booster Pumps are operating.	For the 1B and 1C Cond/Cond Booster Pumps, verifies: - ON lights lit - Current indicating	___	___	___
EVALUATOR NOTE: Step F.4 is N/A, RPV pressure is < 300 psig.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.5	Verify OPEN a RFP Discharge Valve.	Verifies open at least one, MO 1-3201A/B/C, RFP DISCH VLVs: - OPEN light lit - CLOSED light out	___	___	___
F.6	Verify OPEN a RX FW Inlet Valve.	Verifies at least one MO 1-3205A/B RX FW INLT VLV is open: - OPEN light lit - CLOSED light out	___	___	___
EVALUATOR NOTE: If the examinee performs step F.7 using the LLFRV for injection, the valve will NOT open. Both pushbuttons, OPEN FAST and OPEN SLOW, will NOT function.					
F.8	Verify OPEN the 1B FW Regulator Isolation Valve.	Verifies MO 1-3206B, 1B FW REG ISOL VLV is open: - OPEN light lit - CLOSED light out	___	___	___
F.8.a. (2)	Regulate flow through the 1B Feedwater Regulating Station.	At the 1-640-19B, 1B FEEDWATER MAN/AUTO CONT STA: (1) Depresses the MAN pushbutton (2) Depresses the OPEN SLOW/FAST pushbutton OR (1) At the 1-640-18, RX LVL MASTER CONTLR, verifies setpoint. (2) At the 1-640-19B, depresses the AUTO pushbutton	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: When the 1B FRV begins to open, it will "lock-up" causing: · **Annunciator 901-5 H-8 to alarm** · **The RESET pushbutton, (above the 1B FW MAN/AUTO CONT STA), to backlight.**					
CUE:	**If the examinee reports injection is established and 1B FWRV lock up is not reset, THEN as the US state:** **"Raise RPV injection flow."**				
ALTERNATE PATH STARTS HERE					
*B.3 (QCAN 901-5 H-8)	Reset 1B FRV lockup	Depresses the 1B VLV RESET pushbutton and holds for at least 5 seconds and verifies: - Alarm 901-5 H-8 resets - RESET pushbutton backlight goes out	___	___	___
*F.8.a. (2)	Regulate flow through the 1B Feedwater Regulating Station.	At the 1-640-19B, 1B FEEDWATER MAN/AUTO CONT STA: (1) Depresses the MAN pushbutton (2) Depresses the OPEN SLOW/FAST pushbutton OR (1) At the 1-640-18, RX LVL MASTER CONTLR, verifies setpoint (2) At the 1-640-19B, depresses the AUTO pushbutton	___ ___	___ ___	___ ___
CUE:	**As the Unit Supervisor, when the lockup is reset, and the valve opened further state:** **"Another NSO will monitor RPV water level and regulate flow"**				
EVALUATOR NOTE: The examinee should inform you that the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Injecting Standby Coolant

JPM Number: 2016 ILT NRC JPM b Revision Number: 00

Task Number and Title:

SR-3900-P03 (Freq: LIC=A) (ILT-MP): Given a reactor plant QGA condition requiring the use of Standby Coolant, supply water to the reactor vessel using Standby Coolant as the water source in accordance with QCOP 3200-09.

K/A Number and Importance: **K/A:** 256000 A2.06 **Rating:** 3.2/3.2

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 3200-09 Rev. 17, EMERGENCY REACTOR VESSEL LEVEL CONTROL USING CONDENSATE/FEEDWATER OR STANDBY COOLANT SUPPLY

QCAN 901(2)-5 H-8 Rev. 7, 1 (2) B FEEDWATER ACTUATOR TROUBLE

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 10 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 used for operator initial or continuing training)

INITIAL CONDITIONS

- Unit 1 was operating at 50% power with the 1A FRV OOS when a large LOCA occurred.
- QGA 100 and QGA 200 actions are ongoing.
- The US has determined that Alternate Injection Systems are needed to restore RPV water level.
- Hotwell makeup sources are currently inadequate for continued use of the Condensate System as an RPV injection source.

INITIATING CUE

Initiate Standby Coolant in accordance with QCOP 3200-09 and maximize injection.

Report to the Unit Supervisor when the Condensate System is injecting.

Exelon Nuclear

Job Performance Measure

Control Reactor Pressure using the Main Steam Line Drains

JPM Number: 2016 ILT NRC JPM c

Revision Number: 00

Date: 10/02/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/04/16 Date
Approved By:	Raymond J. Venci/S/	02/05/16

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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 0250-05 Rev: 06 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC-17

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:**

   Insert a manual reactor scram

   Place the Mode Switch in Shutdown

   Allow RPV level to stabilize at +30 in.

   Close the Inboard and Outboard MSIVs.

   Place the RWCU system in Reject Mode with both pumps on at 80 gpm, (FCV 1-1239 approx. 15% open).

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. This completes the setup for this JPM.

INITIAL CONDITIONS

- The Unit has been SCRAMMED due to an Instrument Air leak in the Reactor Building.
- The Unit Supervisor has directed actions of QOA 4700-06, Loss of Instrument Air, and attempts to isolate the leak are still in progress.
- The Unit Supervisor has entered QGA 100 and has directed a cooldown at < 100°F/hr using the Main Steam Line Drains.
- An Extra NSO has been assigned to monitor and record the RPV cooldown per QCOS 0201-02.
- This JPM is NOT time critical.

INITIATING CUE

Initiate an RPV cooldown of ≤ 80°F/hr using the Main Steam Line Drains through the Main Turbine Bypass valves per QCOP 0250-05.

Provide examinee with: A copy of QCOP 0250-05, with step C.1 and F.3 marked N/A and initialed by the Unit Supervisor.

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.	Initiate QCOS 0201-02.	Verifies surveillance is in progress per Initial Conditions.	___	___	___
*F.2.a.	**Open** MO 1-220-1, STM DRN ISOL VLV	Places C/S for MO 1-220-1 to the OPEN position and verifies: -Red light lit -Green light out	___	___	___
*F.2.b.	**Open** MO 1-220-2, STM DRN ISOL VLV	Places C/S for MO 1-220-1 to the OPEN position and verifies: -Red light lit -Green light out	___	___	___
*F.2.c.	**Open** MO 1-220-3, OUTSIDE DRN VLV	Places and holds the C/S for MO 1-220-3 to the OPEN position and verifies: -Red light lit -Green light out	___	___	___
*F.2.d	**Open** MO 1-220-90A, STM LINE DRN VLV	Places and holds C/S for MO 1-220-90A in the OPEN position and verifies: -Red light lit -Green light out	___	___	___
*F.2.e	**Open** MO 1-220-90B, STM LINE DRN VLV	Places and holds C/S for MO 1-220-90B in the OPEN position and verifies: -Red light lit -Green light out	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.2.f	**Open** MO 1-220-90C, STM LINE DRN VLV	Places and holds C/S for MO 1-220-90C in the OPEN position and verifies: -Red light lit -Green light out	___	___	___
*F.2.g	**Open** MO 1-220-90D, STM LINE DRN VLV	Places and holds C/S for MO 1-220-90D in the OPEN position and verifies: -Red light lit -Green light out	___	___	___
CUE:	**IF the examinee reports a RPV cooldown has been established, THEN as the US state:** **"Establish additional pressure reduction."**				
F.4.a. (1)	Verify BPV Status is ENABLED	At the DEHC Operator Workstation: Navigates to the <CONTROL><BPV JACK> screen and verifies BPV Status is ENABLED.	___	___	___
*F.4.a (2)	Select STPT/RAMP	At the DEHC Operator Workstation on the <CONTROL><BPV JACK> screen, select STPT/RAMP in the "Bypass Valve Manual Opening (JACK) Control Box".	___	___	___
EVALUATOR NOTE: The values entered for set point and ramp will depend on how many bypass valves are initially desired open and how fast. A value of 11, for set point will open 1 bypass valve.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.4.a (3)	Enter values for Set Point and Ramp.	Enters values > 0 for Set Point and Ramp and selects “OK”.	___	___	___
*F.4.a (4)	Confirm values for Set Point and Ramp.	Selects “OK” to confirm values.	___	___	___
F.4.a (5)	Adjusts Set Point as necessary to obtain cooldown rate.	On the <CONTROL><BPV JACK> screen, Selects RAISE or LOWER to adjust cooldown rate.			
CUE:	**When a discernable cooldown rate is observed, as the Unit Supervisor, state: “Another NSO will monitor and control the RPV cooldown.”**				
EVALUATOR NOTE: The examinee should inform you that 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: Control Reactor Pressure using the Main Steam Line Drains

JPM Number: 2016 ILT NRC JPM c Revision Number: 00

Task Number and Title: SR-0001-P06 (Freq: LIC=B) Given an operating reactor plant when a Group 1 isolation with a failure of relief valves to operate occurs, attempt to stabilize RPV pressure below 1060 psig using Alternate Pressure Control Systems in accordance with QGA 100.

