

**Exelon Nuclear**

**Job Performance Measure**

CROSSTIE CRD FOR ALTERNATE INJECTION

JPM Number: S-N-i

Revision Number: 05

Date: 09/08

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

\_\_\_\_\_  
Date

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

\_\_\_\_\_  
Date

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

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

**Revision 04** Bank JPM.

**Revision 05** Revised for 2009 NRC Exam.

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

### **SIMULATOR SETUP INSTRUCTIONS**

1. None, this is an in-plant JPM.

### **DOCUMENT PREPARATION**

1. Clean copy of DEOP 0500-03.

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

### **INITIAL CONDITIONS**

1. You are an extra NSO.
2. Unit 2 has been manually scrammed following a loss of Feedwater.
3. The 2B CRD pump is OOS AND the 2A pump has tripped AND CANNOT be restarted.
4. HPCI was started AND returned Reactor water level to +15" before an oil leak developed requiring HPCI to be shutdown.
5. The 3A CRD pump is OOS.
6. The 3B CRD pump is running.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to IMMEDIATELY perform the in-plant manipulations to crosstie Unit 2 to the Unit 3 CRD pump discharge header for Unit 2 RPV injection in accordance with DEOP 0500-03 steps G.6.a-g.
2. Inform the Unit Supervisor when the task is complete.

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**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.

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## 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 DEOP 0500-03.				
1.	Verify the Unit 3 CRD system parameters of current and cooling flow.	Establishes communication with the Unit 3 control room.	_____	_____
<b><u>CUE:</u></b>				
Report the following parameters: 3B CRD Pump current of 25 amps and cooling flow of 45 gpm.				
<b><u>NOTE:</u></b>				
CRD system key is required to open locked valves. Do NOT allow examinee to check out key.				
2.	Verify 3-0301-1B CRD PMP DISCH VLV is OPEN.	Verifies 3-0301-1B rising stem full out AND/OR handwheel is full CCW.	_____	_____
<b><u>CUE:</u></b>				
Valve 3-0301-1B is in the condition you described.				
*	3. Closes 3-0399-604, U3 CRD PMP DISCH HDR MIN FLOW THROTTLING VLV.	Rotates 3-0399-604 handwheel CW until handwheel is full CW.	_____	_____
<b><u>CUE:</u></b>				
Valve 3-0399-604 is in the condition you described.				
*	4. Open 2/3-0301-163 U2 & U3 CRD SYS CROSSTIE VLV.	Rotates 2/3-0301-163 handwheel CCW until handwheel is full CCW	_____	_____
<b><u>CUE:</u></b>				
Valve 2/3-0301-163 is in the condition you described.				

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
*	5. Throttle open 2/3-0301-162 U2 & U3 CRD SYS CROSSTIE VLV while maintaining CRD pp current <39 amps and CRD Suction pressure >18" Hg vacuum.	Rotates 2/3-0301-162 handwheel CCW in small increments, while maintaining communication other Operators to ensure amps and suction pressure stay within limits.	_____	_____	_____
<b><u>CUE:</u></b>					
<ul style="list-style-type: none"> <li>2/3-0301-162 handwheel is full CCW.</li> <li>Unit 3 CRD system cooling water flow is 45 gpm.</li> <li>Unit 2 CRD system cooling water flow is 44 gpm.</li> <li>3B CRD pump current is 35 amps.</li> <li>3B CRD pump suction pressure is 5" Hg vacuum.</li> </ul>					
<b><u>NOTE:</u></b>					
The above cues are intended to inform the examinee that the 2/3-0301-162 handwheel is full open and all parameters are within band.					
	6. 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: CROSSTIE CRD FOR ALTERNATE INJECTION

Revision Number: 05

JPM Number: S-N-i

Task Number and Title: 295L092, Crosstie CRD systems for alternate injection.

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 17

### **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 an extra NSO.
2. Unit 2 has been manually scrammed following a loss of Feedwater.
3. The 2B CRD pump is OOS AND the 2A pump has tripped AND CANNOT be restarted.
4. HPCI was started AND returned Reactor water level to +15" before an oil leak developed requiring HPCI to be shutdown.
5. The 3A CRD pump is OOS.
6. The 3B CRD pump is running.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to IMMEDIATELY perform the in-plant manipulations to crosstie Unit 2 to the Unit 3 CRD pump discharge header for Unit 2 RPV injection in accordance with DEOP 0500-03 steps G.6.a-g.
1. Inform the Unit Supervisor when the task is complete.



