Exelon Nuclear

Job Performance Measure

LOCAL Control of the _AF005A-D at the Remote Shutdown Panel

JPM Number: IP i (N127)

Revision Number: 2

Date: 9/21/2009

Revised By:	Lynn Sanders *	9/21/09
	Instructor	Date
Validated By:	Lynn Sanders *	9/25/09
	SME or Instructor	Date
Reviewed By:	W. Kouba *	10/21/09
	Operations Representative	Date
Approved By:	Robert Meyer *	10/20/09
	Training Department	Date

* Signature on File

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

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 8 and 12 below.

See File Copy

1. Task description and number, JPM description and number are identified.
2. Knowledge and Abilities (K/A) references are included.
3. Performance location specified. (in-plant, control room, simulator, or other)
4. Initial setup conditions are identified.
5. Initiating cue (and terminating cue if required) are properly identified.
6. Task standards identified and verified by SME review.
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
8. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure BOA PRI-5 Rev: 106(U1), 109(U2)
   Procedure BAR _-3-D7 Rev: 4 (U1, 2 (U2)
   Procedure _____ Rev: _____
9. Verify cues both verbal and visual are free of conflict.
10. Verify performance time is accurate
11. If the JPM cannot be performed as written with proper responses, then revise the JPM.
12. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

Lynn Sanders (Signature on file)	9/25/09
SME / Instructor	Date
Brian Clark (Signature on file)	9/25/09
SME / Instructor	Date
_____	_____
SME / Instructor	Date

Revision Record (Summary)

Revision 2

- Applied new template TQ-JA-150-02 Rev.1
- Verified/ updated KAs and TPOs to current revision
- Changed Non Licensed Operator to Equipment Operator

INITIAL CONDITIONS

1. You are the opposite Unit Assist NSO
2. A Unit _ Reactor Trip has just occurred
3. The _B Aux Feedwater Pump is OOS
4. 120 VAC Instrument Bus _11 de-energized concurrent with the Reactor Trip
5. The _A Aux Feedwater Pump has started on Lo-2 Steam Generator level, but the _AF005A, B, C, and D all went closed.

INITIATING CUE

You have been directed by the Unit Supervisor to take LOCAL control of _AF005A, B, C, and D ONLY, from the Unit _ Remote Shutdown Panel and establish flow to the Unit _ steam generators at approximately 170 gpm each per Step 1 of Attachment A of _BOA PRI-5 and BAR _ -3-D7.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

RECORD START TIME: _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Refer to _BOA PRI-5 and BAR _ -3-D7. **Note: Step 1 may be performed at any time.**	° LOCATE and OPEN _BOA PRI-5 and BAR _ -3-D7	____	____	____
NOTE A copy of _BOA PRI-5 is available at the associated Remote Shutdown Panel. Provide a copy of _BOA PRI-5 Attachment A to the candidate for placekeeping.				
2. Proceed to Unit _ Remote Shutdown Panel. (383 Elev. Auxiliary Building)	° Locate Unit _ Remote Shutdown Panel.	____	____	____
3. Identify local controls for _AF005 A-D on _PL04J.	° Locate _PL04J controls for _AF005 A-D.	____	____	____
NOTE The next step is directed by the footnote on page 1 of 1BOA Pri-5 Attachment A. **CUE: (if asked): The MCR controllers for _AF005A-D on _PM06J indicate 0.**				
4. Adjust the controller setting to 0 for _AF005A-D on _PL04J. ***Cue: (If asked) individual controllers for _AF005A thru D indicate zero.***	° Reduce the controller settings to zero for _AF005 A-D on _PL04J.	____	____	____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*5. Select LOCAL control for _AF005A, B, C, D at _PL04J. ***Cue: REMOTE LOCAL switches on _PL04J for _AF005A thru D are in the LOCAL (RSP) position.*** ***Cue: (If asked and if step 4 was performed) _AF005A thru D left GREEN lights are LIT, with 0 GPM flow indicated.*** ***Cue: (If asked and if step 4 was NOT performed) _AF005A thru D left and right GREEN lights are LIT, with 90 GPM flow indicated.***	• Place REMOTE LOCAL switches in LOCAL at _PL04J for _AF005A, B, C & D.			
NOTE The normal setting at the Remote Shutdown Panel is 15%, this should equate to a flow less than 100 gpm, the candidate will have to increase the setting to obtain 170 gpm. A setting of 50% should equate to approximately 170 gpm. Cue the candidate as appropriate for increasing flow as the setting is increased.				
*6. Increase control setpoint on _PL04J for _AF005 A thru D. ***Cue: (If asked) controller setpoints on _PL04J for _AF005A-D are set to (setting described by candidate)***	• Adjust _AF005 A thru D controller setpoints on _PL04J to obtain approx. 170 gpm AF flow to each steam generator.			
7. Verify _A train AF flow to steam generators indicated on _PL04J. ***Cue: _PL04J _FI-AF011B, 013B, 015B, and 017B indicate approximately 170 gpm (same as values in computer)*** ***Cue: This JPM is completed.***	◦ Verify _A train AF flow established to Unit _ steam generators, _PL04J indications or contact unit.			

