

**Exelon Nuclear**

**Job Performance Measure**

SBLC - INJECTION WITH PUMP AND RWCU FAILURES

JPM Number: S-N-a

Revision Number: 01

Date: 02/12

**EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 00** Bank JPM.

**Revision 01** Minor Revisions for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to IC 12.

NOTE: It is acceptable 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. Insert following Malfunctions and/or Remotes:

- IMF CIRWCUAP (2-1201-1 valve failure to close – and allows manual closure).
- IMF CIRWCUBP (2-1201-2 valve failure to close – and allows manual closure).
- IMF SCRLFVAD 0.0 (Inserts A SBLC Pump relief valve setpoint drift to 0.0 psig, so whichever pump is started first will not develop flow)
- IMF SCRLFVBD 0.0 (Inserts B SBLC Pump relief valve setpoint drift to 0.0 psig, so whichever pump is started first will not develop flow)
- IOR SCD3013 OFF (Overrides SBLC SYS1&2 and SYS2&1 positions OFF)

3. Setup the following Triggers:

- TRGSET 1 "SCD301\_DRW(1)" (Trigger 1 Activates when SBLC control switch is placed to SYS1 position)
- TRG 1 "DMF SCRLFVBD" (Deletes 2B SBLC relief valve setpoint drift malfunction)
- TRGSET 2 "SCD301\_DRW(2)" (Trigger 2 Activates when SBLC control switch is placed to SYS2 position)
- TRG 2 "DMF SCRLFVAD" (Deletes 2A SBLC relief valve setpoint drift malfunction)

### **DOCUMENT PREPARATION**

DOP 1100-02 hardcard.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. A transient has occurred, resulting in an ATWS.
3. The Unit Supervisor has authorized the use of Hard Cards.

### **INITIATING CUE**

1. The Unit Supervisor has ordered you to inject SBLC, for an ATWS, per the Hard Card.
2. Inform the Unit Supervisor when the task is 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.
- 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 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	
<b><u>NOTE:</u></b>					
Examinee should locate the hard card, then provide the included copy.					
1.	Place the SBLC INJECTION CONTROL keylock switch to the SYS 1 <u>OR</u> SYS 2 position.	Turns the SBLC INJECTION CONTROL keylock switch to <u>either</u> the intermediate right <u>OR</u> intermediate left position.	_____	_____	_____
2.	Verifies applicable SQUIB pilot light NOT lit.	SQUIB "A" or "B" light off.	_____	_____	_____
<b><u>NOTE:</u></b>					
The selected pump starts but does not develop flow (relief valve failure in the JPM setup).					
3.	Verifies applicable PUMP pilot light lit.	PUMP light on.	_____	_____	_____
<b>BEGIN ALTERNATE PATH</b>					
4.	Verifies FLOW pilot light lit.	FLOW light off (SBLC is NOT injecting).	_____	_____	_____
5.	SBLC SQUIB VLV CKT FAILURE annunciator alarms (902-5 H-6).	Annunciator 902-5 H-6 illuminated.	_____	_____	_____
*	6. Places SBLC INJECTION CONTROL keylock switch to opposite position taken to in step 1.	Turns the SBLC INJECTION CONTROL keylock switch to the opposite direction turned in step 1.	_____	_____	_____
7.	Verifies opposite PUMP pilot light lit.	Opposite PUMP light on.	_____	_____	_____
<b><u>NOTE:</u></b>					
Flow light will illuminate when SBLC INJECTION CONTROL keylock switch is re-positioned.					

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	8. Verifies RWCU valve 2-1201-1 closed.	Examinee recognizes that valve 2-1201-1 valve did <b>NOT</b> close.	_____	_____	_____
*	9. Closes RWCU valve 2-1201-1.	Takes manual action for a failed automatic action and closes 2-1201-1 valve, by placing c/s in the CLOSED position.	_____	_____	_____
	10. Verifies RWCU valve 2-1201-1A closed.	GREEN light illuminated.	_____	_____	_____
	11. Verifies RWCU valve 2-1201-2 closed.	Examinee recognizes that valve 2-1201-2 valve did <b>NOT</b> close.	_____	_____	_____
*	12. Closes RWCU valve 2-1201-2.	Takes manual action for a failed automatic action and closes 2-1201-2 valve, by placing c/s in the CLOSED position.	_____	_____	_____
	13. Verifies RWCU valve 2-1201-3 closed.	GREEN light illuminated.	_____	_____	_____
	14. Verifies RWCU valve 2-1201-7 closed.	RED light illuminated.	_____	_____	_____
	15. Informs Unit Supervisor task is complete.	Reports SBLC is injecting but the first pump did not inject and valves 2-1201-1 and 2-1201-2 failed to close automatically.	_____	_____	_____
<b><u>CUE:</u></b>					
Acknowledge report of task completion.					
END					

**JPM Stop Time:** \_\_\_\_\_

## Job Performance Measure (JPM)

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: SBLC - INJECTION WITH PUMP AND RWCU FAILURES

Revision Number: 01

JPM Number: S-N-a

Task Number and Title: 211L002, Injection of Standby Liquid Control System

K/A Number and Importance: 211000.A4.08 4.2 / 4.2

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**Testing Method:**  Simulate  Perform  
Alternate Path:  Yes  No  
SRO Only:  Yes  No

**Time Critical:**  Yes  No

**Estimated Time to Complete:** 9 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DOP 1100-02, rev 18

### **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. You are the Unit 2 Aux NSO.
2. A transient has occurred, resulting in an ATWS.
3. The Unit Supervisor has authorized the use of Hard Cards.

### **INITIATING CUE**

1. The Unit Supervisor has ordered you to inject SBLC, for an ATWS, per the Hard Card.
2. Inform the Unit Supervisor when the task is complete.