# Exelon Nuclear

## Job Performance Measure

LOCALLY CLOSE MSIVs

JPM Number: S-N-j

Revision Number: 02

Date: 09/08

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

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

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

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

**Revision 01** Bank JPM.

**Revision 01** Revised for 2009 NRC Exam.

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

### **SIMULATOR SETUP INSTRUCTIONS**

1. None, this is an in-plant JPM.

### **DOCUMENT PREPARATION**

1. Clean copy of DSSP 0100-CR.

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

### **INITIAL CONDITIONS**

1. You are the Unit 2 NSO.
2. A fire in the Control Room has occurred on Unit 2 requiring a Unit Shutdown with Control Room evacuation.
3. Another NSO will verify that the MSIV's are closed.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to verify MSIVs are closed and will remain closed on U2 in accordance with DSSP 0100-CR, attachment A.
2. Inform the Unit Supervisor when another NSO can verify the MSIVs are closed.

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**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.

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## 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 provided copy of DSSP 0100-CR.</p> <p>The examinee will need to obtain a CB-3 Key from the WEC and equipment from an SSD box. Do <b>NOT</b> allow examinee to check out key or remove equipment from the SSD boxes.</p>				
1.	Obtains key and appropriate equipment.	OBTAINS key and appropriate equipment.	_____	_____
<p><b><u>CUE:</u></b></p> <p>You have the key and equipment you described.</p>				
*	2. Close the 2-4733-503, MSIV INST AIR FILT/PRE-FILT OUTLET SV.	Manually closes the valve.	_____	_____
<p><b><u>CUE:</u></b></p> <p>The valve is in the condition you described.</p>				
*	3. Close the 2-4716-501, MSIV INST AIR FILTS BYP VLV.	Manually closes the valve.	_____	_____
<p><b><u>CUE:</u></b></p> <p>The valve is in the condition you described.</p>				
*	4. Close the 2-4721-501, MSIV INST AIR BACKUP FILT OUTLET SV	Manually closes the valve.	_____	_____
<p><b><u>CUE:</u></b></p> <p>The valve is in the condition you described.</p>				
*	5. Unlock 2-4799-525, MSIV INST AIR FILT BANK OUTLET PI TEST VLV, and remove wrench.	Valve unlocked and wrench removed.	_____	_____
<p><b><u>CUE:</u></b></p> <p>The valve is in the condition you described and you have obtained the wrench.</p>				

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
*	6. Remove the plug from 2-4799-525, MSIV INST AIR FILT BANK OUTLET PI TEST VLV.	Plug removed.	_____	_____	_____
<b><u>CUE:</u></b> The plug is in the condition you described.					
*	7. Open 2-4799-525, MSIV INST AIR FILT BANK OUTLET PI TEST VLV.	Opens valve and listens for air.	_____	_____	_____
<b><u>CUE:</u></b> Inform the candidate that he/she hears air rushing out of plug. After several seconds, inform the candidate that air has stopped emitting from the plug (depressurized).					
	8. 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: LOCALLY CLOSE MSIVs

Revision Number: 00

JPM Number: S-N-j

Task Number and Title: 295L137, Close Outboard MSIV's with CR fire.

K/A Number and Importance: 295016.AK1.08 4.0 / 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:** 15 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DSSP 0100-CR, rev 39

**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: \_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

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

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

### **INITIAL CONDITIONS**

1. You are the Unit 2 NSO.
2. A fire in the Control Room has occurred on Unit 2 requiring a Unit Shutdown with Control Room evacuation.
3. Another NSO will verify that the MSIV's are closed.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to verify MSIVs are closed and will remain closed on U2 in accordance with DSSP 0100-CR, attachment A.
2. Inform the Unit Supervisor when another NSO can verify the MSIVs are closed.



**Exelon Nuclear**

**Job Performance Measure**

SWAP 125VDC BATTERY CHARGERS

JPM Number: S-N-k

Revision Number: 00

Date: 09/08

Developed By: \_\_\_\_\_

**Instructor**

\_\_\_\_\_

**Date**

Approved By: \_\_\_\_\_

**Facility Representative**

\_\_\_\_\_

**Date**

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

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

**Revision 00** New JPM developed for 2009 NRC Exam.

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

### **SIMULATOR SETUP INSTRUCTIONS**

1. None, this is an in-plant JPM.

### **DOCUMENT PREPARATION**

1. Clean copy of DOP 6900-02.

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

### **INITIAL CONDITIONS**

1. You are the Unit 2 Aux NSO.
2. The Unit 3 125 VDC Battery Charger needs to be removed from service for testing.
3. The Unit 3 125 VDC Battery Charger does NOT need to be secured.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to swap Unit 3 125 VDC Battery Chargers, by placing the 3A Charger in service and removing the Unit 3 charger from service, per DOP 6900-02.
2. Inform the Unit Supervisor when the task is complete.