RECORD STOP TIME: _____

JPM SUMMARY

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

JPM Title: LOCAL Control of the _AF005A-D at the Remote Shutdown Panel

JPM Number: N127 Revision Number: 2

Task Number and Title: 4C.AF-01 PERFORM lineups of the Auxiliary Feed System.

K/A Number and Importance: 061 2.1.30 4.4/4.0

Suggested Testing Environment: Plant

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

Reference(s):

_BOA PRI-5, CONTROL ROOM INACCESSIBLILITY UNIT _, rev. 106(U1), rev.109(U2)

BAR _-3-D7, AF FLOW CONT SETTING LOW, rev. 4(U1), rev. 2(U2)

CRITICAL STEPS (*) 5 & 6

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

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 20 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

1. You are the opposite Unit Assist NSO
2. A Unit _ Reactor Trip has just occurred
3. The _B Aux Feedwater Pump is OOS
4. 120 VAC Instrument Bus _11 de-energized concurrent with the Reactor Trip
5. The _A Aux Feedwater Pump has started on Lo-2 Steam Generator level, but the _AF005A, B, C, and D all went closed.

INITIATING CUE

You have been directed by the Unit Supervisor to take LOCAL control of _AF005A, B, C, and D ONLY, from the Unit _ Remote Shutdown Panel and establish flow to the Unit _ steam generators at approximately 170 gpm each per Step 1 of Attachment A of _BOA PRI-5 and BAR _ -3-D7.

Exelon Nuclear

Job Performance Measure

Cross-tie DC Bus 211/111

JPM Number: IP j (N114)

Revision Number: 4

Date: 9/23/2009

Revised By:	Instructor	Date
Validated By:	SME or Instructor	Date
Reviewed By:	Operations Representative	Date
Approved By:	Training Department	Date

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

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 8 and 12 below.

See File Copy

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

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

Revision Record (Summary)

Revision 3

- Applied new template TQ-JA-150-02 Rev.1
- Verified/ updated KAs and TPOs to current revision
- Changed Non Licensed Operator to Equipment Operator

Revision 4

- Made the JPM specific for a 211/111 crosstie.

INITIAL CONDITIONS

1. You are an EO.
2. Battery Charger 211 tripped and a Clearance Order is being created.
3. Both Units are in Mode 1.

INITIATING CUE

1. The WEC directs you to crosstie DC Bus 211 to DC Bus 111 per BOP DC-7.
2. A second EO will be available for Operations required on Unit 1.
3. The US has reviewed Tech Specs and the SM has approved the crosstie.
4. All required keys have been obtained.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