**Exelon Nuclear**

**Job Performance Measure**

FW - ALTERNATE WATER INJECTION USING STANDBY COOLANT

JPM Number: S-N-b

Revision Number: 05

Date: 02/12

# **EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 04** Bank JPM.

**Revision 05** Revised for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to a shutdown IC.

NOTE: It is acceptable 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. Setup following Malfunctions and/or Remotes:

- S M RDPPATRP RDPPBTRP H31 H32 H33 H34 HPTBTRIP and place the mode switch to Shutdown.
- S R S19 (Condensate Demin Bypass) when required during procedure.
- R R S41 through S47 (Condensate Demin Isolations) when required during procedure.

### **DOCUMENT PREPARATION**

1. Clean copy of DEOP 0500-03.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. A Reactor scram has occurred due to a large break in the containment.
3. RPV water level currently CANNOT be kept > -143".
4. ECCS systems are unable to raise reactor water level.
5. Main condenser water level is low.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to align Standby Coolant supply to the Main Condenser per DEOP 500-03, step.G.2.
2. Inform the Unit Supervisor when the task is 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.
- 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 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
<b><u>NOTE:</u></b>				
Provide the examinee with the supplied copy of DEOP 0500-03.				
1.	Directs EO to open the Service Unit Bypass Valve AND isolate the Condensate Demins.	Condensate Demins BYPASSED and ISOLATED.	_____	_____
<b><u>NOTE:</u></b>				
Direct the Sim Op to open the Service Unit Bypass Valve AND isolate the Condensate Demins.				
<b><u>CUE:</u></b>				
Inform examinee that Service Unit Bypass Valve is open AND the Condensate Demins are isolated.				
*	2. Open MO 2-3403 LP HTR BYPASS.	Places control switch to OPEN. Verifies: RED light illuminated and GREEN light extinguished.	_____	_____
*	3. Open MO 2-3203 HP HTR BYPASS.	Places control switch to OPEN. Verifies: RED light illuminated and GREEN light extinguished.	_____	_____
	4. Close LOW PRESS HEATER FW ISOLATIONS: - Line 1 Isolation valves • MO 2-3401A • MO 2-3402A  - Line 2 Isolation Valves • MO 2-3401B • MO 2-3402B  - Line 3 Isolation Valves • MO 2-3401C • MO 2-3402C	Places control switch to CLOSE. Verifies: RED light illuminated and GREEN light extinguished.  Places control switch to CLOSE. Verifies: RED light illuminated and GREEN light extinguished.  Places control switch to CLOSE. Verifies: RED light illuminated and GREEN light extinguished.	_____	_____

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	5. Close HIGH PRESS HEATER FW ISOLATIONS: - 2D1 Isolation Valves • MO 2-3202A • MO 2-3204A  - 2D2 Isolation Valves • MO 2-3202B • MO 2-3204B  - 2D3 Isolation Valves • MO 2-3202C • MO 2-3204C	Places control switch to CLOSE. Verifies: RED light illuminated and GREEN light extinguished.  Places control switch to CLOSE. Verifies: RED light illuminated and GREEN light extinguished.  Places control switch to CLOSE. Verifies: RED light illuminated and GREEN light extinguished.	_____  _____  _____	_____  _____  _____	_____  _____  _____
*	6. Open MO 2-3901 SW TO CONDR.	Places control switch to OPEN. Verifies: RED light illuminated and GREEN light extinguished.	_____  _____	_____  _____	_____  _____
*	7. Open MO 2-3902 SW TO CONDR.	Places control switch to OPEN. Verifies: RED light illuminated and GREEN light extinguished.	_____  _____	_____  _____	_____  _____
<b><u>NOTE:</u></b> A change in condenser level will not be observable immediately. JPM can be considered complete when MO 2-3901 and MO 2-3902 valves are open.					
<b><u>CUE:</u></b> Do NOT allow candidate to start additional Service Water pumps. Inform candidate that another Operator will finish this task.					
	8. Reports to the Unit 2 Supervisor that the task is complete.	Unit 2 Supervisor notified.	_____  _____	_____  _____	_____  _____
<b><u>CUE:</u></b> Acknowledge report of task completion.					
END					

**JPM Stop Time:** \_\_\_\_\_

**Job Performance Measure (JPM)**

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: FW - ALTERNATE WATER INJECTION USING STANDBY COOLANT

Revision Number: 05

JPM Number: S-N-b

Task Number and Title: 295L084, Inject into the RPV with alternate water systems.

K/A Number and Importance: 295031.A1.08 3.8 / 3.9

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**Testing Method:**  Simulate  Perform  
Alternate Path:  Yes  No  
SRO Only:  Yes  No

**Time Critical:**  Yes  No

**Estimated Time to Complete:** 10 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DEOP 0500-03, rev 20

**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. You are the Unit 2 Aux NSO.
2. A Reactor scram has occurred due to a large break in the containment.
3. RPV water level currently CANNOT be kept > -143".
4. ECCS systems are unable to raise reactor water level.
5. Main condenser water level is low.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to align Standby Coolant supply to the Main Condenser per DEOP 500-03, step.G.2.
2. Inform the Unit Supervisor when the task is complete.



**Exelon Nuclear**

**Job Performance Measure**

MAIN STEAM - UNISOLATE ONE LINE USING ALTERNATE METHOD

JPM Number: S-N-c

Revision Number: 01

Date: 02/12

**EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 00** Bank JPM.

**Revision 01** Revised for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to IC 16 (<50% power).

NOTE: It is acceptable 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. Power needs to be low enough so that isolating one main steam line will NOT cause a Group 1 high flow isolation.

