

Exelon Nuclear

Job Performance Measure

Seal Purge Isolation

JPM Number: P-N-i

Revision Number: 00

Date: 10/05

Developed By: _____

Instructor

Date

Approved By: _____

Training Department

Date

Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor

Date

SME/Instructor

Date

SME/Instructor

Date

Job Performance Measure (JPM)

Revision Record (Summary)

From Bank: P2-0202-01

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

N/A

DOCUMENT PREPARATION

Have an unmarked copy of DOP 0202-11 ready to handout to the examinee.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A transient occurred on Unit 2 with Drywell pressure slowly rising.
2. The Reactor was scrammed and both Recirc Pumps tripped due to suspected seal leakage.
3. The Unit Supervisor has determined that Recirc Pumps should be isolated.
4. Prior to isolating the recirc pumps, the Unit Supervisor has decided that seal purge must be isolated to insure the isolated portions of the recirc loops are not overpressurized.

INITIATING CUE

The Unit 2 Unit Supervisor has directed you to shutdown the Seal Purge System to the Recirculation Pumps in accordance with DOP 0202-11. Inform the Unit Supervisor when complete.

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.

If a CRITICAL step has more than one part, then:

- (filled bullet) indicates a CRITICAL part of the step.
- (open bullet) indicates a NON-CRITICAL part of the step.

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.

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Note: Provide the examinee with the included copy of DOP 0202-11.				
1. Proceed to Step G.2.a. of the procedure.	LOCATES step G.2.a	_____	_____	_____
*2. Close 2A Recirc Pump Seal Purge valve 2-0399-510.	Rotates 2-0399-510 valve CW until stem stops moving inward.	_____	_____	_____
Cue: The component you identified is in the condition you described.				
*3. Close 2A Recirc Pump Seal Purge valve 2-0399-512.	Rotates 2-0399-512 valve CW until stem stops moving inward.	_____	_____	_____
Cue: The component you identified is in the condition you described.				
*4. Close 2B Recirc Pump Seal Purge valve 2-0399-509.	Rotates 2-0399-509 valve CW until stem stops moving inward.	_____	_____	_____
Cue: The component you identified is in the condition you described.				
*5. Close 2B Recirc Pump Seal Purge valve 2-0399-513	Rotates 2-0399-513 valve CW until stem stops moving inward.	_____	_____	_____
Cue: The component you identified is in the condition you described.				
*6. Close valve 2-0399-508.	Rotates 2-0399-508 valve CW until stem stops moving inward.	_____	_____	_____
Cue: The component you identified is in the condition you described.				

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
7. Notify Unit Supervisor that the seal purge system is shutdown.	Notifies Unit Supervisor that the seal purge system is shutdown.	_____	_____	_____
Cue: Respond as US.				
	END			

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☒

JPM Title: Seal Purge Isolation

JPM Number: P-N-i

Revision Number: 00

Task Number and Title: 201LK001, Seal Purge Isolation

K/A Number and Importance: 2.1.30

3.9/3.4

Suggested Testing Environment: Plant

Actual Testing Environment: ☐ Simulator ☒ Plant ☐ Control Room

Testing Method: ☒ Simulate
☐ Perform

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

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 15 minutes

Actual Time Used: _____ minutes

References: DOP 0202-11, R17, Reactor Recirculation Pump Seal Purge Start-Up, Operation and Shutdown

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____
(Print)

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A transient occurred on Unit 2 with Drywell pressure slowly rising.
2. The Reactor was scrammed and both Recirc Pumps tripped due to suspected seal leakage.
3. The Unit Supervisor has determined that Recirc Pumps should be isolated.
4. Prior to isolating the recirc pumps, the Unit Supervisor has decided that seal purge must be isolated to insure the isolated portions of the recirc loops are not overpressurized.

INITIATING CUE

The Unit 2 Unit Supervisor has directed you to shutdown the Seal Purge System to the Recirculation Pumps in accordance with DOP 0202-11. Inform the Unit Supervisor when complete.