RECORD START TIME: _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Refer to BOP DC-7, 125V DC ESF Bus Crosstie/Restoration **Note: Provide the examinee with a copy of BOP DC-7** ***Cue: (if asked) Tech Specs have been reviewed.***	° LOCATE and OPEN BOP DC-7	____	____	____
NOTE For any cue, use/refer to actual plant conditions where possible and ***cue: as is.*** ***ALL control manipulations are to be SIMULATED.***				
2. Ensure both battery chargers are not on equalize ***Cue: The Float/Equalize switch is in the 'LEFT' (float) position*** ***Cue: The timer is pointing to 'ZERO'*** ***Cue: The other EO reports that DC Bus 111 is on 'FLOAT' and the timer is 'OFF'***	At Battery Charger 211: • Float/Equalize Switch in Float Position • Equalize Timer is OFF • Contact EO at other unit battery charger to ensure B.C. is not in equalize	____	____	____
3. Check DC Bus 211 voltage ***NOTE: The meter will read the same voltage in either the Bus or Battery position.*** ***Cue: DC Bus 211 voltage is 128 V*** ***Cue: (if asked) B.C. voltage is 0 V*** ***Cue: The other EO reports DC Bus 111 voltage is 129 V***	At _DC05E, Ensure voltage difference is < 20 volts: ° Check DC Bus 211 voltage ° Check Opposite DC Bus 111 voltage	____	____	____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE Checking the grounds will cause a MCB alarm.				
4. Check grounds ***Cue: Negative ground reading is 7 volts*** ***Cue: Positive ground reading is 5 volts*** ***Cue: The other EO reports DC Bus 111 ground readings are positive 10 volts and negative 6 volts***	At 2DC05E, Check grounds ≤ 100 volts: ° Check negative ground: Press pushbutton, take Reading and Release pushbutton ° Check positive ground: Press pushbutton, take Reading and Release pushbutton ° Check grounds on the opposite DC Bus	____	____	____
5. Notify the Control Room ***Cue: U2 NSO (or US) acknowledges that the crosstie breaker will be closed.***	° Notify the Control Room of impending crosstie breaker closure.	____	____	____
6. Notify the SM. ***Cue: The SM reports that 2BOL 8.4 has been initiated***	° Notify the SM to INITIATE 2BOL 8.4	____	____	____
*7. Unlock and close breaker DF1 at DC Bus 111 ***Cue: The other EO reports that on DC Bus 111, breaker DF1 is closed.*** ***Cue: The U1 NSO reports that annunciator 1-21-D7 'DC Bus 111 Tie Brkr to Bus 211 Close/Trip'' is in alarm***	At DC Bus 111: • Unlock and close Breaker DF1 ° Check annunciator 1-21-D7 is in alarm	____	____	____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*8. Unlock and close breaker DF1 at DC Bus 211 ***Cue: DC Bus 211, breaker DF1 is in the UP position*** ***Cue: The U2 NSO reports that annunciator 2-21-D7 'DC Bus 211 Tie Brkr to Bus 111 Close/Trip'' is in alarm*** ***Cue (if required): This JPM is completed***	At DC Bus 211: • Unlock and close Breaker DF1 ◦ Check annunciator 2-21- D7 is in alarm			

RECORD STOP TIME: _____

JPM SUMMARY

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

JPM Title: Cross-tie DC Bus _11/_11

JPM Number: N114 Revision Number: 4

Task Number and Title: 4D.OA-23 RESPOND to a Loss of DC Power.

K/A Number and Importance: 058 AA1.01 3.4/3.5

Suggested Testing Environment: Plant

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

Reference(s):

BOP DC-7, 125V DC ESF Bus Crosstie/Restoration (Rev 13)

CRITICAL STEPS (*) 7 & 8

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

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 17 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

1. You are an EO.
2. Battery Charger 211 tripped and a Clearance Order is being created.
3. Both Units are in Mode 1.

INITIATING CUE

1. The WEC directs you to crosstie DC Bus 211 to DC Bus 111 per BOP DC-7.
2. A second EO will be available for Operations required on Unit 1.
3. The US has reviewed Tech Specs and the SM has approved the crosstie.
4. All required keys have been obtained.

Exelon Nuclear

Job Performance Measure

Local Operation of PZR PORV Block Valve (1RY8000B failure)

JPM Number: IP k

Revision Number: 4

Date: 7/13/2010

Revised By:	Instructor	Date
Validated By:	SME or Instructor	Date
Reviewed By:	Operations Representative	Date
Approved By:	Training Department	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 8 and 12 below.

