Exelon Nuclear

Job Performance Measure

Startup of second Recirculation Pump with failure of discharge valve to open

JPM Number: S-N-a

Revision Number: 00

Date: 03/6/2004

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 00, New JPM (modified from 2002 ILT NRC Exam, new to the LORT JPM Bank).

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 5.

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. Trip the 2B Recirc Pump

3. Close the 2B Recirc Pump discharge valve (MO 2-202-5B) and return C/S to NORMAL

4. Insert following Malfunctions and/or Remotes

   - After running CAEP file a-e-g NRC JPM.cae and completing the above step, activate trigger 16 to insert the following malfunctions.

   - IOR RRD5BCLS CLOSE

   - IOR RRD5BOPN OFF

   - IOR RRD5BJP5 OFF

   - IOR RRD5BJ1P OFF

5. Place the Recirc Pumps in individual manual control
6. Complete DOP 0202-01 up through Step G.4

7. Verify Individual Recirc Controllers are set to Minimum.

8. Verify RPV water level $\geq$ 30 inches and stable.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. 2B Recirc Pump was inadvertently tripped one (1) hour ago during testing.
2. The immediate actions of DOA 0202-01 have been completed.
3. All prerequisites of DOP 0202-01 have been met.
4. Seal Purge to the 2B Recirc Pump has been established.
5. DOP 0202-01 has completed up to and including step G.5.
6. You are the U2 Aux NSO.

INITIATING CUE

1. You have been directed by the Unit 2 Supervisor to restart the 2B Recirc Pump IAW DOP 0202-01 starting at step G.6.
2. Inform the Unit 2 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.

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 #
	1. Verify MO 2-202-5B, 2B PP DISCH VLV, is CLOSED AND C/S is in the NORM position.	Verifies MO 2-202-5B red Closed light lit and green open light is out AND C/S is in the NORM position.	_____	_____	_____
*	2. Start the 2B MG by holding 2B MG SET DRIVE MOTOR switch in START for 3 seconds.	Turns 2B M-G Set Drive Motor Control switch to START and holds for 3 seconds.	_____	_____	_____
Note	Time Recirc Pump Started: _____.	MG set starts ~8 seconds before pump motor. Pump start can be verified by Pump DP increasing and/or amps increasing.			
	3. Observe the following: • MG set Closed indicator comes on • Speed meter rises to a peak of 60% to 80%. • MG Field breaker CLOSES seven seconds after MG DRIVE MOTOR breaker closes. • % Speed meter settles out and then decays to approximately 28%	Observes or monitors the following: • 2B M-G Set Drive Motor Blue On light illuminated. • Monitors speed on Percent speed meter. • MG Field breaker Blue Closed light illuminated. • Monitors speed on Percent speed meter.	_____	_____	_____
Note	IF dual valve position indication is NOT obtained within 2 minutes of pump start, THEN trip the Recirc Pump.				

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
	4. While observing APRM response AND Recirc loop flow indications after each individual open step (jog), perform the following: • Open, MO 2-202-5B, 2B PP DISCH VLV, just to the point of dual valve position indication.	Attempts to OPEN MO 2-202-5B, 2B PP DISCH VLV by either or both of the following: • Jog open by using 2B PP DISCH VLV Jog control. OR • Throttling open with 2B PP DISCH VLV Control switch.	_____	_____	_____
Note	The MO 2-202-5B, 2B PP DISCH VLV, will NOT OPEN				
*	5. If dual valve position indication is NOT obtained within 2 minutes of pump start, THEN trip the recirc pump.	Trips 2B Recirc Pump within 2 minutes of pump start. (not MG start)	_____	_____	_____
Note	Time Recirc Pump Secured: _____.				
	6. Reports to the Unit 2 Supervisor that the MO 2-202-5B, 2B PP DISCH VLV, did not have dual indication and the 2B Recirc Pump was tripped.	Unit 2 Supervisor notified.	_____	_____	_____
CUE	Acknowledge report. The JPM is considered complete at this time.				
		END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: Startup of second Recirculation Pump with failure of discharge valve to open
JPM Number: S-N-a **Revision Number**: 00
Task Number and Title: 202L002, Perform a Unit 2 Recirculation system startup

K/A Number and Importance: 202001A4.01; 3.7 / 3.7

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑Simulator ❑Plant ❑Control Room

Testing Method: ❑ Simulate ☑ Perform **Faulted:** ❑ Yes ☑ No **Alternate Path:** ☑ Yes ❑ No

Time Critical: ☑Yes ❑No

Estimated Time to Complete: 14 minutes **Actual Time Used:** _____minutes

References: DOP 0202-01, Reactor Recirculation System Startup rev. 40

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. 2B Recirc Pump was inadvertently tripped one (1) hour ago during testing.
2. The immediate actions of DOA 0202-01 have been completed.
3. All prerequisites of DOP 0202-01 have been met.
4. Seal Purge to the 2B Recirc Pump has been established.
5. DOP 0202-01 has completed up to and including step G.5.
6. You are the U2 Aux NSO.