K/A Number and Importance: **K/A:** 239001.A4.02 **Rating:** 3.2/3.2

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 0250-05 Rev. 6, Reactor Pressure Control Using Main Steam Line Drains.

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

- The Unit has been SCRAMMED due to an Instrument Air leak in the Reactor Building.
- The Unit Supervisor has directed actions of QOA 4700-06, Loss of Instrument Air, and attempts to isolate the leak are still in progress.
- The Unit Supervisor has entered QGA 100 and has directed a cooldown at < 100°F/hr using the Main Steam Line Drains.
- An Extra NSO has been assigned to monitor and record the RPV cooldown per QCOS 0201-02.
- This JPM is NOT time critical.

INITIATING CUE

Initiate an RPV cooldown of ≤ 80°F/hr using the Main Steam Line Drains through the Main Turbine Bypass valves per QCOP 0250-05.

Exelon Nuclear

Job Performance Measure

RCIC Manual Initiation (Hard Card) with an Inadvertent Isolation

JPM Number: 2016 ILT NRC JPM d

Revision Number: 03

Date: 09/30/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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 through 13 below.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
RJV/S/	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 1300-02 Rev: 31 Procedure QCOA 1300-01 Rev: 18 Procedure QCAN 901-4 B-15 Rev: 12
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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 B.1.b for ILT Certification Exam 03-1 IAW NUREG 1021 Revision 9 and to update format.

Revision 01, Update for correct procedure revisions.

Revision 02, Update for correct procedure revisions.

Revision 03, Update JPM template and use on 2016 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 21 or any other compatible IC. Run CAEP file.
2. **Manual Actuation:**
   - Ensure that the RCIC system is in its normal standby lineup.
3. **Malfunctions / Commands:**
   - **trgset 1 "RCNTB.GT.0.5" (Sets trigger based on 50% RCIC turbine speed)**
   - **trg 1 "imf rc12" (inserts RCIC isolation)**
   - **trgset 2 "an:9014a15" (sets trigger on annunciator 901-4 A-15)**
   - **trg 2 "dmf rc12" (deletes RCIC isolation)**
4. **Remotes:** NONE
5. **Overrides:** NONE
6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
7. This completes the setup for this JPM.

INITIAL CONDITIONS

- A loss of feedwater has resulted in a reactor scram and entry into QGA 100.
- The Unit Supervisor has determined that RCIC injection is needed to restore reactor water level and control RPV pressure.
- Hard Card use has been authorized by the Unit Supervisor.
- RCIC is in its normal standby lineup.
- This JPM is NOT time critical

INITIATING CUE

Establish Unit 1 RCIC injection into reactor vessel using the manual initiation pushbutton per the Hard Card.

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
	Obtain Hardcard.	Obtains Hardcard for RCIC MANUAL STARTUP from the 901-4 panel.	___	___	___
Hardcard Step 1	Initiate RCIC using the manual initiation pushbutton.	Depresses and holds the RCIC MAN INITIATION pushbutton on the 901-4 for at least 30 seconds.	___	___	___
	Verifies the system lines up to inject.	Using indications on the 901-4 panel verifies system valves are lining up for injection.	___	___	___
	Identifies RCIC Isolation and Turbine trip.	Acknowledges 901-4 B-15 alarm and verifies RCIC isolation and turbine trip occur by closure of the following valves: MO 1-1301-16 and MO 1-1301-17 (isolation) MO 1-1301-61 and MO 1-1301-60 (turbine trip).	___	___	___
Alternate Path Starts Here					
CUE:	**If the examinee asks the Unit Supervisor for direction after reporting the RCIC isolation and turbine trip, state, "Continue efforts to establish RCIC injection."**				
901-4 B-15 step B.3.	Determines isolation signal was spurious.	Dispatches EO to the RCIC Room to investigate cause of isolation. Performs QCOA 1300-01.	___	___	___
CUE:	**If dispatched, as EO, report that "a contractor inadvertently bumped DP switch (1-1360-1A) on Instrument rack 2201-58. No other malfunctions or issues are present. There are no indications of steam leaks."** **If dispatched as IM, report that "all DP switches are working properly."**				
INSTRUCTOR NOTE: Examinee may choose to go directly to QCOA 1300-01Step D.8.b.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
QCOA 1300-1 step D.4.	Depress initiation signal seal in and reset.	Depress RCIC initiation signal seal in and reset.	___	___	___
QCOA 1300-1 step D.8.b.	Dispatches operator to check status of RCIC room.	Dispatches operator to check status of RCIC room.	___	___	___
CUE: **(If not dispatched earlier)**	**AS EO, report, "a contractor inadvertently bumped a DP switch (1-1360-1A) on Instrument rack 2201-58. There is no indication of a steam line break or leak."** **If requested as IM report that, "switches are working properly."**				
QCOA 1300-1 step D.8.d.(1)	Verifies all RCIC isolation and trips are cleared.	Verifies all RCIC trip and isolation signals as listed in steps E.1.(a.-d), and E.2.(a.-c) are cleared.	___	___	___
*QCOA 1300-1 step D.8.d.(2)	**Reset** RCIC Isolation	Depresses STM LINE BRK TRIP RESET pushbutton and verifies 901-4 B-15 alarm clears.	___	___	___
*QCOA 1300-1 step D.8.d.(3)	**Reset** RCIC Turbine Trip	Depresses TURB RESET pushbutton and verifies 901-4 D-15 alarm clears.	___	___	___
QCOA 1300-1 step D.8.d.(4)	**Verify closed** MO 1-1301-61, STM TO TURB VLV.	Verifies MO 1-1301-61, CLOSED light is lit.			
QCOA 1300-1 step D.8.d.(5)	**Open** MO 1-1301-17, STM SPLY ISOL VLV.	Places the MO 1-1300-17 control switch to OPEN and verifies the OPEN light is lit.	___	___	___
*QCOA 1300-1 step D.8.d.(7)	**Open** MO 1-1301-16, STM SPLY ISOL VLV.	Throttles MO 1-1300-16 until fully open and verifies: -OPEN light is lit -CLOSED light is out.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
QCOA 1300-1 step D.9	Obtains QCOP 1300-02 Hard Card to initiate RCIC injection.	Determines RCIC Turbine trip/isolation is reset by absence of any alarms, and that RCIC injection is required. Obtains Hardcard to restart system.	___	___	___
EVALUATOR NOTE: The critical task below is satisfied if the examinee chooses to start RCIC using the Hardcard steps for Manual Pushbutton OR Manual Startup-Level Control. QCOP 1300-02 step F.5 will also provide instruction for a manual startup and satisfy the task.					
*Hardcard step 1	Initiate RCIC for injection into the reactor vessel.	Depresses and holds the RCIC MAN INITIATION pushbutton on the 901-4 for at least 30 seconds.	___	___	___
	Verifies the system lines up to inject.	Using indications on the 901-4 panel and verifies: -valves align for injection -RCIC Flow Controller establishes flow at ~ 400 gpm.	___	___	___
EVALUATOR NOTE: The examinee should inform you that the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: RCIC Manual Initiation (Hard Card) with an Inadvertent Isolation

JPM Number: 2016 ILT NRC JPM d Revision Number: 03

Task Number and Title:

SR-1300-P04 (Freq: LIC=A) Given an operating RCIC system when a spurious RCIC isolation occurs, perform actions to determine the cause and reset the isolation and trip in accordance with QCOA 1300-01 and QCOA 1300-06.

K/A Number and Importance: **K/A:** 217000 A4.03 **Rating:** 3.4/3.3

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 1300-02, Rev. 31
QCOA 1300-01, Rev. 18
QCAN 901-4 A-15, Rev. 10
QCAN 901-4 D-15, Rev. 7
QCAN 901-4 B-15, Rev. 12

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 12 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

- A loss of feedwater has resulted in a reactor scram and entry into QGA 100.
- The Unit Supervisor has determined that RCIC injection is needed to restore reactor water level and control RPV pressure.
- Hard Card use has been authorized by the Unit Supervisor.
- RCIC is in its normal standby lineup.
- This JPM is NOT time critical

INITIATING CUE

Establish Unit 1 RCIC injection into reactor vessel using the manual initiation pushbutton per the Hard Card.

Exelon Nuclear

Job Performance Measure

Vent Containment Irrespective of Release Rates with APCV.
(Failure of Torus Valve to Open, Requiring Venting Through the Drywell)

JPM Number: 2016 ILT NRC JPM e

Revision Number: 02

Date: 10/02/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/	02/05/16

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 through 13 below.

RJV/S/ 1. Task description and number, JPM description and number are identified.

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

RJV/S/ 3. Performance location specified. (in-plant, control room, simulator, or other)

RJV/S/ 4. Initial setup conditions are identified.