3. Close 'C' Main Steam Line Isolation Valves:

- AO-2-203-1C
- AO-2-203-2C

4. Verify Main Steam Line drain valves closed:

- MO 2-220-1, 2, 3 & 4
- MO 2-220-90A, B, C & D

5. Place O.O.S. cards on Main Steam Line drain valves:

- 2-220-1 MSL DRN VLV
- 2-220-2 MSL DRN VLV

6. Insert following Malfunctions and/or Remotes:

- None.

7. Setup the following Triggers:

- None.

### **DOCUMENT PREPARATION**

1. Clean copy of DOP 0250-02.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. Following maintenance work on the AO 2-203-2C MSIV, the “C” Main Steam Line is ready to be unisolated.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to unisolate the “C” Main Steam Line using the ALTERNATE method in accordance with DOP 0250-02, step G.6.
2. Inform the Unit Supervisor when the task is 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.
- 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 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.

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The timeclock starts when the candidate acknowledges the initiating cue.  
.....

## Job Performance Measure (JPM)

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

	<b>PERFORMANCE CHECKLIST</b>	<b>STANDARDS</b>	<b>SAT</b>	<b>UNSAT</b>	<b>Comment</b>
<b><u>NOTE:</u></b>					
Provide the Examinee with the supplied copy of DOP 0250-02.					
	1. Contacts Main Steam system engineer for concurrence to unisolated the 2C Main Steam Line using the alternate method.	Indicates he/she would call the system engineer or ask Unit Supervisor.	_____	_____	_____
<b><u>CUE:</u></b>					
Inform the Examinee that the Main Steam system engineer has provided concurrence to unisolated the 2C Main Steam Line using the alternate method.					
*	2. Open MO 2-220-3 MSL DRN VLV.	RED light illuminated.	_____	_____	_____
*	3. Open MO 2-220-90C MSL DRN VLV.	RED light illuminated.	_____	_____	_____
	4. Wait a minimum of 5 minutes.	5 minutes elapsed OR verbal cue received.	_____	_____	_____
<b><u>CUE:</u></b>					
Inform examinee that 5 minutes has elapsed.					
*	5. Open AO 2-203-2C MSIV.	GREEN light illuminated.	_____	_____	_____
	6. Wait a minimum of 30 minutes.	30 minutes elapsed OR verbal cue received.	_____	_____	_____
<b><u>CUE:</u></b>					
Inform examinee that 30 minutes has elapsed.					
*	7. Open AO 2-203-1C MSIV.	GREEN light illuminated.	_____	_____	_____

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	8. Close MO 2-220-90C MSL DRN VLV.	GREEN light illuminated.	_____	_____	_____
	9. Close MO 2-220-3 MSL DRN VLV.	GREEN light illuminated.	_____	_____	_____
	10. Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	_____	_____	_____
<b><u>CUE:</u></b> Acknowledge report of task completion.					
END					

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

## **Job Performance Measure (JPM)**

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: MAIN STEAM – UNISOLATE ONE LINE USING ALTERNATE METHOD

Revision Number: 01

JPM Number: S-N-c

Task Number and Title: 239L004 Unisolating, One Main Steam Line

K/A Number and Importance: 239001.A4.01 4.2 / 4.0

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**Testing Method:**  Simulate  Perform  
Alternate Path:  Yes  No  
SRO Only:  Yes  No

**Time Critical:**  Yes  No

**Estimated Time to Complete:** 14 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DOP 0250-02, rev 12

### **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. You are the Unit 2 Aux NSO.
2. Following maintenance work on the AO 2-203-2C MSIV, the "C" Main Steam Line is ready to be unisolated.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to unisolate the "C" Main Steam Line using the ALTERNATE method in accordance with DOP 0250-02, step G.6.
2. Inform the Unit Supervisor when the task is complete.



**Exelon Nuclear**

**Job Performance Measure**

ISO COND - SHUTDOWN THE ISOLATION CONDENSER

JPM Number: S-N-d

Revision Number: 04

Date: 02/12

# **EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 03** Bank JPM.

**Revision 04** Revised for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to any IC.

NOTE: It is acceptable 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 Isolation Condenser is in its normal standby lineup.

3. Insert following Malfunctions and/or Remotes:

- imf icspdft 0.0 (drifts the Iso Cond Initiation setpoint to 0 psig so it initiates after a time delay)
- ior iclop74 1 (simulates 2-4399-74 CLEAN DEMIN VLV OPEN – open light on)
- ior iclcl74 0 (simulates 2-4399-74 CLEAN DEMIN VLV OPEN – closed light off)

4. After the Isolation Condenser initiates, delete the drift malfunction:

- dmf icspdft

5. Setup the following triggers:

- trgset 3 "icdcl74\_drw" (activates trigger 3 when 2-4399-74 control switch is taken to close)
- trg 3 "dor iclcl74" (deletes the 2-4399-74 closed light override)
- trg 3 "dor iclop74" (5) (deletes the 2-4399-74 open light override after 5 seconds)

6. Start the 2/3A Iso Cond MU Pump.

7. Acknowledge / Reset alarms.

### **DOCUMENT PREPARATION**

1. Mark up a copy of DOP 1300-02.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. A pressure transient has occurred which resulted in the auto initiation of the Isolation Condenser.
3. The 2/3A Isolation Condenser MU Pump is being used to maintain Isolation Condenser level.
4. No additional Clean Demin pump(s) were started, due to initiation of the Isolation Condenser.
5. The transient is over and the Isolation Condenser operation is NO longer required.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to shutdown the Isolation Condenser per DOP 1300-02 Step G.13.
2. Inform the Unit Supervisor when the task is 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.

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- 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 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.

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The timeclock starts when the candidate acknowledges the initiating cue.  
.....

