

# Exelon Nuclear

## Job Performance Measure

### Unisolate and Start the Reactor Building Ventilation System

JPM Number: 2014 ILT NRC JPM h

Revision Number: 00

Date: 10/18/13

Developed By: \_\_\_\_\_  
Instructor Date

Validated By: \_\_\_\_\_  
SME or Instructor Date

Reviewed By: \_\_\_\_\_  
Operations Representative Date

Approved By: \_\_\_\_\_  
Training Department Date

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

**NOTE:** All steps of this checklist should be performed upon initial validation.  
Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

- \_\_\_\_\_ 1. Task description and number, JPM description and number are identified.
- \_\_\_\_\_ 2. Knowledge and Abilities (K/A) references are included.
- \_\_\_\_\_ 3. Performance location specified. (in-plant, control room, simulator, or other)
- \_\_\_\_\_ 4. Initial setup conditions are identified.
- \_\_\_\_\_ 5. Initiating cue (and terminating cue if required) are properly identified.
- \_\_\_\_\_ 6. Task standards identified and verified by SME review.
- \_\_\_\_\_ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (\*).
- \_\_\_\_\_ 8. If an alternate path is used, the task standard contains criteria for successful completion.
- \_\_\_\_\_ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:  
     Procedure QCOP 5750-02 Rev: 25  
     Procedure \_\_\_\_\_ Rev: \_\_\_\_\_  
     Procedure \_\_\_\_\_ Rev: \_\_\_\_\_
- \_\_\_\_\_ 10. Verify cues both verbal and visual are free of conflict.
- \_\_\_\_\_ 11. Verify performance time is accurate
- \_\_\_\_\_ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- \_\_\_\_\_ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

## **Revision Record (Summary)**

**Revision 00,** Renamed JPM to 2014 ILT NRC JPM h. Restarted numbering accordingly.

Previous revision was:

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.2 "Control Room Systems," for RO/SRO candidates.

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

## SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC.

**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. Isolate the Reactor Building Ventilation system by inserting and deleting the Malfunction for Reactor Building Vent Radiation Monitor: RM02K, PROCESS RADIATION MONITORING FAILURE REAC BLDG VENT CH A:
  - **imf RM02K 100**
  - **dmf RM02K**
  - **Reset the Rx Building Vent Channel A Rad Monitor and reset annunciators 901-3 A-3 and 901-3 G-3**
  - **Reset Group 2 per QCOP 5750-02 step F.1.c.(1).(a)**
  - **Place all tripped U-1 and U-2 Reactor Building fan control switches in PTL.**
  - **Reset alarms on 912-5**
3. 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.
4. This completes the setup for this JPM.
5. Provide a copy of QCOP 5750-02 with the following steps signed off/N/A'd:
  - Prerequisite C.1, C.1.a – N/A'd
  - Prerequisite C.2, C.3 – Signed off
  - Precautions (section D) circled
  - Limitations and Actions (section E) circled
  - F.1.a – N/A'd
  - F.1.b – N/A'd
  - F.1.c through F.1.c.(1).(a) – signed off
  - F.2, F.3, F.4 – N/A'd



JPM H QCOP  
5750-02, Rev 025, RI G caep.cae



**INITIAL CONDITIONS**

- You are the Unit 1 ANSO.
- The Channel A Reactor Building Vent Rad Monitor failed upscale due to an internal fault.
- IMs have repaired the fault and tested the monitor satisfactorily.
- Outside air temperature is approximately 80°F.
- The heating Boiler is NOT in operation.
- Proper operation of the Unit-1 Differential Pressure Controller has been verified.
- All Reactor Building Supply and Exhaust Fans that tripped on the isolation have been placed in Pull-to-Lock (PTL).
- Radiation Protection and Chemistry have been notified that Reactor Building Ventilation will be started.
- All isolation signals have been verified reset.

**INITIATING CUE**

Restore the Unit-1 Reactor Building Ventilation System per QCOP 5750-02.

Another operator will restart the Unit-2 Reactor Building Ventilation fans.

Inform the Unit supervisor when the Unit-1 Reactor Building ventilation has been returned to a normal operating lineup.

**{When candidate acknowledges the cue, provide the candidate with the procedure QCOP 5750-02}**

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

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**Information For Evaluator's Use:**

UNSAT requires written comments on respective step.

- \* Denotes critical steps.
- Denotes critical elements of a critical step.

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.