RJV/S/ 5. Initiating cue (and terminating cue if required) are properly identified.

RJV/S/ 6. Task standards identified and verified by SME review.

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

RJV/S/ 8. If an alternate path is used, the task standard contains criteria for successful completion.

RJV/S/ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 1600-13 Rev: 28
Procedure_____ Rev: _____
Procedure _____ Rev: _____

RJV/S/ 10. Verify cues both verbal and visual are free of conflict.

RJV/S/ 11. Verify performance time is accurate

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

RJV/S/ 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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

Revision Record (Summary)

Revision 00: Developed for 2016 ILT NRC exam (Class 14-1). This JPM is based on existing JPM LS-053-I-A. This JPM is venting for high Primary Containment pressure, vice high H2 as was the case in LS-053-I-A. The actions are the same for both JPMs. The reasons for venting and desired outcomes are different. Therefore, this is not considered a new JPM. It is a revised Bank JPM.

Revisions to LS-053-I-A

Revision 00, New JPM

Revision 01, JPM revised to reflect procedure revisions.

Revision 02, JPM revised to reflect procedure and K/A revisions.

SRRS: 3D.105 There are no retention requirements for this section.

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. **Trip Latch** HPCI.

3. **INSERT** malfunctions to break the D and E Main Steam Relief Valves above the water line. **imf ms16d imf ms16e**

4. **INSERT** a malfunction to erode the D Main Steam Relief Valve seat 15%. **imf ms06d 15** (This will maintain a high DW pressure such that the examinee gets feed back from their actions.)

5. **OVERRIDE** the AO 1-1601-60, "TORUS 18-INCH VENT" closed. **ior dihs1160160 close**

6. **MANUALLY OPEN** the "D" and "E" Main Steam Relief Valves on the 901-3 panel.

7. **PLACE** the RX Mode switch to SHUTDOWN.

8. **Secure** the 1A and 1C RFPs and **close** the Feed Reg Isolation Valves.

9. **Secure** the 1B Condensate Pump.

10. **MONITOR** DW pressure on the 901- 3 panel.

11. **WHEN** DW pressure reaches ~55 psig, **THEN CLOSE** "D" and "E" Main Steam Relief Valves

12. **ALLOW** the DW pressure to stabilize. The DW pressure should remain between 45 and 55 psig.

13. **Silence** the DW/T Vacuum breaker alarms. **bat sv**

14. **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.

15. This completes the setup for this JPM.

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- A transient has occurred on Unit One resulting in high Drywell Pressure
- The US has determined the need to vent the Primary Containment to prevent exceeding the Primary Containment Pressure Limit (PCPL)
- All available Radwaste and Turbine Building Exhaust Fans are operating

INITIATING CUE

Vent the Primary Containment in accordance with QCOP 1600-13 and establish a Primary Containment pressure band of 45 to 50 psig.

It is "OK to exceed release rate limits."

(If the examinee elects to use the procedure instead of the Hard Card, provide a blank copy of QCOP 1600-13 when the procedure is located)

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 at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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.

SRRS: 3D.105 There are no retention requirements for this section.

JPM Start Time: _

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: Operator may choose to use procedure or Hard Card. Both are acceptable.					
C.1.	IF QGA or SAMG procedures do NOT state "OK to exceed Release Rate Limits," THEN a vent recommendation has been provided by the Chemistry Department within the last 8 days.	Signs off Prerequisite as N/A per Initial Conditions.			
C.2.	Verify RPS available to operate valves.	Signs off Prerequisite per Initial Conditions.	___	___	___
F.1. (Hard Card 1.a)	Operate fans to provide dilution flow.	Signs off as complete per Initial Conditions.	___	___	___
F.2.a-f. (Hard Card 1.b)	Verify closed primary containment valves.	Verifies CLOSED lights lit for the following valves: AO 1-1601-23 AO 1-1601-24 AO 1-1601-60 AO 1-1601-61 AO 1-1601-62 AO 1-1601-63	___	___	___
F.4.a. (Hard Card 1.c)	Evacuate the Reactor Building **AND** Turbine Building.	Makes announcement to evacuate the Reactor Building **AND** Turbine Building	___	___	___
*F.4.b. (Hard Card 1.d)	Place MASTER VENT MODE SWITCH in APCV position.	Positions “Master Vent Mode Switch” to the APCV position.	___	___	___
F.4.c. (Hard Card 1.e)	Verify closed AO 1-1699-7, VENT TO RX BLDG.	Verifies AO 1-1699-7 closed light lit.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: The following 2 steps will bypass the 2.5 psig Group II isolation signal to allow opening containment vent valves.					
*F.4.d. (Hard Card 1.f)	Override Gp II signal for AO 1-1601-24 valve.	Positions AO 1-1601-24 CIS OVERRIDE switch to OVERRIDE AND holds for 1 second AND Verifies 901-5, E4 alarms	___	___	___
*F.4.e. (Hard Card 1.g)	Override Gp II signal for AO 1-1601-23 AND AO 1-1601-60	SIMULTANEOUSLY positions the AO 1-1601-23 CIS OVERRIDE and the AO 1-1601-60 CIS OVERRIDE switches to OVERRIDE AND holds for 1 second AND Verifies 901-5, E3 and F3 alarm	___	___	___
*F.4.f. (Hard Card 1.h)	Open Vent to Reactor Building Exhaust system valve	Positions AO 1-1601-24 control switch to open. Verifies the OPEN light lit.	___	___	___
ALTERNATE PATH STARTS HERE					
F.4.g (Hard Card 2.a)	Open the AO 1-1601-60.	Positions AO 1-1601-60 control switch to open AND observes the OPEN light is NOT lit.	___	___	___
F.4.h (Hard Card 3.)	Recognizes inability to vent the containment through the Torus, and need to vent the Drywell.	Operator recognizes inability to vent the containment through the Torus, and need to vent the Drywell.	___	___	___
CUE:	**(IF needed) Restate need to vent the containment.** **The operator may dispatch an operator and/or maintenance to investigate. Role play as necessary to investigate the valve failure.**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.4.h.(1). (Hard Card 3.a)	Verifies the Torus 18-inch Vent valve is closed.	Verifies AO-1601-60 closed light lit.	___	___	___
*F.4.h.(2). (Hard Card 3.b)	Opens AO 1-1601-23 DW 18" vent valve.	Positions AO 1-1601-23 control switch to open. Verifies OPEN light lit	___	___	___
*F.4.h.(3). (Hard Card 3.c)	Control vent flow by cycling AO 1-1699-6 open and closed as required.	Positions AO 1-1699-6 control switch to OPEN Verifies DW pressure lowering	___	___	___
CUE:	**When the examinee checks the 0-1705-19 Chimney Gas Activity recorder, state:** **"Count rate indication is slightly higher."**				
NOTE: Closure of the AO 1-1699-6 valve is not included as a Critical Step.					
F.4.h.(3). (Hard Card 3.c)	Control vent flow by cycling AO 1-1699-6 open and closed as required.	Positions AO 1-1699-6 control switch to CLOSE when DW pressure in the desired band of 45 – 50 psig.	___	___	___
CUE:	**Another NSO will monitor and control Containment venting.**				
EVALUATOR NOTE: The examinee should inform you that the task is complete.					

JPM Stop Time:_____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Vent Containment Irrespective of Release Rates with APCV. (Failure of Torus Valve to Open, Requiring Venting Through the Drywell)

JPM Number: 2016 ILT NRC JPM e Revision Number: 00

Task Number and Title:

SR-0001-P24 (Freq: LIC=A) Given a reactor plant with rising containment pressure due to a LOCA or steam leak, vent the containment irrespective of off-site radioactivity release rates before torus pressure reaches the Primary Containment Pressure Limit (QGA Figure D) in accordance with QGA 200 and QCOP 1600-13. (Important PRA task. Failure to control containment venting or restore IA for venting results in core damage in 20 of top 100 Core Damage Sequences)

K/A Number and Importance: **K/A:** 295024.EA1.14 **Rating:** 3.4/3.5

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 1600-13, Rev. 28, POST ACCIDENT VENTING OF THE PRIMARY CONTAINMENT

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 10 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

- A transient has occurred on Unit One resulting in high Drywell Pressure
- The US has determined the need to vent the Primary Containment to prevent exceeding the Primary Containment Pressure Limit (PCPL)
- All available Radwaste and Turbine Building Exhaust Fans are operating

INITIATING CUE

Vent the Primary Containment in accordance with QCOP 1600-13 and establish a Primary Containment pressure band of 45 to 50 psig.

It is "OK to exceed release rate limits."

SRRS: 3D.105 There are no retention requirements for this section.