INITIATING CUE

1. You have been directed by the Unit 2 Supervisor to restart the 2B Recirc Pump IAW DOP 0202-01 starting at step G.6.
2. Inform the Unit 2 Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

Reject Primary Water Via RWCU System with Group 3 Isolation

JPM Number: S-N-b

Revision Number: 00

Date: 03/29/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

Rev 00 This is a new JPM developed for ILT 03-1 NRC exam. Complies with rev 21 of DOP 1200-02.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset simulator to IC-8.
2. Lower RPV water level low enough to get a Group 3 isolation and scram.
3. Raise water level to approximately 10 inches.
4. Check the drain flow controller 2-1290-14 and ensure it is fully closed.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. Unit 2 Reactor Scram has occurred.
2. Reactor water level is slowly rising.
3. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to establish an 80 - 110 gpm blowdown from the RWCU system to the Main Condenser Hotwell in accordance with DOP 1200-02.
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.

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.

*** Student may cause a RWCU isolation due to the coarseness of the simulator controls as compared to the in-plant controls. Grant permission for the student to reset the isolation and establish blowdown flow as directed. ***

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
1. Verify Group III Isolation for RWCU Valves.	Verifies Group III Isolation for RWCU Valves complete.	_____	_____	_____
* 2. On 902-5 panel, reset the Group III isolation signal.	Resets the Group III isolation signal on the 902-5 panel using the Group 2 &3 ISOL RESET switch.	_____	_____	_____
3. Verify closed MO 2-1201-3 (AUX PP SUCT).	Verifies closed MO 2-1201-3.	_____	_____	_____
4. Verify closed MO 2-1201-4 (AUX PP DISCH VLV).	Verifies closed MO 2-1201-4 .	_____	_____	_____
* 5. Place PIC 2-1290-2 PRESSURE CONTROLLER in AUTO and set to approximately 50 psig.	Places PIC 2-1290-2 in AUTO and sets to approximately 50 psig.	_____	_____	_____
* 6. Set RMC 2-1290-10, FLOW CNTRL, to approximately 10% open demand.	Sets RMC 2-1290-10 to approximately 10% open demand.	_____	_____	_____
* 7. Open MO 2-1201-2 (INLET ISOL).	MO 2-1201-2 OPEN.	_____	_____	_____
* 8. Open MO 2-1201-11 (BLOWDN TO COND).	MO 2-1201-11 OPEN.	_____	_____	_____
* 9. Open RMC 2-1290-14, DRN FLOW CONTLR, approximately 1 turn.	Opens RMC 2-1290-14 approximately 1 turn.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
* 10. Slowly throttle open MO 2-1201-1A (RX OUTLET BYP) until PI 2-1290-1, REGEN HX INLET PESS, is within 100 psig of reactor pressure.	Slowly throttles open MO 2-1201-1A until PI 2-1290-1, is within 100 psig of reactor pressure.	_____	_____	_____
* 11. Open MO 2-1201-1 (RX OUTLET ISOL).	MO 2-1201-1 OPEN.	_____	_____	_____
* 12. Close MO 2-1201-1A (RX OUTLET BYP).	MO 2-1201-1A CLOSED.	_____	_____	_____
13. Adjust RMC 2-1290-13, DRN FLOW CONTRL to establish 100 gpm blowdown, adjust PIC 2-1290-2 (PRESSURE CONTRL) in auto or manual to achieve flow.	100 gpm BLOWDOWN ESTABLISHED.	_____	_____	_____
IF 923-1 panel indicator TI 2-3740-17 (U2 RBCCW DISCH HDR TEMP) reaches 110°F or 902-4 panel indication 2-1290-28 (RWCU TEMP METER SELECT SS) Pt.2 (WTR TO RWCU SYS), approaches 135°F, then immediately secures RWCU blowdown.	Immediately secures RWCU blowdown IF 923-1 panel indicator TI 2-3740-17 reaches 110°F or 902-4 panel indication 2-1290-28 approaches 135°F.	_____	_____	_____
14. Informs Unit Supervisor task is complete.	Informs Unit Supervisor task is complete.	_____	_____	_____
CUE Acknowledge report that the task is complete.				
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____

Job Title: NLO❑ RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: Reject Primary Water Via RWCU System
JPM Number: S-N-b **Revision Number**: 00
Task Number and Title: 204L003, Reject Primary Water Via RWCU System

K/A Number and Importance: 204000A4.03 3.2/3.1

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑Simulator ❑Plant ❑Control Room