Job Performance Measure (JPM)

Job Performance Measure (JPM)

Exelon Nuclear

Job Performance Measure

Title

Valve In Control Room Emergency Breathing Air Supply

JPM Number: P-N-j

Revision Number: 00

Date: 10/05

Developed By: _____
Instructor

Date

Approved By: _____
Training Department

Date

Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

- _____ 12. Task description and number, JPM description and number are identified.
- _____ 13. Knowledge and Abilities (K/A) references are included.
- _____ 14. Performance location specified. (in-plant, control room, or simulator)
- _____ 15. Initial setup conditions are identified.
- _____ 16. Initiating and terminating cues are properly identified.
- _____ 17. Task standards identified and verified by SME review.
- _____ 18. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 19. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 20. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 21. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 22. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor

Date

SME/Instructor

Date

SME/Instructor

Date

Job Performance Measure (JPM)

Revision Record (Summary)

From Bank: P3-4650-01

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS:

N/A

DOCUMENT PREPARATION

Have an unmarked copy of DOP 4650-01 ready to handout to the Examinee

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. Control Room personnel have noticed a pungent odor in the Control Room .
2. The Control Room Ventilation is NOT operating properly and the smell is getting worse.
3. The Unit 3 Unit Supervisor has evacuated ALL non-essential personnel from the Control Room and has directed all the NSOs to don SCBAs until the Control Room Emergency Air system can be valved in.
4. The Control Room Emergency Air system is currently in the STANDBY condition IAW DOP 4650-01.

INITIATING CUE

1. The Unit 3 Unit Supervisor has directed you to place the Control Room Emergency Breathing Air System Main Bank in operation in accordance with DOP 4650-01.

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.

If a CRITICAL step has more than one part, then:

- (filled bullet) indicates a CRITICAL part of the step.
- (open bullet) indicates a NON-CRITICAL part of the step.

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.

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Note: Provide the Examinee with the provided copy of DOP 4650-01.				
Note: DS key is required for Unit 2 Battery Room entrance. It can be checked out at the WEC.				
1. Proceed to Emergency Breathing Air manifold.	LOCATES Emergency Breathing Air manifold in Unit 2 Battery Room.	_____	_____	_____
2. Proceed to step G.3 of the procedure.	LOCATES procedure step G.3.	_____	_____	_____
3. Verify the following: <ul style="list-style-type: none"> ○ LP-1 CLOSED ○ LP-2 CLOSED ○ LP-3 CLOSED ○ LP-4 CLOSED 	VERIFIES valve handle perpendicular to valve body for: <ul style="list-style-type: none"> ○ LP-1 _____ ○ LP-2 _____ ○ LP-3 _____ ○ LP-4 _____ 	_____	_____	_____
Cue: The component you identified is in the condition you described.				
Note: Count cylinders from left to right to find cylinders 7 through 13 (DOP 4650-01 Figure 1)				
*4. OPEN all Main Bank Cylinder shutoff valves (Cylinders 7 through 13).	Turns handwheels of cylinders 7 through 13 counter clockwise.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Cue: The component you identified is in the condition you described.				
Note: Have examinee read actual pressure.				
5. Check Main Bank pressure.	Reads pressure on PRV 3, CR EMER AIR BREATHING CYL OUTLET PRV. (right side gauge)	_____	_____	_____
Cue: If actual right side gauge indicated pressure is less than 300 psig, then inform examinee Cylinder pressure indicates 2000 psig.				
*6. Pressurize the supply manifold from the Main Bank by opening LP-3, CR EMERG AIR BREATHING CYL SV.	OPENS valve LP-3 by turning valve handle counter clockwise ¼ turn so handle is in-line with valve body.	_____	_____	_____
Cue: The component you identified is in the condition you described.				
Note: Have examinee read actual pressure.				
7. Verify pressure regulator PRV-3 is maintaining manifold pressure >65 psig and <80 psig.	VERIFIES manifold pressure between 65 and 80 psig as read on CR EMER AIR BREATHING CYL OUTLET PRV. (left side gauge)	_____	_____	_____
Cue: If actual left side gauge pressure is NOT between 65 and 80 psig, inform the examinee, Manifold pressure indicates 70 psig.				