## Job Performance Measure (JPM)

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

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<b><u>NOTE:</u></b>				
Provide the examinee with the supplied copy of DOP 1300-02.				
1.	Monitor RPV pressure, level, and reactor power to verify IC operation is NOT required for RPV pressure control.	Verifies IC operation is NOT required for RPV pressure control.	_____	_____
2.	Determines RPV pressure.	Determines RPV pressure <1070 psig.	_____	_____
3.	Identify that 902-4 A-15, ISOL CONDR A/B INITIATION, is in alarm.	Tile illuminated.	_____	_____
*	4. Reset the IC initiation signal at Panel 902-5 as follows: <ul style="list-style-type: none"> <li>• Rotate ISOL CONDR RESET switch to CH A</li> <li>• Rotate ISOL CONDR RESET switch to CH B</li> </ul>	Rotates ISOL CONDR RESET switch to: <ul style="list-style-type: none"> <li>• CH A and releases switch</li> <li>• CH B and releases switch</li> </ul>	_____	_____
5.	Close/verify closed MO 2-1301-3, RX INLET ISOL, by holding control switch to CLOSE.	Verifies MO 2-1301-3, RX INLET ISOL closed, GREEN light illuminated, RED light extinguished.	_____	_____
<b><u>NOTE:</u></b>				
Resetting the IC isolation automatically causes MO 2-1301-3 to close.				
6.	Rotate RX INLET ISOL VLV HAND/RESET switch to RESET.	Rotates RX INLET ISOL VLV HAND/RESET switch to RESET position.	_____	_____
7.	Verify that MO 2-1301-10 COND FILL INLET valve is closed.	Verifies MO 2-1301-10 COND FILL INLET valve is closed. GREEN light illuminated, RED light extinguished.	_____	_____

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	8. Verify that MO 2-4102 SERV WTR VLV is closed.	Verifies MO 2-4102 SERV WTR VLV is closed, GREEN light illuminated, RED light extinguished.	_____	_____	_____
*	9. Verify the MO 2-4399-74 CLEAN DEMIN VLV is closed.	Places the control switch for MO 2-4399-74 CLEAN DEMIN VLV to CLOSE, GREEN light illuminated, RED light extinguished	_____	_____	_____
	10. Stop the 2/3A ISOL CNDR M-U PP.	Stops the 2/3A ISOL CNDR M-U PP by taking the control switch to stop and releasing back to mid position.	_____	_____	_____
<b><u>CUE:</u></b>					
If candidate asks for the DIESEL FUEL DAY TANK level, inform them the tank level is 7/8 full. If candidate asks to place Iso Cond in standby, inform them NOT to place the Iso Cond in standby.					
	11. Reports to the Unit 2 Supervisor that the task is complete.	Unit 2 Supervisor notified.	_____	_____	_____
<b><u>CUE:</u></b>					
Acknowledge report of task completion.					
END					

**JPM Stop Time:** \_\_\_\_\_

## **Job Performance Measure (JPM)**

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: ISO COND - SHUTDOWN THE ISOLATION CONDENSER

Revision Number: 04

JPM Number: S-N-d

Task Number and Title: 207L002, Operate the Isolation Condenser following an automatic initiation.

K/A Number and Importance: 207000.A4.05 3.5 / 3.7

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**Testing Method:**  Simulate  Perform  
Alternate Path:  Yes  No  
SRO Only:  Yes  No

**Time Critical:**  Yes  No

**Estimated Time to Complete:** 10 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DOP 1300-02, rev 24

### **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. You are the Unit 2 Aux NSO.
2. A pressure transient has occurred which resulted in the auto initiation of the Isolation Condenser.
3. The 2/3A Isolation Condenser MU Pump is being used to maintain Isolation Condenser level.
4. No additional Clean Demin pump(s) were started, due to initiation of the Isolation Condenser.
5. The transient is over and the Isolation Condenser operation is NO longer required.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to shutdown the Isolation Condenser per DOP 1300-02 Step G.13.
2. Inform the Unit Supervisor when the task is complete.



**Exelon Nuclear**

**Job Performance Measure**

TORUS - LOWER WATER LEVEL

JPM Number: S-N-e

Revision Number: 14

Date: 02/12

# **EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 13** Bank JPM.

**Revision 14** Revised for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to a full power IC.

NOTE: It is acceptable 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. Establish Torus Cooling in one loop with 1 LPCI pump and 1 CCSW pump running.
3. Insert following Malfunctions and/or Remotes:
  - IRF LPVLV501 Open - These remotes need to be toggled prior to start of JPM.

### **DOCUMENT PREPARATION**

1. Mark up a copy of DOP 1600-02.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. U2 Torus water level is currently at +1" as indicated on LI 2-1602-3 on the 902-3 panel.
3. U2 Torus level has been verified locally per DOS 1600-02.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to begin lowering the U2 Torus level by pumping it to the U2 Main Condenser in accordance with DOP 1600-02 steps G.1.g through G.1.j
2. Inform the Unit Supervisor when the task is 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.
- 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 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	
<p><b><u>NOTE:</u></b></p> <p>Provide the examinee with the supplied copy of DOP 1600-02.</p>					
1.	Verify that manual position control potentiometers for the following condensate makeup and reject valves are at zero: <ul style="list-style-type: none"> <li>• LCV 2-3301, NORMAL M-U VLV</li> <li>• LCV 2-3302, EMERG M-U VLV</li> <li>• LCV 2-3303, NORMAL REJECT VLV</li> <li>• LCV 2-3304, EMERG REJECT VLV</li> </ul>	Potentiometers are at zero.	_____	_____	_____
*	2. Place M-U/REJECT CONT switch in the MANUAL position.	Switch in MANUAL position.	_____	_____	_____
*	3. Open AO 2-1599-61, TORUS/ HOTWELL ISOL VLV.	Places control switch to OPEN: RED light illuminated, GREEN light extinguished.	_____	_____	_____
	4. Open AO 2-1599-62, TORUS/ HOTWELL ISOL VLV.	Places control switch to OPEN: RED light illuminated, GREEN light extinguished.	_____	_____	_____
*	5. Throttle open LCV 2-3301, NORMAL M-U VLV, until desired flow is achieved.	Throttles open LCV 2-3301 to achieve 100 to 300 gpm as read on FR 2-3340-51, Condensate Makeup.	_____	_____	_____
	6. Closely monitor Torus and Hotwell levels.	Monitors Torus and Hotwell levels for appropriate level changes.	_____	_____	_____

### Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
7.	Reports to the Unit 2 Supervisor that the task is complete.	Unit 2 Supervisor notified.	_____	_____	_____
<b><u>CUE:</u></b> Acknowledge report of task completion.					
		END			

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

## Job Performance Measure (JPM)

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: TORUS - LOWER WATER LEVEL

Revision Number: 14

JPM Number: S-N-e

Task Number and Title: 223L003, Lowering Torus Water Level During Normal Plant Operations

K/A Number and Importance: 219000.A4.02 3.7 / 3.5

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**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 1600-02, rev 18

### **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. You are the Unit 2 Aux NSO.
2. U2 Torus water level is currently at +1" as indicated on LI 2-1602-3 on the 902-3 panel.
3. U2 Torus level has been verified locally per DOS 1600-02.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to begin lowering the U2 Torus level by pumping it to the U2 Main Condenser in accordance with DOP 1600-02 steps G.1.g through G.1.j
2. Inform the Unit Supervisor when the task is complete.



**Exelon Nuclear**

**Job Performance Measure**

EDG - PERFORM SURVEILLANCE TESTING, WITH SCRAM

JPM Number: S-N-f

Revision Number: 04

Date: 02/12

# **EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 03** Bank JPM.

**Revision 04** Revised for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to any IC 12.

NOTE: It is acceptable 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. U2 Diesel Generator should be started and loaded to Bus 24-1, per DOS 6600-01 up to and including step I.12. (inclusive).
3. Insert following Malfunctions and/or Remotes:
  - IRF T02 = TRUE (Set Diesel Generator 2 droop to 55).
4. Acknowledge all applicable alarms (locally and on the 902-8 panel).
5. Setup the following remote functions set to triggers, for when directed by examinee:
  - IRF T02 = FALSE (When directed by examinee to set droop to 5).
  - IRF T20 = ACKNOWLEDGE (A few seconds after the droop has been set to 55 acknowledges U2 D/G Local Panel Trouble Alarms).

### **DOCUMENT PREPARATION**

1. Marked up copy of DOS 6600-01, up to and including step I.14.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. DOS 6600-01 is in progress on the Unit 2 Diesel Generator, which is currently paralleled and loaded to Bus 24-1.
3. The surveillance run will be completed in approximately 5 minutes.
4. The operator performing the surveillance in the control room had to leave for an urgent family emergency.
5. An EO has been briefed and is in the field with the appropriate portions of DOS 6600-01.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to review Sections F. and G. of DOS 6600-01 and then complete the procedure, starting at step I.15. to secure the Unit 2 Diesel Generator.
2. Inform the Unit Supervisor when the task is 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.
- 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 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
<b><u>NOTE:</u></b>					
Provide the Examinee with the supplied copy of DOS 6600-01.					
1.	Verifies Chemistry Department has completed all required samples per CY-DR-120-413.	Asks if Chemistry Department has completed all required samples per CY-DR-120-413.	_____	_____	_____
<b><u>CUE:</u></b>					
All required samples have been completed.					
2.	Verifies the fuel oil transfer pump has recharged the day tank at least once during the engine run.	Asks if the fuel oil transfer pump has recharged the day tank at least once during the engine run.	_____	_____	_____
<b><u>CUE:</u></b>					
The day tank level is in the normal band and has been recharged during the engine run.					
3.	Data Sheet 1A complete.	Asks if Data Sheet complete.	_____	_____	_____
<b><u>CUE:</u></b>					
Data sheet 1A is complete.					
4.	Reduce U2 DG load	Places the U2 DG Governor c/s to DECR to reduce load until less than 100 kW.	_____	_____	_____
<b>BEGIN ALTERNATE PATH</b>					
<b><u>CUE:</u></b>					
As soon as the examinee begins to reduce load, announce: "UNIT 2 HAS JUST SCRAMMED".					

## Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
	5. Proceed to Attachment "A".	Recognizes need to perform Attachment "A".	_____	_____	_____
*	6. Open circuit breaker U2 D/G TO BUS 24-1 ACB.	Green light illuminated.	_____	_____	_____
	7. Records time of Circuit Breaker opening.	Records time of Circuit Breaker opening on attachment A.	_____	_____	_____
*	8. Set droop setting to 5.	Directs EO to set 2 DG Droop to 5.	_____	_____	_____
<b><u>NOTE:</u></b>					
If requested to set droop to 5, signal Sim Op to insert remote function (T02 = FALSE)					
If requested to reset local annunciators, signal Sim Op to insert remote function (T20 = ACKNOWLEDGE)					
	9. Reset annunciator D/G 2 C-1 Droop not set on 5.	Directs EO to reset local annunciator C-1 on local panel A.	_____	_____	_____
<b><u>CUE:</u></b>					
The droop set at 5. Received local alarm and have acknowledged it.					
	10. Reset annunciator 902-8 A-7 U2 DIESEL GEN TROUBLE alarm.	Annunciator 902-8 A-7 alarm tile extinguished.	_____	_____	_____
*	11. Adjust D/G frequency to 60 Hz.	Adjusts frequency to 60 Hz with Governor Control switch.	_____	_____	_____
*	12. Adjust the D/G voltage to 4160.	Adjusts voltage to 4160 volts with VOLTAGE REGULATOR control.	_____	_____	_____