Testing Method: ❑ Simulate **Faulted:** ❑ Yes ☑ No
☑ Perform **Alternate Path:** ☑ Yes ❑ No

Time Critical: ❑Yes ☑No

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

References: DOP 1200-02, rev. 21

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. Unit 2 Reactor Scram has occurred.
2. Reactor water level slowly rising.
3. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to establish an 80 - 110 gpm blowdown from the RWCU system to the Main Condenser Hotwell in accordance with DOP 1200-02
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

Manually Start HPCI for Pressure Control

JPM Number: S-N-c

Revision Number: 09

Date: 01/26/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure: DOA 2300-02
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

REVISION 09, Update JPM to new format and DOA 2300-02 Revision 08.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS:

1. Can use any IC where reactor pressure is high enough (> 150 psig) for HPCI to be operated. (Use IC-8 for this exam)
2. Scram the reactor. Do NOT take the mode switch to Shutdown until a Group 1 isolation comes in.
3. Initiate Torus cooling per Hard Card.
4. Start 2/3A SBGT.
5. Start Unit 2 HPCI Room Cooler.
6. Verify HPCI turbine not tripped, level is not near the setpoint (~50")

REMOTES/ALARMS REQUIRED

NONE

MALFUNCTIONS REQUIRED

NONE

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A transient has occurred on Unit 2, which resulted in a Group I isolation.
2. Reactor pressure has been slowly increasing.
3. Torus cooling is operating and 2/3 A SBGT is running.
4. Unit 2 HPCI Room Cooler is in service and operating normally.
5. The Unit 2 NSO will monitor and control Torus water level per DOP 1600-02.
6. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to initiate HPCI in the pressure control mode in accordance with the Hard Card.
2. Inform the Unit Supervisor when you have completed the task.

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 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 time clock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
* 1. Place HPCI FLOW CONTROL, 2-2340-1, in MAN with zero (0) output.	HPCI FLOW CONTROL in MAN with zero (0) output.	_____	_____	_____
2. Verify MGU and MSC at LSS.	Verifies MGU and MSC at LSS.	_____	_____	_____
* 3. Depress and hold depressed the HPCI AUTO INITIATE pushbutton until MSC reaches HSS.	Depresses and holds depressed the HPCI AUTO INITIATE pushbutton until MSC reaches HSS.	_____	_____	_____
* 4. IF no initiation signal present, THEN; • CLOSE 2-2301-8, PP DISCH VLV • OPEN 2-2301-15, TEST RETURN VLV • OPEN 2-2301-10, TEST RETURN VLV	OPERATES the following valves: • CLOSES 2-2301-8 • OPENS 2-2301-15 • OPENS 2-2301-10	_____	_____	_____
* 5. Control HPCI steam flow by adjusting HPCI flow rate and discharge pressure using turbine speed and/or throttle 2-2301-10.	Controls HPCI steam flow by adjusting HPCI flow rate and discharge pressure using 2-2301-10, **OR** using turbine speed control	_____	_____	_____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
6. Verify the following have been started: • SBGT • HPCI Room Cooler • Torus Cooling	VERFIES the following systems have been started (using cues or physically verifying): • SBGT • HPCI Room Cooler • Torus Cooling	_____	_____	_____
7. Informs Unit Supervisor task is complete.	Informs Unit Supervisor task is complete.	_____	_____	_____
CUE Acknowledge report that the task is complete.				
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: NLO❑ RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: Manually Start HPCI for Pressure Control

JPM Number: S-N-c **Revision Number**: 09

Task Number and Title: 206L006, Manually Start HPCI for Pressure Control

K/A Number and Importance: 206000A4.06 4.3/4.3

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate **Faulted:** ❑ Yes ☑ No
☑ Perform **Alternate Path:** ❑ Yes ☑ No

Time Critical: ❑Yes ☑No

Estimated Time to Complete: _16__minutes **Actual Time Used:** _____minutes

References: DOA 2300-02 Rev. 08 "HPCI Fast Startup" and DOP 2300-03 Rev. 34 "High Pressure Coolant Injection System Manual Startup and Operation"

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily? ❑Yes ❑No

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

Comments:_____
_____
_____
_____
_____
_____
_____
_____

Evaluator's Name: _____
(Print)

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

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A transient has occurred on Unit 2, which resulted in a Group I isolation.
2. Reactor pressure has been slowly increasing.
3. Torus cooling is operating and 2/3 A SBGT is running.
4. Unit 2 HPCI Room Cooler is in service and operating normally.
5. The Unit 2 NSO will monitor and control Torus water level per DOP 1600-02.
6. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to initiate HPCI in the pressure control mode in accordance with the Hard Card.
2. Inform the Unit Supervisor when you have completed the task.