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
8. Notify the U3 Supervisor that Control Room Emergency Breathing Air System Main Bank is in operation	Using a radio or the phone in the battery room, notifies the U3 Supervisor that Control Room Emergency Breathing Air System Main Bank is in operation	_____	_____	_____
Cue: Acknowledge the report.				
	END			

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☒

JPM Title: Valve In Control Room Emergency Breathing Air Supply

JPM Number: P-N-j

Revision Number:00

Task Number and Title: 279N001 Valve In Control Room Emergency Breathing Air Supply

K/A Number and Importance: 290003 A 2.02 3.1/3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: ☐ Simulator ☒ Plant ☐ Control Room

Testing Method: ☒ Simulate
☐ Perform

Alternate Path: ☐ Yes ☒ No

SRO Only: ☐ Yes ☒ No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 16 minutes Actual Time Used: _____ minutes

References: DOP 4650-01, R09, Control Room Emergency Air System

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____
(Print)

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. Control Room personnel have noticed a pungent odor in the Control Room .
2. The Control Room Ventilation is NOT operating properly and the smell is getting worse.
3. The Unit 3 Unit Supervisor has evacuated ALL non-essential personnel from the Control Room and has directed all the NSOs to don SCBAs until the Control Room Emergency Air system can be valved in.
4. The Control Room Emergency Air system is currently in the STANDBY condition IAW DOP

INITIATING CUE

1. The Unit 3 Unit Supervisor has directed you to place the Control Room Emergency Breathing Air System Main Bank in operation in accordance with DOP 4650-01.

Job Performance Measure (JPM)

Job Performance Measure (JPM)

Exelon Nuclear

Job Performance Measure

Perform Local Manual Start of the Unit 3 Diesel Generator

JPM Number: P-N-k

Revision Number: 00

Date: 10/05

Developed By: _____
Instructor

Date

Approved By: _____
Training Department

Date

Job Performance Measure (JPM)

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Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

- _____ 23. Task description and number, JPM description and number are identified.
- _____ 24. Knowledge and Abilities (K/A) references are included.
- _____ 25. Performance location specified. (in-plant, control room, or simulator)
- _____ 26. Initial setup conditions are identified.
- _____ 27. Initiating and terminating cues are properly identified.
- _____ 28. Task standards identified and verified by SME review.
- _____ 29. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 30. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 31. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 32. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 33. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor

Date

SME/Instructor

Date

SME/Instructor

Date

Job Performance Measure (JPM)

Revision Record (Summary)

From Bank: P3-6600-03

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

N/A

DOCUMENT PREPARATION

Have an unmarked copy of DSSP 0200-T2 ready to handout to the examinee.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A fire in the 903-8 panel has caused the feeder breakers from TR-32 and TR-31 to Bus 34 to open.
2. The fire also prevented the Automatic Start of the Unit 3 Diesel Generator and the 903-8 Panel controls to start the Unit 3 Diesel Generator are inoperable.
3. The fire was extinguished before the Control Room was required to be evacuated.

INITIATING CUE

The Unit Supervisor has directed you to IMMEDIATELY manually start the Unit 3 Diesel Generator per DSSP 200-T2.

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.

If a CRITICAL step has more than one part, then:

- (filled bullet) indicates a CRITICAL part of the step.
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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.