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	13. Verifies the applicable Fuel Oil Transfer Pump circuit breaker is closed.	Directs EO to verify the Unit 2 Diesel Oil Transfer Pump circuit breaker, at MCC 29-2 cubicle B-2, is closed.	_____	_____	_____
<b><u>CUE:</u></b> At MCC 29-2 cubicle B-2, the 2-5203 DIESEL OIL TRANSFER PUMP 2 circuit breaker is closed.					
	14. Informs Unit Supervisor that the D/G is running following the scram and the task is complete.	Examinee notifies the Unit Supervisor.	_____	_____	_____
<b><u>CUE:</u></b> Acknowledge report of task completion.					
		END			

**JPM Stop Time:** \_\_\_\_\_

## **Job Performance Measure (JPM)**

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: EDG – PERFORM SURVEILLANCE TESTING, WITH SCRAM

Revision Number: 04

JPM Number: S-N-f

Task Number and Title: 264L009 Perform DG Surveillance Testing

K/A Number and Importance: 264000.A4.05 3.6 / 3.7

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**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:** DOS 6600-01, rev 119

### **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. You are the Unit 2 Aux NSO.
2. DOS 6600-01 is in progress on the Unit 2 Diesel Generator, which is currently paralleled and loaded to Bus 24-1.
3. The surveillance run will be completed in approximately 5 minutes.
4. The operator performing the surveillance in the control room had to leave for an urgent family emergency.
5. An EO has been briefed and is in the field with the appropriate portions of DOS 6600-01.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to review Sections F. and G. of DOS 6600-01 and then complete the procedure, starting at step I.15. to secure the Unit 2 Diesel Generator.
2. Inform the Unit Supervisor when the task is complete.

**Exelon Nuclear**

**Job Performance Measure**

NI - IRM DETECTOR TEST, WITH FAILURE TO MEET ACCEPTANCE CRITERIA

JPM Number: S-N-g

Revision Number: 00

Date: 02/12

**EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 00** New JPM developed for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to any IC with Rx mode switch in REFUEL OR START & HOT STBY position.

NOTE: It is acceptable 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. Ensure the IRM detectors are at the Full-IN positions.
3. Place rod select power to on, and select any CRD.
4. Ensure annunciator 902-5 C-3, ROD OUT BLOCK, clear.
5. Ensure ROD OUT PERMIT light on at Panel 902-5 is illuminated.
6. Ensure IRM backpanel alarms are clear (DOWNSCALE may be alarmed) for **IRM 12**.
7. Insert following Malfunctions and/or Remotes:
  - ior rdl501w (2) off (Overrides the ROD OUT PERMIT light OFF)
  - trg 3 "dor rdl501w" (Deletes the ROD OUT PERMIT light override)
8. Setup the following Triggers:
  - trgset 2 "(.not. nilidin(2)) .and. (.not. rdl501w)" - (Trigger 2 Activates when IRM 12 IN light is OFF and the ROD OUT PERMIT light is OFF).
  - trgset 3 "nidirby(2)" - (Trigger 3 Activates when IRM 12 is BYPASSED)

### **DOCUMENT PREPARATION**

Marked up copy of DOS 0700-04, to include prerequisites signed off.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. IMD has requested IRM 12 be tested for the Rod Block Position Function.
3. The prerequisites for DOS 0700-04 have been verified and completed.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to perform IRM Detector Position Rod Block Functional Test, for IRM 12, per DOS 0700-04.
2. Inform the Unit Supervisor when the task is 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.
- 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 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
<b>NOTE:</b>					
Provide the Examinee with the supplied copy of DOS 0700-04.					
	1. Verify IRM 12 is NOT Bypassed.	IRM BYPASS joystick is in the neutral position.	_____	_____	_____
	2. Verify IRM 12 mode switch in OPERATE.	Selector switch is in the OPERATE position.	_____	_____	_____
*	3. Withdraw IRM 12 until annunciator 902-5 C-3, ROD OUT BLOCK, is received.	Depress IRM CH 12 pushbutton until OUT light illuminates.	_____	_____	_____
	4. Verify ROD OUT PERMIT light OFF at Panel 902-5.	Light is extinguished.	_____	_____	_____
	5. Verify IRM DETECTOR POSITION computer point, point ID C020 is in alarm.	Point in alarm.	_____	_____	_____
*	6. Insert IRM 12 to Full-IN position.	Depress IRM CH 12 pushbutton until IN light illuminates.	_____	_____	_____
	7. Verify Annunciator 902-5 C-3, ROD OUT BLOCK, clears.	Annunciator is extinguished.	_____	_____	_____
<b>BEGIN ALTERNATE PATH</b>					
	8. Verify ROD OUT PERMIT light ON at Panel 902-5.	Recognizes that the ROD OUT PERMIT light does <b>NOT</b> illuminate.	_____	_____	_____
	9. Notifies the Unit Supervisor that the ROD OUT PERMIT light did not come on when completing testing on IRM 12.	Notifies Unit Supervisor.	_____	_____	_____

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
*	10.	Bypasses IRM 12.	Places IRM BYPASS joystick in the IRM 12 position.	_____	_____
<b><u>NOTE:</u></b> ROD OUT PERMIT light will illuminate when IRM 12 is BYPASSED.					
	11.	May inform Unit Supervisor of Tech Spec implications for operable instruments.	May inform Unit Supervisor.	_____	_____
<b><u>CUE:</u></b> Inform candidate that another Operator will finish this task.					
	12.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	_____	_____
<b><u>CUE:</u></b> Acknowledge report of task completion.					
			END		

**JPM Stop Time:** \_\_\_\_\_

## Job Performance Measure (JPM)

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: NI - IRM DETECTOR TEST, WITH FAILURE TO MEET ACCEPTANCE CRITERIA

Revision Number: 00

JPM Number: S-N-g

Task Number and Title: 21504LP004, Perform IRM rod block functional test for at least one IRM channel.