Exelon Nuclear

Job Performance Measure

Perform LPCI System Operability Test with Torus Available

JPM Number: S-N-d

Revision Number: 02

Date: 03/29/2004

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

REVISION 01: Update JPM to new format.

Update DOS 1500-10, "LPCI System Pump Operability Test With Torus Available and In-Service Testing (IST) Program" to Rev. 53.

REVISION 02: Update DOS 1500-10, "LPCI System Pump Operability Test With Torus Available and In-Service Testing (IST) Program" to Rev. 54.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS:

- LPCI pump operability surveillance can be performed from any IC.
- Start the LPCI room coolers.
- Marked up copy of DOS 1500-10 completed up to and including step I.8.a.
- Perform DOS 1500-10 up through and including step I.8.a.
- Snapshot the above conditions if the JPM will be repeated multiple times.
- Place flags on the following annunciators: 902-3 A6, A8, B7, B8, E6, F6, G6, H6, H13.

REMOTES/ALARMS REQUIRED

Run CAEP file d-f NRC JPM.cae to set up the following trigger for this JPM:

Event Trigger 1 activates when LPCI 38A valve OPEN light is lit.
After 10 sec., trips B LPCI pump.
trgset 1 "lplvlvop(23)"
irf lpcipbtp (1 10) true

MALFUNCTIONS REQUIRED

NONE.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. DOS 1500-10 is in progress.
2. The LPCI Valve Operability Test is **NOT** required.
3. Chemistry sampled CCSW last week and results were <1 x 10^{-7} µCi/ml.
4. In-Service Test (IST) and vibration data are **NOT** required.
5. The following annunciators have been flagged: 902-3 A6, A8, B7, B8, E6, F6, G6, H6, H13.
6. NLO is stationed by the 2B LPCI pump, with a copy of DOS 1500-10 Data sheet 1, waiting for orders to record appropriate data.
7. HVO is stationed at Bus 23-1 with a copy of DOS 1500-10, Data sheet 1, waiting for orders to record appropriate data.
8. DOS 1500-10 is completed up through and including step I.8.a.
9. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to complete DOS 1500-10 starting at step I.8.b.
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.

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 time clock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
	1. Select computer point C 254 to be trended on the CRT.	NOTE Evaluator will act as 2nd operator to monitor flow – Selects OD-37 – Selects 1, Add Point – Selects 1, Fast Speed – Enters C254	_____	_____	_____
*	2. Open TORUS CLG/TEST, MO 2-1501-20A.	MO 2-1501-20A OPEN	_____	_____	_____
	3. Close MO 2-1501-11A, HX BYPASS VLV.	MO 2-1501-11A CLOSE	_____	_____	_____
	4. Verify annunciator 902-3 F-2, 2A/2B LPCI SYS HDR PRESS LO is Clear.	VERIFIES Annunciator 902-3 F-2 is NOT illuminated.	_____	_____	_____
	5. Determine acceptable pump discharge pressure for LPCI pump.	Determines acceptable pump discharge pressure for LPCI pump using data from data sheet 1.	_____	_____	_____
Cue:	After NSO contacts NLO for local data, Inform the examinee that step I.8.f. is compete. (Verification of calculation is complete)				
Note:	Procedure CAUTION states LPCI Pumps discharge pressure should be maintained above 100 psig to prevent run out condition and cavitation.				

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
* 6. Start 2B LPCI Pump.	2B LPCI pump ON	_____	_____	_____
* 7. Records 2B LPCI pump discharge pressure.	Records 2B LPCI pump discharge pressure from 2-1540-45B.	_____	_____	_____
* 8. Verify 2B LPCI pump discharge pressure is greater than calculated in step I.8.f	Verifies 2B LPCI pump discharge pressure is greater than calculated in step I.8.f	_____	_____	_____
* 9. Verify the following 902-3 panel annunciators in alarm… A-6 E-6 F-6 G-6 H-6 H-13	Verifies the following 902-3 panel annunciators in alarm… A-6 E-6 F-6 G-6 H-6 H-13	_____	_____	_____
* 10. Time and Throttle TORUS CLG/TEST, MO 2-1501-38A as necessary until LPCI System flow rate of 5000 to 5050 gpm is obtained as indicated by computer point C254.	• Times and holds MO 2-1501-38A C/S CW in Open until 5000 to 5050 GPM indicated on FI 2-1561A. • Times opening of MO 2-1501-38A to be $\leq$36 seconds.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Note: **Trigger 1 activates when the 38A valve open light is lit causing the 2B LPCI pp to trip after a 10 sec. delay.**				
* 11. Immediately closes MO 2-1501-20A.	MO 2-1501-20A CLOSE.	_____	_____	_____
* 12. Close MO 2-1501-38A.	MO 2-1501-38A CLOSE.	_____	_____	_____
13. Notify Unit Supervisor of Tripped 2B LPCI pp.	Notifies Unit Supervisor.	_____	_____	_____
Cue: Acknowledge as NLO/HVO to check pump and/or breaker for 2B LPCI pump.				
Cue: Acknowledge report and inform to leave the LPCI system as-is and you will have Maintenance investigate.				
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____

Job Title: NLO❑ RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: Perform LPCI System Operability Test with Torus Available

JPM Number: S-N-d **Revision Number**: 02
Task Number and Title: 203L015, Perform LPCI System operability test with Torus available.