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

JPM Start Time: \_\_\_\_\_

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<b>EVALUATOR NOTE: Step F.1.a and F.1.b and F.1.c.(1) are not applicable or are complete because, per the Turnover, the U-1 DPC was verified in operation, the heating boiler is not operating, and the isolation signal was reset.</b>					
<b>EVALUATOR NOTE: In the following step, the student may decide to operate the Group 2 reset switch in conjunction with verifying the alarms are clear.</b>					
F.1.c (2)	<b>Verify</b> RB Vent C/S targets GREEN (AUTO-AFTER-OFF position), <b>OR</b> in PTL.	On Panel 912-5, control switch positions for all tripped Reactor Building Vent Fans are GREEN or are in PTL.	—	—	—
<b>EVALUATOR NOTE: The candidate may chose to open both Units Isolation Dampers. However since the task is to restore Unit 1 ventilation, critical steps apply to Unit 1 components only.</b>					
F.1.c (3)	<b>Momentarily place</b> U1 and U2 RX BLDG INLT ISOL DMPRS control switch to CLOSE.	At the 912-1 Panel: Momentarily places the 1-5741-196A HS to CLOSE <u>AND</u> 2-5741-196A HS to CLOSE.	—	—	—
F.1.c (4)	<b>Momentarily place</b> U1 and U2 RX BLDG OUTLT ISOL DMPRS control switch to CLOSE.	A the 912-1 panel: Momentarily places the 1-5741-250A HS to CLOSE <u>AND</u> 2-5741-250A HS to CLOSE.	—	—	—
<b>CUE:</b>	<b>The RB Vent Isolation can also be reset at a local panel. If the candidate tries to contact an EO to perform this task, Role Play as necessary. All EOs are busy at this time.</b>				
*F.1.c (5)	<b>•Reset</b> RB Vent Isolation by pressing U1(2) ISOL DAMPER RESET push button at Panel 912-1 <b>OR</b> local control Panel 2251(2)-24X. <b>•</b>	At the 912-1 panel: Presses the U1 and U2 ISOL DAMPER RESET pushbuttons.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*F.1.c (6)	<p>●<b>Open</b> RB Isolation Dampers with U1(2) RX BLDG INLT ISOL DAMPER <b>AND</b> U1(2) RX BLDG OUTLT ISOL DAMPER control switch.●</p>	<p>Momentarily places the following control switches at the 912-1 panel to OPEN:</p> <ul style="list-style-type: none"> <li>• 1-5741-196A HS</li> <li>• 1-5741-250A HS</li> <li>2-5741-196A HS</li> <li>2-5741-250A HS</li> </ul>	—	—	—
F.1.d	<p><b>Verify open</b> indication at Panel 912-1 for:</p> <p>(1) RX BLDG INLT DAMPER, AO 1(2)-5741A.</p> <p>(2) RX BLDG INLT DAMPER, AO 1(2)-5741B.</p> <p>(3) RX BLDG OUTLT DAMPER, AO 1(2)-5742A.</p> <p>(4) RX BLDG OUTLT DAMPER, AO 1(2)-5742B.</p>	<p>Verifies the red OPEN lights are lit for the following dampers:</p> <p>AO 1-5741A</p> <p>AO 1-5741B</p> <p>AO 1-5742A</p> <p>AO 1-5742B</p> <p>AO 2-5741A</p> <p>AO 2-5741B</p> <p>AO 2-5742A</p> <p>AO 2-5742B</p>	—	—	—
<b>EVALUATOR: Per the NOTE preceding these next two steps, the exhaust fan should be started immediately after the supply fan to minimize dP swings.</b>					
*F.1.e	<p>●<b>Start <u>one</u></b> RB EXH FAN, then <b><u>one</u></b> RB SUPPLY FAN. ●</p>	<p>Places the exhaust fan to start and when the starting current is seen, simultaneously places the supply fan to start. The candidate will release the switch(es) when current drops to running current.</p>	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*F.1.f	•For a normal fan configuration, <b>start</b> second RB exhaust fan, then second RB supply fan. •	Places the exhaust fan to start and when the starting current is seen, simultaneously places the supply fan to start. The candidate will release the switch(es) when current drops to running current.	—	—	—
F.1.g	<b>Maintain</b> RB < -0.1” H <sub>2</sub> O D/P (D/P setpoint is -0.35” H <sub>2</sub> O, with a design range limit of -0.1” to -0.7” H <sub>2</sub> O).	RX Building dP verified to be –0.1” and approximately –0.35” H <sub>2</sub> O using 912-5 dPI 1-5740-22, RX BLDG TO ATMOS DP.	—	—	—
F.1.h	<b>Place</b> standby supply <b>AND</b> exhaust fan control switches to AUTO-AFTER-OFF (green target).	Places green targets for the remaining U-1 Supply and Exhaust fans by removing the switches from PTL.	—	—	—
CUE:	If the candidate starts to restore Unit-2 fans, inform the candidate that another operator will restart the Unit-2 fans as necessary.				
EVALUATOR: The candidate should inform you that the task is complete.					

JPM Stop Time: \_\_\_\_\_  
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JPM SUMMARY

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

JPM Title: Unisolate and Start the Reactor Building Ventilation System  
JPM Number: 2014 ILT NRC JPM h Revision Number: 00

Task Number and Title:  
**SR-5750-P03** Given an operating reactor plant following a reactor building ventilation isolation, unisolate and start the reactor building ventilation system IAW QCOP 5750-02.

K/A Number and Importance: **K/A:** 288000 A4.01 **Rating:** 3.1/2.9  
Ability to manually operate and/or monitor in the control room: Start and stop fans

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 5750-02 Rev. 25, Reactor Building Ventilation System

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: \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

Evaluator's Name: \_\_\_\_\_ (Print)

Evaluator's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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