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**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.

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The timeclock starts when the candidate acknowledges the initiating cue.

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## 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 6900-02.				
1.	Verify MCC 38-2 Cubicle C1, 3-8300-3A 3A 125 VOLT BATTERY CHARGER breaker is closed.	Breaker is in the closed position.	_____	_____
<b><u>CUE:</u></b> The breaker is in the position you described.				
2.	Verify EQUALIZE TIMER (HR'S) pointer at '0' position.	Timer is at '0' position.	_____	_____
<b><u>CUE:</u></b> The timer is in the position you described.				
3.	Verify AC POWER INPUT breaker is closed.	Breaker is in the closed position.	_____	_____
<b><u>CUE:</u></b> The breaker is in the position you described.				
4.	Verify DC POWER OUTPUT breaker is closed.	Breaker is in the closed position.	_____	_____
<b><u>CUE:</u></b> The breaker is in the position you described.				
5.	Verify the green FLOAT indicating lamp is lit.	GREEN light is illuminated.	_____	_____
<b><u>CUE:</u></b> The indicating light is GREEN.				

## Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
*	6. Verify the 3A charger DC OUTPUT VOLTMETER is 128.8 to 130.5 volts  <u>AND</u> greater than (by approximately 1.0 VDC) the Unit 3 charger DC OUTPUT VOLTMETER.	Asks for readings on the 3A charger DC OUTPUT VOLTMETER  <u>AND</u> The Unit 3 charger DC OUTPUT VOLTMETER.	_____	_____	_____
<b><u>CUE:</u></b>  The 3A charger OUTPUT VOLTMETER is reading 130 volts. The Unit 3 charger OUTPUT VOLTMETER is reading 129 volts.					
*	7. Close the Cubicle H-3, 3-8300-3A U3 125VDC BATTERY CHARGER 3A breaker.	Indicates he/she would place the U3 125VDC BATTERY CHARGER 3A breaker in the CLOSED position.	_____	_____	_____
<b><u>CUE:</u></b>  The breaker is in the position you described.					
	8. Verify the on-coming charger has accepted the majority of the bus load by verifying the 3A charger OUTPUT AMMETER is reading $\leq 5$ amps.	Asks for readings on the U3 charger OUTPUT AMMETER.	_____	_____	_____
<b><u>CUE:</u></b>  The U3 charger OUTPUT AMMETER is reading 0 amps.					
	9. At the MAIN BUS 3A, verify the battery float voltage reading 128.8 to 130.5 volts (125VDC VOLTMETER SELECTOR SWITCH in BATT position).	Indicates he/she would place the 125VDC VOLTMETER SELECTOR SWITCH in BATT position and asks for readings on the voltage.	_____	_____	_____
<b><u>CUE:</u></b>  The MAIN BUS 3A VOLTMETER is reading 130 volts.					

## Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
*	10. Open Cubicle H-2, 3-8300-3 U3 125VDC BATTERY CHARGER 3 breaker.	Indicates he/she would place the U3 125VDC BATTERY CHARGER 3 breaker in the OPEN position.	_____	_____	_____
<b><u>CUE:</u></b> The breaker is in the position you described.					
	11. 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: SWAP 125VDC BATTERY CHARGERS

Revision Number: 00

JPM Number: S-N-k

Task Number and Title: 263LN00314, Place a battery charger in service and remove a battery charger from service.

K/A Number and Importance: 263000.A4.01 3.0 / 3.2

**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:** 20 minutes **Actual Time Used:** \_\_\_\_\_ minutes

**References:** DOP 6900-02, rev 30

**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. The Unit 3 125 VDC Battery Charger needs to be removed from service for testing.
3. The Unit 3 125 VDC Battery Charger does NOT need to be secured.

### **INITIATING CUE**

1. The Unit Supervisor has directed you to swap Unit 3 125 VDC Battery Chargers, by placing the 3A Charger in service and removing the Unit 3 charger from service, per DOP 6900-02.
2. Inform the Unit Supervisor when the task is complete..