Exelon Nuclear

Job Performance Measure

Install OPRM Jumpers on RPS B

JPM Number: 2016 ILT NRC JPM f

Revision Number: 00

Date: 09/30/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 7000-03 Rev: 01 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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 is a new JPM written for the 2016 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC-21

NOTE:	This JPM is performed inside the simulator panels and can be done in any IC. The examiners must verify that this JPM is compatible with other JPMs that are scheduled to be run concurrently.

2. **Manual Actuations:**

   None

3. **Malfunctions:**

   None

4. **Remotes:**

   None

5. **Overrides:**

   None

6. **Equipment:**

   Four (4) Switchable Jumpers and Four (4) TCC tags.

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

- Unit 1 is operating steady state at 80% power.
- The “A” RPS MG set has been returned to service following repairs to the feed breaker.
- The control room has made preparations for re-energizing RPS A from its normal feed.
- Equipment Operators in the Aux Electric Room have requested the control room to perform step C.12 of QCOP 7000-03.
- The Unit Supervisor has authorized installation of the OPRM jumpers on RPS B.
- Short Duration Time Clocks (SDTC) for Tech Spec LCOs 3.3.1.3 Condition A and 3.3.1.3 Condition B have been started.
- An Equipment Status Tag (EST) has been placed on the 901-5 panel stating OPRM trips on “B” RPS are bypassed.
- Continuity checks have been performed on the jumpers.
- This JPM is NOT time critical.

INITIATING CUE

Install jumpers to bypass RPS “B” OPRM trips per QCOP 7000-03 Attachment A.

Provide examinee with: A copy of QCOP 7000-03 signed off through step C.12.g.

Four (4) switchable jumpers with banana type connectors.

Four (4) TCC tags.

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
Attach A 1.a.	Notify Unit Supervisor of jumper installation	Informs the Unit Supervisor of jumper installation on RPS "B" bypassing OPRM trips. OR Determines completion from Initial Conditions.	___	___	___
CUE:	**As Unit Supervisor, acknowledge and concur with jumper installation.**				
Attach A 1.b.	Verifies Unit Supervisor has entered SDTCs.	Verifies the Unit Supervisor has entered SDTCs for TS LCOs 3.3.1.3 Condition A and B. OR Determines completion from Initial Conditions.	___	___	___
CUE:	**If asked, as Unit Supervisor, state:** **"Short Duration Time Clocks are started for Tech Spec LCOs 3.3.1.3 Condition A and B."**				
CUE:	**If necessary, as the Unit Supervisor, inform the examinee that** **"Step 1.c of QCOP 7000-03 Attachment A (place EST on the 901-5 panel) has been completed by the Unit NSO."** **"Another NSO will place the TCC tags on the jumpers after installation."**				
CUE:	**The examinee may ask for verification of jumper placements in the following steps. If so, then state:** **"There is no one available. The verifications will be done later."**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Attach A 1.d.(1). (a)	**Verify** Jumper is open.	Verifies jumper switch is in "OPEN" position.	___	___	___
*Attach A 1.d.(1). (b)	**Install** OPRM 4 jumper leads.	Installs jumper leads between terminals (PS2)TB4-4 and TB1B-4 in the 901-37 panel.	___	___	___
*Attach A 1.d.(1). (c)	**Close** OPRM 4 jumper.	Places the OPRM 4 jumper switch to the "CLOSE" position.	___	___	___
Attach A 1.d.(2). (a)	**Verify** Jumper is open.	Verifies jumper switch is in "OPEN" position.	___	___	___
*Attach A 1.d.(2). (b)	**Install** OPRM 5 jumper leads.	Installs jumper leads between terminals (PS4)TB4-1 and TB2B-1 in the 901-37 panel.	___	___	___
*Attach A 1.d.(2). (c)	**Close** OPRM 5 jumper.	Places the OPRM 5 jumper switch to the "CLOSE" position.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Attach A 1.d.(3). (a)	**Verify** Jumper is open.	Verifies jumper switch is in "OPEN" position.	___	___	___
*Attach A 1.d.(3). (b)	**Install** OPRM 6 jumper leads.	Installs jumper leads between terminals TB4B-1 and TB4B-14 in the 901-37 panel.	___	___	___
*Attach A 1.d.(3). (c)	**Close** OPRM 6 jumper.	Places the OPRM 6 jumper switch to the "CLOSE" position.	___	___	___
Attach A 1.d.(4). (a)	**Verify** Jumper is open.	Verifies jumper switch is in "OPEN" position.	___	___	___
*Attach A 1.d.(4). (b)	**Install** OPRM 8 jumper leads.	Installs jumper leads between terminals TB5B-118 and TB5B-119 in the 901-37 panel.	___	___	___
*Attach A 1.d.(4). (c)	**Close** OPRM 8 jumper.	Places the OPRM 8 jumper switch to the "CLOSE" position.			

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	**As the Unit Supervisor, inform the examinee that "you will have another NSO complete the remaining steps QCOP 7000-03 Attachment A."**				
EVALUATOR NOTE: The examinee should inform you that 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: Install OPRM Jumpers on RPS B

JPM Number: 2016 ILT NRC JPM f Revision Number: 00

Task Number and Title: **SRN-TMOD-K12** (Freq: LIC=B NF=B) Describe how to install and remove the following: a.) Jumper wires

K/A Number and Importance: **K/A:** 216000.K1.01 **Rating:** 3.9/4.1

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 7000-03 Rev. 01, Unit 1 Reactor Protection MG Sets

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**: _____

INITIAL CONDITIONS

- Unit 1 is operating steady state at 80% power.
- The “A” RPS MG set has been returned to service following repairs to the feed breaker.
- The control room has made preparations for re-energizing RPS A from its normal feed.
- Equipment Operators in the Aux Electric Room have requested the control room to perform step C.12 of QCOP 7000-03.
- The Unit Supervisor has authorized installation of the OPRM jumpers on RPS B.
- Short Duration Time Clocks (SDTC) for Tech Spec LCOs 3.3.1.3 Condition A and 3.3.1.3 Condition B have been started.
- An Equipment Status Tag (EST) has been placed on the 901-5 panel stating OPRM trips on “B” RPS are bypassed.
- Continuity checks have been performed on the jumpers.
- This JPM is NOT time critical.

INITIATING CUE

Install jumpers to bypass RPS “B” OPRM trips per QCOP 7000-03 Attachment A.

Exelon Nuclear

Job Performance Measure

Reverse RHRSW Heat Exchanger Flow

JPM Number: 2016 ILT NRC JPM g

Revision Number: 00

Date: 12/08/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/ 1. Task description and number, JPM description and number are identified.

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

RJV/S/ 3. Performance location specified. (in-plant, control room, simulator, or other)

RJV/S/ 4. Initial setup conditions are identified.

RJV/S/ 5. Initiating cue (and terminating cue if required) are properly identified.

RJV/S/ 6. Task standards identified and verified by SME review.

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

RJV/S/ 8. If an alternate path is used, the task standard contains criteria for successful completion.

RJV/S/ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 1000-04 Rev: 22
Procedure _____ Rev: _____
Procedure _____ Rev: _____

RJV/S/ 10. Verify cues both verbal and visual are free of conflict.

RJV/S/ 11. Verify performance time is accurate

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

RJV/S/ 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

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision 00, This JPM was developed for the 2016 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. Verify the 1B RHR HX SW FLOW SELECT switch is in NORM.
3. Start up the 1C and 1D RHRSW pumps per QCOP 1000-04, step F.2.b-c.
4. 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.
5. This completes the setup for this JPM.

INITIAL CONDITIONS

- The 1C and 1D RHRSW pumps were started earlier this shift at the request of Engineering and the CMO group for performance monitoring.

- Both groups have collected the data and are now requesting the 1B RHRSW Heat Exchanger flow reversed and both RHRSW pumps placed in operation.

INITIATING CUE

Place the 1B RHR Heat Exchanger in REVERSE FLOW and restart the 1C and 1D RHRSW pumps per QCOP 1000-04.

Provide examinee with: A blank copy of QCOP 1000-04.