K/A Number and Importance: 219000A4.01 3.8 / 3.7

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ☑ Perform **Faulted:** ❑ Yes ☑ No **Alternate Path:** ☑ Yes ❑ No

Time Critical: ❑Yes ☑No

Estimated Time to Complete: 18 minutes **Actual Time Used:** _____minutes

References: DOS 1500-10, "LPCI System Pump Operability Test With Torus Available and In-Service Testing (IST) Program", Rev. 54

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. DOS 1500-10 is in progress.
2. The LPCI Valve Operability Test is **NOT** required.
3. Chemistry sampled CCSW last week and results were $<1 \times 10^{-7}$ µCi/ml.
4. In-Service Test (IST) and vibration data are **NOT** required.
5. The following annunciators have been flagged: 902-3 A6, A8, B7, B8, E6, F6, G6, H6, H13.
6. NLO is stationed by the 2B LPCI pump, with a copy of DOS 1500-10 Data sheet 1, waiting for orders to record appropriate data.
7. HVO is stationed at Bus 23-1 with a copy of DOS 1500-10, Data sheet 1, waiting for orders to record appropriate data.
8. DOS 1500-10 is completed up through and including step I.8.a.
9. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to complete DOS 1500-10 starting at step I.8.b.
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

Perform DG Surveillance Testing

JPM Number: S-N-e

Revision Number: 05a

Date: 04/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

REVISION 05, Update JPM to new format.

REVISION 05a, Updated JPM for ILT 03-1 NRC exam

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS:

1. Unit 2/3 Diesel Generator surveillance can be run from any at power IC

2. Run CAEP file: a-e-g NRC JPM.cae

3. Diesel Generator should be started and loaded to Bus 23-1, per DOS 6600-01 up to and including step I.12. (inclusive).

   a. Start 2/3 EDG.
   b. Reset alarms.
   c. Set droop to 55 (trigger)
   d. Acknowledge local panel alarm (trigger)
   e. Reset alarms.
   f. Adjust speed to 60 hz.
   g. Adjust voltage to 4160 v.
   h. Place syncroscope ON for 2/3 EDG output breaker.
   i. Synchronize EDG with 4 kv system.
   j. When synchronized, close DG output breaker.
   k. Raise load with Governor Control Switch to 2340 – 2600 kw.
   l. Turn off synchroscope and remove key.
   m. Using Voltage Reg switch, adjust vars to –300 to +300 kvars.

REMOTES/ALARMS REQUIRED

1. Set Diesel Generator 2/3 droop to 55 (irf T03 = TRUE).

2. When the examinee directs the NLO to set the droop to 5, (irf T03 = FALSE).

3. A few seconds after the droop has been set to 55 (irf T23 = ACKNOWLEDGE) acknowledges U2 D/G Local Panel Trouble Alarms.

4. Running a-e-g NRC JPM.cae will insert the above malfunctions.

MALFUNCTIONS REQUIRED

1. None.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. DOS 6600-01 is in progress on the Unit 2/3 Diesel Generator.
2. Unit 2/3 Diesel Generator is currently paralleled to Bus 23-1.
3. Unit 2/3 Diesel Generator was NOT paralled to Bus 33-1 and will NOT be, due to maintenance activities.
4. The surveillance run is complete and the 2/3 EDG is ready to be shut down.
5. The operator performing the surveillance in the control room had to leave for an urgent family emergency.
6. Intake temperature is 80^{O}F.
7. You are an extra NSO.

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.14. to secure the Unit 2/3 Diesel Generator.
2. Inform the Unit 2 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.