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Note: Provide the examinee with the included copy of DSSP 200-T2. A DS key is required to enter the U3 EDG room. If necessary, one can be checked out at the WEC.				
Note: Above the Local Control Switch in the upper cubicle the Green light is ON and the Red light is OFF. In the Lower cubicle the Green OPEN flag is visible.				
1. Verify applicable diesel output breaker is Open. <ul style="list-style-type: none"> Bus 34-1 Cubical 7, 3-6601 STANDBY DIESEL GEN 3 FEED. 	For the diesel output breaker verifies the following... <u>Upper Cubicle</u> Lights above local control switch <ul style="list-style-type: none"> Green - On Red – Off <u>Lower Cubicle</u> Green Open flag	_____	_____	_____
Cue: The indication you identified is in the condition you see.				
2. Proceed to the Unit 3 Diesel Generator.	LOCATES the Unit 3 Diesel Generator.	_____	_____	_____
3. Verify Engine Start SELECTOR SW in REMOTE AUTO START.	At the Unit 3 Diesel Generator local Control panel verifies Engine Start selector switch in REMOTE AUTO START.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Cue: Engine Start SELECTOR Switch is in REMOTE AUTO START.				
4. Verify governor speed droop is set to 5 at the engine governor.	At the engine governor verifies governor speed droop is set at 5.	_____	_____	_____
Cue: Speed droop is set at 5.				
5. Proceed to Bus 34-1.	Proceeds to Bus 34-1.	_____	_____	_____
6. At Bus 34-1 Cubical 7, 3-6601 STANDBY DIESEL GEN 3 FEED, open the top section.	At Bus 34-1, locates Cubical 7, 3-6601 STANDBY DIESEL GEN 3 FEED, AND opens the top section.	_____	_____	_____
7. Using an insulated item OR glove, momentarily depress and hold ASR (AUTO-Start Relay) at Bus 34-1.	<ul style="list-style-type: none"> ○ Locates U3 EDG ASR. ○ Using an insulated item OR glove, momentarily depresses and holds the ASR. 	_____	_____	_____
Cue: There was NO response by the diesel generator				
BEGIN ALTERNATE PATH				
8. Proceed to the Unit 3 Diesel Generator.	LOCATES the Unit 3 Diesel Generator.	_____	_____	_____
*9. Press ENGINE START button	At the Unit 3 Diesel Generator Local Control Panel presses the ENGINE START pushbutton	_____	_____	_____
Cue: The diesel has started.				
END ALTERNATE PATH				
10. Verifies DG COOLING WATER PUMP Unit 3 starts.	At Unit 3 diesel Generator Auxiliary Control panel verifies the DG COOLING WATER PUMP Unit 3 pump On light is illuminated.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
11. Check DG voltage and frequency at the EDG metering and relay panel 2253-10.	At the Unit 3 D/G Relaying and Metering Cabinet 2253-10 verifies <ul style="list-style-type: none"> ○ Frequency = 59.5 to 60.5 Hz ○ Voltage ~ 4150 volts 	_____	_____	_____
Cue: The meters indicate: Frequency = 60.2 Hz Voltage = 4150 volts				
12. Inform the Unit Supervisor the EDG is ready for loading.	Reports by radio or phone to the Unit Supervisor that the EDG is ready for loading.	_____	_____	_____
Cue: I understand the Unit 3 EDG is ready for loading. Your task is complete.				
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☒

JPM Title: Perform Local Manual Start of the Unit 3 Diesel Generator

JPM Number: P-N-k Revision Number: 00

Task Number and Title: 295L154, Perform Local Manual Start of the Unit 3 Diesel Generator

K/A Number and Importance: 264000A4.04 3.7/3.7

Suggested Testing Environment: Plant

Actual Testing Environment: ☐ Simulator ☒ Plant ☐ Control Room

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

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 26 minutes Actual Time Used: _____ minutes

References: DSSP 0200-T2, R06, Diesel Generator 2(3) Local Manual Start

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____
(Print)

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A fire in the 903-8 panel has caused the feeder breakers from TR-32 and TR-31 to Bus 34 to open.
2. The fire also prevented the Automatic Start of the Unit 3 Diesel Generator and the 903-8 Panel controls to start the Unit 3 Diesel Generator are inoperable.
3. The fire was extinguished before the Control Room was required to be evacuated

INITIATING CUE

The Unit Supervisor has directed you to IMMEDIATELY manually start the Unit 3 Diesel Generator per DSSP 200-T2.