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.2.e. (1)	Stop 1C RHR SW PMP	Places the 1C RHR SW PMP c/s to the OFF position and verifies: - Off light lit - RHRSW Hx Outlet pressure lowers	___	___	___
*F.2.e. (1)	Stop 1D RHR SW PMP	Places the 1D RHR SW PMP c/s to the OFF position and verifies: - Off light lit - RHRSW Hx Outlet pressure lowers	___	___	___
*F.2.e. (2)	Close MO 1-1001-5B valve	Places the MO 1-1001-5B c/s to the CLOSE position and verifies: - CLOSED light lit	___	___	___
F.2.e. (3)	Place MO 1-1001-5B c/s to STOP	Places the MO 1-1001-5B c/s to the STOP mid-position.	___	___	___
F.2.e. (4)	Verify closed MO 1-1001-5B valve	Verifies: - CLOSED light lit - Valve position indication at 0%	___	___	___
F.3.a-b	Verify B Loop RHR and RHRSW pumps are OFF	Verifies OFF lights are lit for: - 1C & 1D RHR Pumps - 1C & 1D RHRSW Pumps	___	___	___
EVALUATOR NOTE: Step F.3.c. is N/A					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.3.d	Place 1B RHR Hx in Reverse Flow	Places the 1B RHR HX SW FLOW SELECT switch to the REV position.	___	___	___
F.3.d. (1)-(4)	Verify 1B RHR Hx valve positions for Reverse Flow	Verifies: - MO 1-1001-186B valve OPEN light is lit - MO 1-1001-187B valve OPEN light is lit - MO 1-1001-4B valve CLOSED light is lit - MO 1-1001-185B valve CLOSED light is lit	___ ___ ___ ___	___ ___ ___ ___	___ ___ ___ ___
EVALUATOR NOTE: The examinee should return to step F.2. to restart the 1C and 1D RHRSW pumps. Step F.2.a. is NA.					
CUE:	If an EO is dispatched to the 1D and 1B/C RHRSW Vaults, then after each pump is started, state: **"The pump sounds normal, oil levels are good, and the room cooler is running."**				
F.2.b. (1)	Verify RHR HX B SERVICE WATER FLOW is in REVERSE lineup	Verifies valve position lights for REVERSE Flow are lit. (As indicated on placard above the 1B RHR HX SW FLOW SELECT switch.)	___	___	___
*F.2.b. (2)	Throttle open MO 1-1001-5B, valve.	Places MO 1-1001-5B, RHR HX SW DISCH VLV c/s to OPEN, then places it to STOP when valve position indicates >40% open.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.2.b. (3)	Start the 1C/D RHRSW Pump	Places the 1C/1D RHRSW Pmp c/s to the ON position and verifies: - ON light lit - Rising pressure indicated on PI 1-1040-3B.	___	___	___
*F.2.b. (4)	Throttle MO 1-1001-5B, valve to establish discharge pressure and flow	Throttles MO 1-1001-5B closed until the following conditions are met: - Discharge press is < 350 psig on PI 1-1040-3B - Flow is < 3600 gpm on FI 1-1040-1B	___	___	___
F.2.b. (5)	Verify NO increase on 1-1705-12, PROCESS LIQUID MONITOR	At Panel 901-2, verifies: No count rate (cps) increase indicated on 1-1705-12, PROCESS LIQUID MONITOR, (Channel 2).	___	___	___
EVALUATOR NOTE: The examinee should read the next two steps and then perform them in succession.					
*F.2.c. (1)	Throttle open MO 1-1001-5B valve to establish discharge pressure	Throttles open MO 1-1001-5B to establish a discharge pressure of approx. 140 psig indicated on PI 1-1040-3B.	___	___	___
*F.2.c. (2)	Start the 1C/D RHRSW Pump	Places the 1C/1D RHRSW Pmp c/s to the ON position and verifies: - ON light lit Rising pressure indicated on PI 1-1040-3B.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.2.c (3)	Throttle MO 1-1001-5B, valve to establish discharge pressure and flow	Throttles MO 1-1001-5B closed until the following conditions are met: Discharge press is < 350 psig on PI 1-1040-3B Flow is < 7200 gpm on FI 1-1040-1B			
EVALUATOR NOTE: The examinee should inform you that 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: Reverse RHRSW Heat Exchanger Flow

JPM Number: 2016 ILT NRC JPM g Revision Number: 00

Task Number and Title:

SR-1000-P11 (Freq: LIC=I): Given an operating reactor plant with RHRSW operating, reverse RHRSW flow in accordance with QCOP 1000-04.

K/A Number and Importance: **K/A:** 400000.A4.01 **Rating:** 3.1/3.0

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 1000-04 Rev. 22, RHR SERVICE WATER SYSTEM 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)

SRRS: 3D.100; There are no retention requirements for this section

INITIAL CONDITIONS

- The 1C and 1D RHRSW pumps were started earlier this shift at the request of Engineering and the CMO group for performance monitoring.

- Both groups have collected the data and are now requesting the 1B RHRSW Heat Exchanger flow reversed and both RHRSW pumps placed in operation.

INITIATING CUE

Place the 1B RHR Heat Exchanger in REVERSE FLOW and restart the 1C and 1D RHRSW pumps per QCOP 1000-04.

Exelon Nuclear

Job Performance Measure

Energize 480 Bus 15 With a Failure of the Normal Feed

JPM Number: 2016 ILT NRC JPM h

Revision Number: 03

Date: 12/17/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/ 1. Task description and number, JPM description and number are identified.

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

RJV/S/ 3. Performance location specified. (in-plant, control room, simulator, or other)

RJV/S/ 4. Initial setup conditions are identified.

RJV/S/ 5. Initiating cue (and terminating cue if required) are properly identified.

RJV/S/ 6. Task standards identified and verified by SME review.

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

RJV/S/ 8. If an alternate path is used, the task standard contains criteria for successful completion.

RJV/S/ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QOP 6700-02 Rev: 38
Procedure QCOA 6100-03 Rev: 41
Procedure QOA 6700-01 Rev: 18

RJV/S/ 10. Verify cues both verbal and visual are free of conflict.

RJV/S/ 11. Verify performance time is accurate

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

RJV/S/ 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

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision 00, New JPM developed for ILT 09-1 NRC Exam.

Revision 01, JPM revised for procedure changes.

Revision 02, JPM revised for procedure changes.

Revision 03, Taken from JPM Bank (LS-082-I-A) and used on 2016 ILT NRC Exam. Revised JPM number, updated template, and Evaluator notes.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC-18

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. Take the following actions:
   - Start the 2A Service Water Pump.
   - Prevent reclosure of the Bus 15 Main Feed Breaker: **imf ed06a**
   - Trip T-12 using the command: **imf ed02**
   - Insert a manual reactor scram and place the Mode Switch in Shutdown.
   - Verify the U-1 and U1/2 EDG are supplying the ECCS Busses.
   - Restore RPS A and B from the normal feeds: **irf rp28r reset, irf rp29r reset**
   - Backfeed Bus 13 and Bus 14.
   - Allow the simulator to stabilize, i.e. RPV water level approx. 0 inches (use SSMP if necessary), and RPV pressure stable at < 1060 psig.
   - Perform the following steps of QCOA 6100-03, D.3, D.15, D.18, D.23, D.24, and D.28.
   - Start the 1/2 Instrument Air Compressor.
   - Start the 2A Service Air Compressor.
   - Acknowledge annunciators initially and throughout the JPM.
   - Snap the setup to IC-0 or any other available IC.

3. Prepare a copy of QCOA 6100-03 signed off as complete, N/A, or in progress (circled), as appropriate up to step D.29.
4. One blank copy of QOP 6700-02.
5. 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.
6. This completes the setup for this JPM.

INITIAL CONDITIONS

- A loss of offsite power has occurred on Unit 1.
- The Unit Supervisor has entered QGA 100 and directed actions to control RPV water level and pressure.
- Actions have been completed per QCOA 6100-03, Loss of Offsite Power up to step D.29.
- Hard Cards are authorized.
- The Unit Supervisor has directed you to resume Electric Plant restoration activities.

INITIATING CUE

Re-energize Bus 15 and Bus 17 from their Normal Feeds per QCOA 6100-03, step D.29.

Do NOT energize Bus 16 due to a Bus fault.

Notify the Unit Supervisor when Bus 15 and Bus 17 are energized.

Provide examinee with: A marked up copy of QCOA 6100-03.