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 #
	1. Data Sheet 1 complete.	Verifies Data Sheet complete.	_____	_____	_____
CUE	Data Sheet 1 is complete.				
	2. Reduce 2/3 DG load.	Places the 2/3 DG Governor C/S to Decr to reduce load.	_____	_____	_____
	NOTE: As soon as load is being reduced give the cue…				
CUE	**Unit 2 has scrammed.**				
*	3. Proceed to Attachment "A"	Recognizes need to perform Attachment "A".	_____	_____	_____
*	4. Open circuit breaker from D/G 2/3 to Bus 23-1.	D/G 2/3 to Bus 23-1 Circuit breaker C/S to Open (Green Open light illuminated)	_____	_____	_____
	5. Records time of Circuit Breaker opening.	Records time of Circuit Breaker opening on attachment A.	_____	_____	_____
	6. Set droop setting to 5.	Requests 2/3 DG Droop to be set to 5.	_____	_____	_____
NOTE	When requested to change droop to 5, (**IRF T03 = FALSE**), Insert trigger **2.** UNIT 2/3 DIESEL GEN TROUBLE alarms. When requested to reset local annunciators, set (**IRF T23 = ACKNOWLEDGE**), insert trigger **3.**				

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
CUE The NLO reports the droop set at 5. Received local alarm and have acknowledged and reset it.				
7. Reset annunciator D/G 2/3 C-1 Droop not set on 5.	Orders HVO to reset local annunciator C-1 on local panel A.	_____	_____	_____
8. Reset annunciator 902-8 A-4 U2/3 DIESEL GEN TROUBLE alarm.	Depresses 902-8 panel annunciator reset button. Verifies 902-8 A-4 alarm tile extinguished.	_____	_____	_____
* 9. Adjust Unit 2/3 D/G frequency to 60 Hz.	Adjusts Governor C/S with Incr or Decr until frequency is 60 Hz.	_____	_____	_____
* 10. Adjust the Unit 2/3 D/G voltage to 4160.	Adjusts Voltage Regulator C/S to Lower or Raise until voltage is at 4160 Volts.	_____	_____	_____
11. Informs the Unit Supervisor of the status of the 2/3 D/G.	Informs the Unit 2 Unit Supervisor that the 2/3 diesel generator surveillance has been terminated and Attachment "A" is complete.	_____	_____	_____
CUE Acknowledge as Unit Supervisor.				
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: NLO❑ RO❑ SRO❑ STA❑ SRO Cert❑

JPM Title: Perform DG Surveillance Testing
JPM Number: S-N-e **Revision Number**: 05a
Task Number and Title: 264L009 Perform DG Surveillance Testing

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

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate **Faulted:** ❑ Yes ☑ No
☑ Perform **Alternate Path:** ☑ Yes ❑ No

Time Critical: ❑Yes ☑No

Estimated Time to Complete: __18__minutes **Actual Time Used:** _____minutes

References: DOS 6600-01

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. DOS 6600-01 is in progress on the Unit 2/3 Diesel Generator.
2. Unit 2/3 Diesel Generator is currently paralleled to Bus 23-1.
3. Unit 2/3 Diesel Generator was NOT paralled to Bus 33-1 and will NOT be, due to maintenance activities.
4. The surveillance run is complete and the 2/3 EDG is ready to be shut down.
5. The operator performing the surveillance in the control room had to leave for an urgent family emergency.
6. Intake temperature is 80^{O}F.
7. You are an extra NSO.

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.14. to secure the Unit 2/3 Diesel Generator.
2. Inform the Unit 2 Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

Bypass an LPRM

JPM Number: S-N-f

Revision Number: 3a

Date: 3/29/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

1. **Revision 03:** Reformatted, updated references and re-validated.

2. **Revision 03a:** For ILT 03-1 NRC Exam, Added some additional LPRMs bypassed to force student to evaluate if another LPRM may be bypassed.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC 12.
2. Bypass the following LPRMs:
   24-57A
   32-33A
   24-41A
   40-49C
   16-17B
   40-49D
   08-49C

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. Unit 2 is at 912 MWe.
2. LPRM 32-25A, APRM Channel 4 is reading full downscale.
3. The following LPRM are currently bypassed:
   - 24-57A
   - 32-33A
   - 24-41A
   - 40-49C
   - 16-17B
   - 40-49D
   - 08-49C
4. The Unit Supervisor has already written an action request to repair LPRM 32-25A.
5. 2nd verifications are not required.
6. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisors has directed you bypass LPRM 32-25A in accordance with DOP 0700-08 through step G.5.
2. Report to 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.

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 #
Provide examinee with a copy of DOP 0700-08.		____	____	____
1. Run computer OD-78 edit to verify bypassed APRM channel meets operability requirements and to also verify channel inop warning is NOT present. **OR** Verifies all of the following; ➢ <9 LPRM cards are in bypass. ➢ at least 2 LPRMs per core level. ➢ APRM Channel inop light NOT lit.	Run OD-78 edit to verify APRM Channel operabilty. **OR** Verifies all of the following; ➢ <9 LPRM cards are in bypass. ➢ at least 2 LPRMs per core level. ➢ APRM Channel inop light not lit.	____	____	____
Cue: If Examinee asks if APRM Channel 4 is operable, tell Examinee to determine the APRM operability.				
2. Ask Shift Supervisor for permission to bypass APRM Channel 4.	Permission GRANTED.	____	____	____
Cue: Unit Supervisor gives you permission to bypass APRM Channel 4.				

Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
*	3. Bypasses APRM Channel 4 with APRM Joystick (Channels 4-5-6).	APRM Channel 4 BYPASSED.	_____	_____	_____
	4. Reset any associated RPS half-scram.	VERIFIES NO RPS half-scram.	_____	_____	_____
	5. Locates LPRM 32-25A in APRM Channel 4 cabinet.	APRM Channel 4 cabinet and LPRM 32-25A LOCATED.	_____	_____	_____
Note:	When LPRM function switch is moved between the BY and OP positions, annunciators 902-5 D-7 and E-7 will alarm. Examinee may flag these tiles.				
*	6. Bypasses LPRM 32-25A.	LPRM 32-25A BYPASSED. (Amplifier card function switch to BY (bypass).	_____	_____	_____
Note:	If asked, inform examinee that another Operator will place an equipment status tag on the bypassed LPRM.				
	7. Log on Attachment B, Bypassed LPRM Log.	LOGS LPRM 32-25A on Attachment B, Bypassed LPRM Log.	_____	_____	_____
	8. Log LPRM location and time bypassed in Unit Log Book.	LOGS LPRM location and time bypassed in Unit Log Book.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
Cue: Inform examinee the Unit Supervisor will log the bypassed LPRM in the Unit Log Book.				
* 9. Verify APRM Channel 4 meets operability requirements.	Determines APRM Channel 4 DOES meet operability requirements.	_____	_____	_____
* 10. Removes APRM Channel 4 from bypass.	APRM Channel 4 REMOVED from Bypass.	_____	_____	_____
CUE Respond as US when examinee informs you they have completed the task.				
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____

Job Title: NLO ❑ RO ❑ SRO ☑ STA ❑ SRO Cert ❑

JPM Title: Bypass an LPRM

JPM Number: S-N-f **Revision Number**: 03a

Task Number and Title: 215L025, Bypass an LPRM

K/A Number and Importance: 215005A4.05 3.4 / 3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ☑ Perform **Faulted:** ❑ Yes ☑ No **Alternate Path:** ❑ Yes ☑ No

Time Critical: ❑ Yes ☑ No

Estimated Time to Complete: 10 minutes **Actual Time Used:** _____minutes

References:
DOP 0700-08, Guideline to Correct an Abnormal LPRM, Rev 11

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. Unit 2 is at 912 MWe.
2. LPRM 32-25A, APRM Channel 4 is reading full downscale.
3. The following LPRM are currently bypassed:
   - 24-57A
   - 32-33A
   - 24-41A
   - 40-49C
   - 16-17B
   - 40-49D
   - 08-49C
4. The Unit Supervisor has already written an action request to repair LPRM 32-25A.
5. 2nd verifications are not required.
6. You are the Unit 2 Aux NSO.

INITIATING CUE

1. The Unit Supervisors has directed you bypass LPRM 32-25A in accordance with DOP 0700-08 through step G.5.
2. Report to the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

SBGT Post Maintenance Testing with receipt of an Auto Initiation Signal

JPM Number: S-N-g

Revision Number: 05

Date: 03/30/04

Developed By: _____ _____
Instructor **Date**

Approved By: _____ _____
Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 2 Updated to comply with rev 26 of DOS 7500-02

Revision 3 Updated to comply with rev 29 of DOS 7500-02

Revision 4 Removed conflicting information in initial conditions regarding IST testing (TR-03-1396)

Revision 5 Updated to comply with rev 30 of DOS 7500-02

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC with Reactor Building Ventilation operating in a normal lineup.

2. The 2/3A SBGT train is in STBY and the 2/3B SBGT train is in PRI.

3. Have the following malfunction ready to automatically insert when the 2/3A SBGT Control Switch is placed to start:

   # Event Trigger 1 inserts a spurious Group II isolation 45 sec. after 2/3A SBGT switch is placed to START.

   trgset 1 "vgdstrta"|2

   imf cigp2i (1 45)|2

   Running a-e-g NRC JPM.cae will setup the above malfunction as trigger 1.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. 2/3B SBGT train is operable and 2/3A SBGT train is in day 2 of a 7 day LCO per ITS 3.6.4.3 Action A.
2. Minor maintenance has been completed on the 2/3 A SBGT train and the train is back in service.
3. The prerequisites of DOS 7500-02 have been completed and IST testing is NOT required.
4. The Initial Cumulative Run Time has been recorded.
5. You are the Center Desk NSO.