K/A Number and Importance: 215003.A4.06 3.0 / 2.9

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**Testing Method:**  Simulate  Perform  
Alternate Path:  Yes  No  
SRO Only:  Yes  No

**Time Critical:**  Yes  No

**Estimated Time to Complete:** 10 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DOS 0700-04, rev 15

### **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. You are the Unit 2 Aux NSO.
2. IMD has requested IRMs 11 and 12 be tested for the Rod Block Position Function.
3. The prerequisites for DOS 0700-04 have been verified and completed.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to perform IRM Detector Position Rod Block Functional Test, for IRM 11 and IRM 12, per DOS 0700-04.
2. Inform the Unit Supervisor when the task is complete.

**Exelon Nuclear**

**Job Performance Measure**

SBGT - START SBGT WITH A FAILURE OF RX BLDG VENT TO ISOLATE

JPM Number: S-N-h

Revision Number: 03

Date: 02/12

# **EXAM MATERIAL**

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

Approved By: \_\_\_\_\_  
Facility Representative Date

## **Job Performance Measure (JPM)**

### **Revision Record (Summary)**

**Revision 02** Bank JPM.

**Revision 03** Revised for ILT 11-1 (2012-301) NRC Exam.

## **Job Performance Measure (JPM)**

### **SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to any IC with Rx Bldg Vent operating normally.

NOTE: It is acceptable 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. Place the 2/3A SBTG train control switch in STBY.

3. Place the 2/3B SBTG train control switch in PRI.

4. Verify the following fans operating:

- 2A RX BLDG VENT FAN
- 2B RX BLDG VENT FAN
- 2A RX BLDG EXH FAN
- 2B RX BLDG EXH FAN

5. Insert following EXPERT commands:

- irf cirbvall lifted (Prevents Secondary Containment Isolation on U2)
- trgset 16 "vgdstrta\_drw" (Trigger 16 automatically activates when 2/3A SBTG is placed to START)
- imf radrbvah (16 30) (After 30 sec, inserts RX Bldg Rad Mon failed high to cause a Secondary Containment Isolation signal)
- imf x04 (16 30) (After 30 sec, trips 2A RBV Supply Fan).
- imf x05 (16 30) (After 30 sec, trips 2B RBV Supply Fan).
- imf x07 (16 30) (After 30 sec, trips 2A RBV Exhaust Fan).
- imf x08 (16 30) (After 30 sec, trips 2B RBV Exhaust Fan).

### **DOCUMENT PREPARATION**

Markup a copy of DOP 7500-01.

## **Job Performance Measure (JPM)**

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. U2 HPCI surveillance is in progress and is at the point of starting a SBGT train.
3. DOP 7500-M1/E1 is not required per the Unit Supervisor.
4. The 2/3A SBGT Initial Cumulative Run Time has been recorded.
5. There has been **NO** painting or operation of propane powered equipment in the power block in the last 72 hours.

### **INITIATING CUE**

1. The Unit 2 Supervisor has directed you to start the 2/3A SBGT train per DOP 7500-01.
2. Inform the Unit Supervisor when the task is 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.
- 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 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
<b><u>NOTE:</u></b>					
Provide the Examinee with the provided copy of DOP 7500-01.					
	1. Place the 2/3A SBGT SELECT switch to A PRI position.	Places the 2/3A SBGT SELECT switch to the A PRI position.	_____	_____	_____
	2. Place the 2/3B SBGT SELECT switch to B STBY position.	Places the 2/3B SBGT SELECT switch to the B STBY position.	_____	_____	_____
	3. Verify the 2/3A and B AIR HEATERS are OFF.	Both GREEN lights illuminated.	_____	_____	_____
	4. Verify the 2/3A and B Fans are OFF.	Both GREEN lights illuminated.	_____	_____	_____
	5. Verify annunciators 923-5 A-6 and 923-5 B-6 are NOT in alarm.	Both annunciator tiles extinguished.	_____	_____	_____
	6. Places 2-8605A, 2A DW & TORUS PURGE FAN control switch to the PULL-TO-LOCK (PTL) position.	Places 2-8605A, 2A DW & TORUS PURGE FAN control switch to the PTL position.	_____	_____	_____
	7. Places 2-8605B, 2B DW & TORUS PURGE FAN control switch to the PTL position.	Places 2-8605B, 2B DW & TORUS PURGE FAN control switch to the PTL position.	_____	_____	_____
	8. Places 3-8605A, 3A DW & TORUS PURGE FAN control switch to the PTL position.	Places 3-8605A, 3A DW & TORUS PURGE FAN control switch to the PTL position.	_____	_____	_____
	9. Places 3-8605B, 3B DW & TORUS PURGE FAN control switch to the PTL position.	Places 3-8605B, 3B DW & TORUS PURGE FAN control switch to the PTL position.	_____	_____	_____