See File Copy

1. Task description and number, JPM description and number are identified.
2. Knowledge and Abilities (K/A) references are included.
3. Performance location specified. (in-plant, control room, simulator, or other)
4. Initial setup conditions are identified.
5. Initiating cue (and terminating cue if required) are properly identified.
6. Task standards identified and verified by SME review.
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
8. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure 1BOA Pri-5 Rev: 106
   Procedure 2BOA Pri-5 Rev: 109
   Procedure _____ Rev: _____
9. Verify cues both verbal and visual are free of conflict.
10. Verify performance time is accurate
11. If the JPM cannot be performed as written with proper responses, then revise the JPM.
12. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

_____
SME / Instructor Date

_____
SME / Instructor Date

_____ _____
SME / Instructor Date

Revision Record (Summary)

Revision 3
Revised to current format

Revision 4
Made Unit 1 specific.

INITIAL CONDITIONS

1. You are the Aux Building EO.
2. The Main Control Room has been declared uninhabitable due to smoke.
3. 1BOA PRI-5 has been entered and the RSP has been activated.

INITIATING CUES

1. PZR pressure is 2200# and lowering
2. The 1C and 1D RCP's are secured
3. The U-1 US directs you to locally close the U-1 PZR PORV Block valves per 1BOA PRI-5, step 15.

++++++++++++++++++

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

RECORD START TIME: _____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Refer 1BOA PRI-5, step 15 **Note: Provide the examinee with a copy of 1BOA PRI-5, step 15.** ***Cue (if asked): MCC locations are in the unit's electrical penetration area:*** ***131X2B – AB 414, S-11*** ***132X2 – AB 426, S-11***	○ LOCATE and OPEN 1BOA PRI-5 ○ Utilize plant knowledge, operator aid, or contact WEC/MCR for MCC location.			
NOTE **In JPM steps 2 & 3, read the 'Closing' Cues in sequence**				
*2. Locally isolate 1RY455A ***Cue: The 'Local/Remote' switch for 1RY8000A is to the 'LEFT' (LOCAL)*** ***Cue: Both lights are lit for 1RY8000A*** ***Cue: The 'RED' light is lit for 1RY8000A***	At MCC 131X2B, cub A5: • Place LOCAL/REMOTE switch to LOCAL. • CLOSE 1RY8000A			
NOTE **Alternate path initiated in the following step.**				

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
3. Locally isolate 1RY456 ***Cue: The 'Local/Remote' switch for 1RY8000B is to the 'LEFT' (LOCAL)*** ***Cue: Both lights are lit for 1RY8000B*** ***Cue: Both lights are now out for 1RY8000B and the breaker has tripped*** ***Cue (if asked): The breaker will NOT reset***	At MCC 132X2, cub C4: • Place LOCAL/REMOTE switch to LOCAL. • CLOSE the 1RY8000B			
*4. Remove Control Power fuses for 1RY456 ***Cue: Fuse 46 has been removed*** ***Cue: Fuse 47 has been removed*** ***Cue: (if asked) PZR Pressure is 2221 psig and rising slowly***	At 1DC11J, REMOVE control power to fail close 1RY456: • Remove FU-46 • Remove FU-47			
Cue: This JPM is completed.				

RECORD STOP TIME: _____

JPM SUMMARY

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

JPM Title: Local Operation of PZR PORV Block Valve (1RY8000B failure)

JPM Number: IP k (N-113a) Revision Number: 4

Task Number and Title: 4D.OA-27 Respond to Control Room Evacuation.

K/A Number and Importance: 068 AA1.28 3.8 / 4.0

Suggested Testing Environment: In Plant

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

Reference(s):

1BOA Pri-5, Rev 106, Control Room Inaccessibility

CRITICAL STEPS (*) 2 & 4

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

Testing Method: ☐ Simulate ☐ Perform

Estimated Time to Complete: 30 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

1. You are the Aux Building EO.
2. The Main Control Room has been declared uninhabitable due to smoke.
3. _BOA PRI-5 has been entered and the RSP has been activated.

INITIATING CUES

1. PZR pressure is 2200# and lowering
2. The _C and _D RCP's are secured
3. The U-_ US directs you to locally close the U-_ PZR PORV Block valves per _BOA PRI-5, step 15.