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
QCOA 6100-03 Step 29.a OR QOA 6700-01 Hard Card Step 1	Close Bus 15 Main Feed Breaker	Places Bus 15 c/s to the NAT position to clear the AUTO TRIP. THEN Places Bus 15 c/s to the NAC position.	___	___	___
CUE:	**The Bus 15 Main Feed Breaker will not close. If the examinee reports this and asks for direction, as the Unit Supervisor state:** **"Continue efforts to energize Bus 15"**				
CUE:	**If an EO is dispatched to investigate the Bus 15 Main Feed Breaker, then report back as appropriate from either:** **Bus 13 cubicle 1, "BUS 13 TO XFORMER 15 FEED BKR** **OR** **Bus 15 cubicle 2B, "BUS 13 TO TRANSFORMER 15"** **"EMs are here and they have identified a problem with the closing spring and are unable to charge it. There are no other problems preventing Bus 15 from being energized,"**				
* QCOA 6100-03 Step 29.c OR * QOA 6700-01 Hard Card Step 1	Close Bus 17 Main Feed Breaker	Places Bus 17 c/s to the NAT position to clear the AUTO TRIP. THEN Places the Bus 17 c/s to the NAC position and verifies: - CLOSED light lit - OPEN light out - Bus 17 LIVE light lit	___	___	___
ALTERNATE PATH STARTS HERE					
EVALUATOR NOTE: The task may be accomplished by using the Hard Card (QOA 6700-01) OR QOP 6700-02. If necessary, provide a copy of QOP 6700-02 when located.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
QOA 6700-01 Hard Card Step 1 OR QOP 6700-02 Step F.1.d.(1)	Verify closed the Bus 17 Main Feed breaker.	Verifies the Bus 17 Main Feed Breaker indications: - CLOSED light lit - OPEN light out - Bus 17 LIVE light lit	___	___	___
QOA 6700-01 Hard Card Step 2.a OR QOP 6700-02 Step F.1.d.(2)	Verify open Bus 15 Main Feed Breaker.	Verifies Bus 15 Main Feed Breaker OPEN and AUTO TRIP lights are lit OR Places Bus 15 c/s to NAT and verifies breaker OPEN light is lit.	___	___	___
QOA 6700-01 Hard Card Step 2.c OR QOP 6700-02 Step F.1.d.(3)	Verify open Bus 15 to Bus 16 Tie-Breaker.	Verifies Bus 15 to Bus 16 Tie-Breaker indications: - OPEN light lit - CLOSED light out	___	___	___
* QOA 6700-01 Hard Card Step 2.d OR * QOP 6700-02 Step F.1.d.(4)	Close Bus 15 to Bus 17 Tie-Breaker.	Places Bus 15 to Bus 17 Tie-Breaker c/s to NAC and verifies: - CLOSED light lit - OPEN light out - Bus 15 LIVE light lit	___	___	___
EVALUATOR NOTE: The examinee should inform you that 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: Energize 480 VAC Bus 15 With a Failure of the Normal Feed

JPM Number: 2016 ILT NRC JPM h Revision Number: 03

Task Number and Title:

SR-6500-P04 (Freq: LIC=B): Given a loss of normal power to an emergency bus (13-1 or 14-1) with a failure of the associated emergency diesel to start, supply power to the emergency bus using the crosstie from Unit 2 and restore 480vac busses in accordance with QOA 6500-03, QCOP 6500-08, QOA 6700-04 and QOA 6700-01. (Determine expected bus loading currents in accordance with QCOP 6500-28) (SOER 83-6 r4)

K/A Number and Importance: **K/A:** 262001 A4.01 **Rating:** 3.4/3.7

Suggested Testing Environment: Simulator

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

Reference(s): QCOA 6100-03 Rev.41, LOSS OF OFFSITE POWER
QOA 6700-01 Rev.18, 480V BUS 15, 16 OR 17 (25, 26 OR 27) FAILURE
QOP 6700-02, Rev.38, 480 VOLT BUS TIE CIRCUIT BREAKERS

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 10 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)

SRRS: 3D.100; There are no retention requirements for this section

INITIAL CONDITIONS

- A loss of offsite power has occurred on Unit 1.
- The Unit Supervisor has entered QGA 100 and directed actions to control RPV water level and pressure.
- Actions have been completed per QCOA 6100-03, Loss of Offsite Power up to step D.29.
- Hard Cards are authorized.
- The Unit Supervisor has directed you to resume Electric Plant restoration activities.

INITIATING CUE

Re-energize Bus 15 and Bus 17 from their Normal Feeds per QCOA 6100-03, step D.29.

Do NOT energize Bus 16 due to a Bus fault.

Notify the Unit Supervisor when Bus 15 and Bus 17 are energized.

Exelon Nuclear

Job Performance Measure

Flex 125 VDC Battery Crosstie

JPM Number: 2016 ILT NRC JPM i

Revision Number: 00

Date: 01/21/2016

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/01/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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.

RJV/S/ 1. Task description and number, JPM description and number are identified.

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

RJV/S/ 3. Performance location specified. (in-plant, control room, simulator, or other)

RJV/S/ 4. Initial setup conditions are identified.

RJV/S/ 5. Initiating cue (and terminating cue if required) are properly identified.

RJV/S/ 6. Task standards identified and verified by SME review.

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

N/A 8. If an alternate path is used, the task standard contains criteria for successful completion.

RJV/S/ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 0050-15 Rev: 01
Procedure _____ Rev: _____
Procedure _____ Rev: _____

RJV/S/ 10. Verify cues both verbal and visual are free of conflict.

RJV/S/ 11. Verify performance time is accurate

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

RJV/S/ 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

SRRS: 3D.100; There are no retention requirements for this section

Revision Record (Summary)

Revision 00, New JPM developed for the 2016 ILT NRC Exam.

INITIAL CONDITIONS

- An Extended Loss of AC Power (ELAP) event was declared several hours ago by the Shift Manager.
- The Unit 2 125 VDC Battery Bus voltage is reading 105 VDC as indicated on the 902-8 panel.
- Several delays have been encountered in deployment of the FLEX Generator.
- The Unit Supervisor has determined the 125 VDC Alternate Battery is required to restore system voltage.
- You have been issued a Fire Lock Key and a screwdriver.
- 100 ft. of cable fitted with red and black connectors on each end, has been staged at the Junction Box in the Battery Charger Room.
- This JPM is NOT time critical.

INITIATING CUE

Connect the Unit 2 125 VDC Alternate Battery to 125 VDC System per QCOP 0050-15, step F.4.

Provide examinee with a marked up copy of QCOP 0050-15.

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.4.a	Verify OPEN: Breaker 12 on 125 VDC Distribution Panel 2A-2.	At 125 VDC Distribution Panel 2A-2, verifies breaker 12 is in the OFF position.	___	___	___
CUE:	Point to the position indicated by the examinee and state: **"The breaker is here."**				
CUE:	**As needed, provide examinee with a screwdriver to open JB 2-0030-JB200.**				
*F.4.b	Connect the FLEX 125 VDC Battery crosstie cables to JB 2-0030-JB200.	· Obtains the pre-staged FLEX connecting cable beside the Junction Box. · Opens JB 2-0030-JB200 (adjacent to 125 VDC Dist. Pnl. 2A-2). · Attaches connectors, "red to red" and "black to black."	___	___	___
CUE:	Point to the connection points indicated by the examinee and state: **"The cable is attached."**				
*F.4.c	Connect the FLEX 125 VDC Battery crosstie cables to the Unit-2 Alternate 125 VDC Battery.	· Runs FLEX cables from the Junction Box to the 125 VDC Alternate Battery post connectors. · Attaches cable and battery post connectors, "red to red" and "black to black."	___	___	___
CUE:	Point to the connection points indicated by the examinee and state: **"The cable is attached."**				
*F.4.d	Unlock fused disconnect at 125 VDC Battery Bus #2 Cub. C04.	Using Fire Key, unlocks (or breaks) and removes lock on fused disconnect at 125 VDC Battery Bus #2 Cub, C04.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	**"The lock is removed."**				
*F.4.e	OPEN disconnect at 125 VDC Battery Bus #2 Cub. C04.	At 125 VDC Battery Bus #2 Cub. C04: Depresses lever and repositions disconnect downward to the "OFF" position.	___	___	___
CUE:	Point to the position indicated by the examinee and state: **"The disconnect is here."**				
*F.4.f	CLOSE Breaker 12 on 125 VDC Distribution Panel 2A-2.	At 125 VDC Distribution Panel 2A-2, places breaker 12 to the "ON" position.	___	___	___
CUE:	Point to the position indicated by the examinee and state: **"The breaker is here."**				
F.4.g	Verify local voltage	In the Unit 2 125 VDC Battery Charger Room: Places the voltmeter select switch to either Bus 2A, 2A-1, or 2A-2 and reads indicated voltage.	___	___	___
CUE:	If the voltmeter is selected to Bus 2A, 2A-1, or 2A-2, point to 130 Volts and state: **"Meter indication is here."** If the voltmeter is selected to Batt Bus, point to 105 Volts and state: **"Meter indication is here."**				
F.4.h	Notify Main Control Room	Contacts Control Room and informs Unit Supervisor that QCOP 0050-15 step F.4.a.thru h is complete.	___	___	___
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: Flex 125 VDC Battery Crosstie

JPM Number: 2016 ILT NRC JPM i Revision Number: 00

Task Number and Title:

SRN-FLEX.2-P02 (Freq: LIC=I N=I): Given a reactor plant in an ELAP (Extended Loss of AC Power) Event and 125 VDC battery voltage is expected to drop to < 105 VDC,or 250 VDC battery voltage is expected to drop to <210 VDC swap to the Alternate 125 or Non-Emergency 250 VDC Battery in accordance with QCOP 0050-15 "FLEX 125/250 VDC Operation".