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	10. Verify 2/3B SBTG SELECT SWITCH in B STBY position.	Verifies 2/3 B SBTG Select switch in B STBY.	_____	_____	_____
<p><b><u>NOTE:</u></b></p> <p>When 2/3A SBTG train starts, a Trigger auto activates which inserts a RBV Rad Mon Hi Hi condition after 30 seconds. The resulting Secondary Containment Isolation fails and the operator should complete the isolation.</p>					
*	11. Starts 2/3A SBTG train.	Places 2/3 A SBTG Select switch to START A position.	_____	_____	_____
	12. Records the Start Time on Operator Aid.	Records the Start Time on Operator Aid.	_____	_____	_____
	13. Verifies the 2/3A SBTG train initiated properly.	Begins verifying the 2/3A SBTG train operating properly.	_____	_____	_____
<p><b>BEGIN ALTERNATE PATH</b></p>					
<p><b><u>NOTE:</u></b></p> <p>The examinee should recognize the Secondary Containment Isolation did NOT occur, and perform the Limitations and Actions. The examinee may close the Isolation Dampers first, and then come back and verify the Fans trip. In that case, ALL fans will be tripped.</p>					
	14. Verifies trip of 2A RX BLDG VENT FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
	15. Verifies trip of 2B RX BLDG VENT FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
	16. Verifies trip of 2C RX BLDG VENT FAN.	Determines 2C RX BLDG VENT FAN is running. (Or not running if examinee closed dampers first)  If running, trips 2C RX BLDG VENT FAN.	_____	_____	_____

**Job Performance Measure (JPM)**

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
17.	Verifies trip of 2A RX BLDG EXH FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
18.	Verifies trip of 2B RX BLDG EXH FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
19.	Verifies trip of 2C RX BLDG EXH FAN.	Determines 2C RX BLDG EXH FAN is running. (Or not running if examinee closed dampers first) If running, trips 2C RX BLDG VENT FAN.	_____	_____	_____
20.	Verifies trip of 3A RX BLDG VENT FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
21.	Verifies trip of 3B RX BLDG VENT FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
22.	Verifies trip of 3C RX BLDG VENT FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
23.	Verifies trip of 3A RX BLDG EXH FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
24.	Verifies trip of 3B RX BLDG EXH FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____
25.	Verifies trip of 3C RX BLDG EXH FAN.	GREEN and AMBER lights illuminated.	_____	_____	_____



## Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
*	26. Verifies 2A INLET DAMPER AO 2-5741A closed. Verifies 2B INLET DAMPER AO 2-5741B closed.	Determines 2A & 2B INLET DAMPERs AO 2-5741A & B are NOT closed (GREEN lights illuminated).  Places control switch 2A & 2B RX BLDG VENT INLET ISOL DAM 2-5741A & 2-5741B to the CLOSE position.  Determines 2A & 2B INLET DAMPERs AO 2-5741A & B went closed (RED lights illuminated).	_____	_____	_____
*	27. Verifies 2A OUTLET DAMPER AO 2-5742A closed. Verifies 2B OUTLET DAMPER AO 2-5742B closed.	Determines 2A & 2B OUTLET DAMPERs AO 2-5742A & B are NOT closed (GREEN lights illuminated).  Places control switch 2A & 2B RX BLDG VENT OTLT ISOL DAM 2-5742A & 2-5742B to the CLOSE position.  Determines 2A & 2B OUTLET DAMPERs AO 3-5742A & B went closed (RED lights illuminated).	_____	_____	_____
	28. Verifies 3A INLET DAMPER AO 3-5741A closed.	RED light illuminated.	_____	_____	_____
	29. Verifies 3B INLET DAMPER AO 3-5741B closed.	RED light illuminated.	_____	_____	_____
	30. Verifies 3A OUTLET DAMPER AO 3-5742A closed.	RED light illuminated.	_____	_____	_____

## Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
31.	Verifies 3B OUTLET DAMPER AO 3-5742B closed.	RED light illuminated.	_____	_____	_____
32.	Verifies trip of 2A D/W & Torus Purge Fan.	Condition met from previous steps in the procedure.	_____	_____	_____
33.	Verifies trip of 2B D/W & Torus Purge Fan.	Condition met from previous steps in the procedure.	_____	_____	_____
34.	Verifies trip of 3A D/W & Torus Purge Fan.	Condition met from previous steps in the procedure.	_____	_____	_____
35.	Verifies trip of 3B D/W & Torus Purge Fan.	Condition met from previous steps in the procedure.	_____	_____	_____
36.	Notifies US of Secondary Containment Isolation Failure and successful manual completion of the isolation.	Examinee notifies the Unit Supervisor.	_____	_____	_____
<b><u>CUE:</u></b>					
Acknowledge report of task completion.					
			END		

**JPM Stop Time:** \_\_\_\_\_

## **Job Performance Measure (JPM)**

Operator's Name: \_\_\_\_\_

Job Title: RO  SRO

JPM Title: SSGT – START SSGT WITH A FAILURE OF RX BLDG VENT TO ISOLATE

Revision Number: 03

JPM Number: S-N-h

Task Number and Title: 261L002, Start the SSGT system.

K/A Number and Importance: 261000.A2.13 3.4 / 3.7

**Suggested Testing Environment:** Simulator

**Actual Testing Environment:**  Simulator  Control Room  In-Plant

**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 7500-01, rev 32

### **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. You are the Unit 2 Aux NSO.
2. U2 HPCI surveillance is in progress and is at the point of starting a SBGT train.
3. DOP 7500-M1/E1 is not required per the Unit Supervisor.
4. The 2/3A SBGT Initial Cumulative Run Time has been recorded.
5. There has been **NO** painting or operation of propane powered equipment in the power block in the last 72 hours.

### **INITIATING CUE**

1. The Unit 2 Supervisor has directed you to start the 2/3A SBGT train per DOP 7500-01.
2. Inform the Unit Supervisor when the task is complete.