K/A Number and Importance: **K/A:** 295004. AA1.01 **Rating:** 3.3/3.4

Suggested Testing Environment: In-Plant

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

Reference(s): QCOP 0050-15 Rev. 1, FLEX 125/250 VDC 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)

SRRS: 3D.100; There are no retention requirements for this section

INITIAL CONDITIONS

- An Extended Loss of AC Power (ELAP) event was declared several hours ago by the Shift Manager.
- The Unit 2 125 VDC Battery Bus voltage is reading 105 VDC as indicated on the 902-8 panel.
- Several delays have been encountered in deployment of the FLEX Generator.
- The Unit Supervisor has determined the 125 VDC Alternate Battery is required to restore system voltage.
- You have been issued a Fire Lock Key and a screwdriver.
- 100 ft. of cable fitted with red and black connectors on each end, has been staged at the Junction Box in the Battery Charger Room.
- This JPM is NOT time critical.

INITIATING CUE

Connect the Unit 2 125 VDC Alternate Battery to 125 VDC System per QCOP 0050-15, step F.4.

Exelon Nuclear

Job Performance Measure

Start the Control Room B Train HVAC with a Failure of the FCV

JPM Number: 2016 ILT NRC JPM j

Revision Number: 00

Date: 11/30/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/04/16 Date
Approved By:	Raymond J. Venci/S/	02/05/16

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.

RJV/S/ 1. Task description and number, JPM description and number are identified.

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

RJV/S/ 3. Performance location specified. (in-plant, control room, simulator, or other)

RJV/S/ 4. Initial setup conditions are identified.

RJV/S/ 5. Initiating cue (and terminating cue if required) are properly identified.

RJV/S/ 6. Task standards identified and verified by SME review.

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

RJV/S/ 8. If an alternate path is used, the task standard contains criteria for successful completion.

RJV/S/ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure QCOP 5750-09 Rev: 56
Procedure _____ Rev: _____
Procedure _____ Rev: _____

RJV/S/ 10. Verify cues both verbal and visual are free of conflict.

RJV/S/ 11. Verify performance time is accurate

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

RJV/S/ 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 for the 2016 ILT NRC test. It is a Safety Function 9, Alternate Path in- plant JPM.

INITIAL CONDITIONS

- Units 1 and 2 are operating at rated power.
- The Control Room HVAC B Train is to be placed in operation to support maintenance activities on the A Train.
- Control Room Train A HVAC is currently in operation.
- The 1A RHRSW pump has been started per QCOP 1000-04.
- An EO has verified the valve positions for step F.3.e.(2a-c) of QCOP 5750-09.
- Mechanical Maintenance is in standby to determine if refrigerant needs to be added.
- The US has directed you to locally start the B AHU. Do NOT run the Air Filtration Unit (AFU).
- This JPM is NOT time critical.

INITIATING CUE

Place the Control Room B Train HVAC in operation per QCOP 5750-09 step F.3. Contact Mechanical Maintenance when ready for the refrigerant check.

Provide the examinee with a marked-up copy of QCOP 5750-09.

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.3.a. (1)	Verify: AIR HANDLING UNIT "B" in AUTO.	At Panel ½-9400-105: Verifies the B Train AHU control switch is in the AUTO position.	___	___	___
CUE:	**Point to the position indicated by the examinee and state:** **"The switch is positioned here."**				
F.3.a. (2)	Verify: A/C UNIT "B" COMPRESSOR in AUTO.	At Panel ½-9400-105: Verifies the A/C UNIT "B" COMPRESSOR control switch is in the AUTO position.	___	___	___
CUE:	**Point to the position indicated by the examinee and state:** **"The switch is positioned here."**				
F.3.b.	Verify: STOP/RESET-STANDBY-AUTO switch in STANDBY.	At Panel ½-9400-102: Verifies the STOP/RESET-STANDBY-AUTO control switch is in the STANDBY position.	___	___	___
CUE:	**Point to the position indicated by the examinee and state:** **"The switch is positioned here."**				
EVALUATOR NOTE: Steps F.3.c. and F.3.d. are N/A per the Initial Conditions.					
F.3.e. (1)	Verify RCU is NOT operating.	Verifies the RCU is NOT operating.	___	___	___
*F.3.e (1)(a)	Place A/C UNIT "B" COOLING WATER SUPPLY SELECTOR switch in EMERG.	At Panel ½-9400-105: Places the A/C UNIT "B" COOLING WATER SUPPLY SELECTOR switch in the EMERG position.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
EVALUATOR NOTE: Per the "Initial Conditions", the valves in step F.3.e.(2)(a) through F.3.e.(2)(c) have been verified to be in the correct positions. If the examinee dispatches an EO to verify valve positions, then role play accordingly.					
F.3.e.(2)(a-c)	Verify OPEN: 1-5799-385, CR HVAC TRAIN B RCU RHRSW SPLY FR PMPS 1-1001-65A & 65B OUTBD SV Verify CLOSED: 1-5799-384, CR HVAC TRAIN B RCU RHRSW SPLY FR PMPS 1-1001-65C & 65D OUTBD SV Verify CLOSED: 1-5799-406, CR HVAC TRAIN B RCU RHRSW SPLY FR PMPS 1-1001-65C & 65D INBD SV	Determines from "Initial Conditions." OR Dispatches an EO to the CRD Pump Level (TB 572' elev) to verify the valves.	___ ___ ___	___ ___ ___	___ ___ ___
CUE:	**If dispatched/contacted, as EO, report:** **"The 1-5799-385 valve is OPEN.** **The 1-5799-384 and 1-5799-406 valves are CLOSED."**				
EVALUATOR NOTE: Steps F.3.e.(2)(d) and F.3.e.(3) are N/A.					
F.3.e.(4)	Verify RHRSW system is operating.	Determines from "Initial Conditions." OR Contacts the Control Room.	___	___	___
CUE:	**If contacted, as the NSO, state:** **"The 1A RHRSW Pump has been started and is operating in accordance with QCOP 1000-04."**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.3. f-g	Place the Control Room HVAC in "Recirc Mode." AND Shut down Control Room A Train HVAC.	Contacts the NSO to complete step F.3.f & g of QCOP 5750-09 by: Placing the CONTROL ROOM HVAC ISOL SWITCH in the ISOLATE position at the 912-5 panel. AND Shut down Control Room A Train HVAC per step F.2.	___ ___	___ ___	___ ___
CUE:	**As the NSO, state: "Step F.3.f & g of QCOP 5750-09 are complete. The Control Room HVAC system was placed on ISOLATE and the A Train HVAC has been shut down per step F.2."**				
CUE:	**If the examinee verifies damper positions at the ½-9400-105 panel, then state:** **"The green lights are lit for the following dampers:** **AO ½-5741-324A & B,** **AO ½-5741-325A & B,** **AO ½-5741-327A & B,** **AO ½-5741-331"**				
EVALUATOR NOTE: Step F.3.h is N/A per "Initial Conditions."					
*F.3.i	Start AIR HANDLING UNIT B.	At Panel ½-9400-105: Places control switch, (HS ½-5741-316B), to the START position and releases.	___	___	___
CUE:	**Point to the red light above the B Train HVAC control switch and state:** **"This light is lit and you hear the Air Handling Unit running."**				
CUE:	**If the examinee verifies damper positions at the ½-9400-105 panel, then state:** **"The red lights are lit for the ½-5741-330A & B and ½-5741-331 dampers."**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.3.j	Reset oil pressure trips and allow RCU to cycle on Control Room temperature.	At Panel ½-9400-102: Place the STOP/RESET-STANDBY-AUTO switch to the STOP/RESET position, then to the AUTO position.	___	___	___
F.3.k	Verify RCU compressor is running.	Verifies Compressor running by Checking oil pressure & temperature or running sound.	___	___	___
CUE:	**"You hear the compressor running."** **If compressor oil pressure is checked at PI 1/2-5795-336, point to 105 psig and state: "The Indicator is here."**				
F.3.l	Verify RCU compressor oil level.	Verifies oil is visible in sightglass located on the side of the RCU compressor.	___	___	___
CUE:	**Point to the middle of the sightglass and state: "Oil level is here."**				
ALTERNATE PATH STARTS HERE					
F.3.m	Verify adequate RCU compressor discharge pressure	At the RCU compressor: Determines PI ½-5795-335, COMPRESSOR DISCHARGE PRESSURE is NOT within 100 psig to 280 psig range.	___	___	___
CUE:	**At PI ½-5795-335, point to the 50 psig mark and state:** **"Pressure indication is here."**				
F.3.m. (1)(a)	Verify PIC ½-5795-333, CR HVAV TRAIN "B" RCU SERV WTR SPLY FCV, is in AUTO.	At Panel ½-9400-105: Verifies AUTO pushbutton back light is lit on PIC ½-5795-333.	___	___	___
CUE:	**When asked about the status of the AUTO pushbutton on PIC ½-5795-333, state:** **"The green light below the AUTO pushbutton is lit"**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*F.3. m.(1) (b)	Close ½-5799-378, CR HVAC TRAIN B RCU SERV WTR SPLY FCV MANUAL ISOL VLV.	Locates ½-5799-378 valve outside of B HVAC room and turns valve handwheel clockwise until it will not turn further.	___	___	___
CUE:	**After the examinee has made several turns in the clockwise direction, state:** **"The valve will not turn any further"**				
EVALUATOR NOTE: Only ONE of the next two steps will be successful in controlling RCU compressor discharge pressure.					
*F.3. m.(1) (b)•	Adjust ½-5799-381, CR HVAC TRAIN B RCU SERV WTR SPLY BYP VLV.	Partially throttles open the ½-5799-381 valve by turning the handwheel counterclockwise direction. UNTIL Discharge pressure at PI ½-5795-335 is within 100 psig to 280 psig range.	___	___	___
CUE:	**After the first manipulation, when PI ½-5795-335 is checked, point to 250 psig and state:** **"Pressure indication is here."**				
CUE:	**If the examinee attempts to control the RCU compressor discharge pressure by unlocking and throttling the 0- 5799-1073, CR HVAC TRAIN B RCU SERV WTR OUTLET VALVE, state:** **"The valve will NOT turn"**				
F.3.n	Contact Mechanical Maintenance for refrigerant check.	Calls Control Room or Mechanical Maintenance and informs them that Control Room B Train HVAC is running and requires a refrigerant check.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	**Acknowledge the call and state:** **"Maintenance personnel are in route to perform the refrigerant check on B Train HVAC."**				
CUE:	**"Another operator will assist Mechanical Maintenance and perform steps F.3.o and F.3.p."**				
EVALUATOR NOTE: The examinee should inform you that 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: Start Control Room B Train HVAC with a Failure of the FCV

JPM Number: 2016 ILT NRC JPM j Revision Number: 00

Task Number and Title:

SR-5750-P05 (Freq: LIC=I) Given an operating reactor plant with the 'A' and 'B' train control room ventilation systems shutdown, start the 'B' train HVAC, RCU and the AFU in accordance with QCOP 5750-09.

K/A Number and Importance: **K/A:** 290003 G.2.1.20 **Rating:** 4.6/4.6

Suggested Testing Environment: Plant

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

Reference(s): QCOP 5750-09 Rev. 56 Control Room Ventilation System

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

- Units 1 and 2 are operating at rated power.
- The Control Room HVAC B Train is to be placed in operation to support maintenance activities on the A Train.
- Control Room Train A HVAC is currently in operation.
- The 1A RHRSW pump has been started per QCOP 1000-04.
- An EO has verified the valve positions for step F.3.e.(2a-c) of QCOP 5750-09.
- Mechanical Maintenance is in standby to determine if refrigerant needs to be added.
- The US has directed you to locally start the B AHU. Do NOT run the Air Filtration Unit (AFU).
- This JPM is NOT time critical.

INITIATING CUE

Place the Control Room B Train HVAC in operation per QCOP 5750-09 step F.3. Contact Mechanical Maintenance when ready for the refrigerant check.

Exelon Nuclear

Job Performance Measure

Locally Start Up the 1/2 A Fire Diesel

JPM Number: 2016 ILT NRC JPM k

Revision Number: 00

Date: 09/29/2015

Developed By:	Raymond J. Venci/S/ Instructor	01/28/16 Date
Validated By:	Duane Haas /S/ SME or Instructor	01/29/16 Date
Reviewed By:	Jason Swain/S/ Operations Representative	02/04/16 Date
Approved By:	Raymond J. Venci/S/ Training Department	02/05/16 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 through 13 below.

RJV/S/	1.	Task description and number, JPM description and number are identified.
RJV/S/	2.	Knowledge and Abilities (K/A) references are included.
RJV/S/	3.	Performance location specified. (in-plant, control room, simulator, or other)
RJV/S/	4.	Initial setup conditions are identified.
RJV/S/	5.	Initiating cue (and terminating cue if required) are properly identified.
RJV/S/	6.	Task standards identified and verified by SME review.
RJV/S/	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
N/A	8.	If an alternate path is used, the task standard contains criteria for successful completion.
RJV/S/	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure QCOP 4100-03 Rev: 20 Procedure _____ Rev: _____ Procedure _____ Rev: _____
RJV/S/	10.	Verify cues both verbal and visual are free of conflict.
RJV/S/	11.	Verify performance time is accurate
N/A	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
RJV/S/	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

SRRS: 3D.105 There are no retention requirements for this section.

Revision Record (Summary)

ILT 2016 NRC Examination Revision 00, Revised to new format.

ILT 2009 NRC Examination Revision 00, This JPM is developed IAW guidelines established in NUREG 1021 Rev 9 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.

This JPM was based on bank JPM LP-002-II, Rev. 18.

JPM revised to match procedure revision and update to latest JPM template.

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- You are an extra operator.
- Both Diesel Fire pumps are in a standby condition per QCOP 4100-03, Section F.1.a.
- The Fire Marshall has requested that the ½ A Diesel Fire Pump be started locally for observation.
- There are no AUTO start signals present.
- You have been issued a fire protection key.
- This JPM is NOT time critical.

INITIATING CUE

Locally start-up the 1/2 A Diesel Fire Pump in the Test Mode, establish proper pressure, and verify proper operation per QCOP 4100-03.

Contact the Fire Marshall when the 1/2A Fire Diesel is running.

Provide the examinee: A copy of QCOP 4100-03 with Prerequisite C.1 and Step F.1.a-b signed off.

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.

SRRS: 3D.105 There are no retention requirements for this section.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.1.b.	Verify closed MO 1/2-3906.	Contacts CR to verify MO 1/2-3906 valve is closed.	___	___	___
CUE:	**As the Control Room Operator, state, "The MO 1/2-3906 valve is closed."**				
F.1.c.(1)	Open the 1/2A Diesel Fire PMP MIN FLOW VLV.	Unlocks the 1-4199-6 valve and rotates handwheel counter-clockwise.	___	___	___
CUE:	**"You cannot rotate the handwheel any further."**				
*F.1.d.(2)	Start the 1/2 A Diesel Fire Pump by placing control switch to TEST.	Positions 1/2 A Diesel Fire Pump control switch to TEST.	___	___	___
CUE:	**"The diesel is running."**				
F.1.d.(3)	Verifies engine cooling water outlet flow to the intake flume funnel	Checks the intake flume funnel for cooling water flow.	___	___	___
CUE:	**"There is flow into the funnel."**				
*F.1.d.(4)(a)	Throttles the 1/2A DIESEL FIRE PMP MIN FLOW VLV to attain proper discharge press.	Rotates 1-4199-6 valve hand wheel clockwise to establish 140 to 145 psig disch. press on PI 1/2-4141-2A.	___	___	___
CUE:	**When asked, point to 140 psig on PI 1/2-4141-2A and state, "the pressure is here" after the valve is throttled.** **If asked before the valve is throttled, point to 100 psig.**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
F.1.d.(5)	Verify normal parameters.	Verifies oil press. ³ 40 psig and engine temp. is < 200°F.	___	___	___
CUE:	**When prompted, point to the value for each gauge and state, "the pressure is here."** **Oil pressure is 60 psig,** **Water temp. is 180° F.**				
CUE:	**The examinee informs the Fire Marshal that the 1/2A Fire Diesel is operating properly.**				
CUE:	**The Fire Marshall informs you that maintenance personnel want to walk down the system prior to placing the system in a shutdown lineup and it will be approximately 1 hour before you can place the system in a shutdown condition.**				
EVALUATOR NOTE: The examinee should inform you that the task is complete.					

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Locally Start Up The 1/2 A Fire Diesel

JPM Number: 2016 ILT NRC JPM k Revision Number: 00

Task Number and Title:

SRN-4100-P05 (Freq: LIC=B NF=B) Given an operating reactor plant with a loss of service water and a failure of a diesel fire pump to start, locally start the diesel fire pump in accordance with QCOP 4100-03.

K/A Number and Importance: **K/A:** 286000.2.1.30 **Rating:** 4.4/4.0

Fire system; Ability to locate and operate components, including local controls

Suggested Testing Environment: Plant

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

Reference(s): QCOP 4100-03 Rev. 20, DIESEL FIRE PUMP OPERATION

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

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 10.5 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)

SRRS: 3D.105 There are no retention requirements for this section.

INITIAL CONDITIONS

- You are an extra operator.
- Both Diesel Fire pumps are in a standby condition per QCOP 4100-03, Section F.1.a.
- The Fire Marshall has requested that the ½ A Diesel Fire Pump be started locally for observation.
- There are no AUTO start signals present.
- You have been issued a fire protection key.
- This JPM is NOT time critical.

INITIATING CUE

Locally start-up the 1/2 A Diesel Fire Pump in the Test Mode, establish proper pressure, and verify proper operation per QCOP 4100-03.

Contact the Fire Marshall when the 1/2A Fire Diesel is running.

SRRS: 3D.105 There are no retention requirements for this section.