INITIATING CUE

1. The Unit 2 Supervisor has directed you to perform DOS 7500-02 for the 2/3A SBGT train.
2. Notify the Unit 2 Supervisor when the task is complete up to step I.3.j.

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 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 #
1. Ensure the following: • 2/3 A and B AIR HEATERs are OFF. • 2/3 A and B Fans are OFF. • The following Annunciators are not in alarm: • 923-5 A-6, STBY GAS TRT SYS A TROUBLE • 923-5 B-6, STBY GAS TRT SYS B TROUBLE	Correctly verifies.	_____	_____	_____
* 2. Verify "B" SBGT SELECT SWITCH in STBY position.	Places 2/3 B SBGT SELECT switch in STBY.	_____	_____	_____
* 3. Place "A" SBGT SELECT SWITCH to START position	STARTS "A" SBGT.	_____	_____	_____
Note The Initial Run Time data has already been recorded. (This was in the initial cues)				
4. Records the Initial Run Time data for SBGT Train "A" on Checklist A.	Verifies the Initial Run Time data for SBGT Train "A" on Checklist A.	_____	_____	_____
Note 45 sec. after the 2/3A SBGT control switch is placed to START, the following malfunction is inserted automatically: **CIGP2I**. (Spurious Group II isolation)				
5. Verifies the 2/3A SBGT train initiated properly.	Verifies the 2/3A SBGT train is initiated properly. When the Group 2 isolation signal is received, recognizes the need to perform the required Limitation and Action steps.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
* 6. Place the SELECT SWITCH for the non-running train to PRI.	Places the SELECT SWITCH for "B" SBGT train to PRI.	_____	_____	_____
* 7. Place the control switch for the train under test to OFF.	Places the control switch for "A" SBGT train to OFF.	_____	_____	_____
8. Verify train in PRI has sufficient flow and the heater is operating.	Correctly verifies.	_____	_____	_____
* 9. Place the Train previously under test to STBY.	Places the control switch for "A" SBGT train to STBY.	_____	_____	_____
10. Verifies a Reactor Building Isolation has occurred on Panel 923-4.	Uses the Limitations and Actions section of DOS 7500-02, step G.1, or any other appropriate procedure to verify the Reactor Building Isolation. (DAN 923-5 A-1 or A-2, Group 2 hard card.)	_____	_____	_____
11. Notifies Unit Supervisor of the change in status of the surveillance.	Unit Supervisor notified.	_____	_____	_____
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: NLO❑ RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: SBGT Post Maintenance Testing with receipt of an Auto Initiation Signal
JPM Number: S-N-g **Revision Number**: 05
Task Number and Title: 261L002, Start the SBGT system.

K/A Number and Importance: 261000A2.10 3.1/3.2

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑Simulator ❑Plant ❑Control Room

Testing Method: ❑ Simulate **Faulted:** ❑ Yes ☑ No
☑ Perform **Alternate Path:** ☑ Yes ❑ No

Time Critical: ❑Yes ☑No

Estimated Time to Complete: 15 minutes **Actual Time Used:** _____minutes

References: DOS 7500-2, 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:_____
_____
_____
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_____
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_____
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_____

Evaluator's Name: _____
(Print)

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

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. 2/3B SBGT train is operable and 2/3A SBGT train is in day 2 of a 7 day LCO per ITS 3.6.4.3 Action A.

2. The minor maintenance has been completed on the 2/3 A SBGT train and the train is back in service.

3. The prerequisites of DOS 7500-02 have been completed and IST testing is NOT required.

4. The Initial Cumulative Run Time has been recorded.

5. You are the Center Desk NSO.

INITIATING CUE

1. The Unit 2 Supervisor has directed you to perform DOS 7500-02 for the 2/3A SBGT train.

2. Notify the Unit 2 Supervisor when the task is complete up to step I.3.j.

Exelon Nuclear

Job Performance Measure

SBGT Post Maintenance Testing with receipt of an Auto Initiation Signal

JPM Number: S-N-g

Revision Number: 05

Date: 03/30/04

Developed By: _____ _____
Instructor **Date**

Approved By: _____ _____
Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 2 Updated to comply with rev 26 of DOS 7500-02

Revision 3 Updated to comply with rev 29 of DOS 7500-02

Revision 4 Removed conflicting information in initial conditions regarding IST testing (TR-03-1396)

Revision 5 Updated to comply with rev 30 of DOS 7500-02

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC with Reactor Building Ventilation operating in a normal lineup.

2. The 2/3A SBGT train is in STBY and the 2/3B SBGT train is in PRI.

3. Have the following malfunction ready to automatically insert when the 2/3A SBGT Control Switch is placed to start:

   # Event Trigger 1 inserts a spurious Group II isolation 45 sec. after 2/3A SBGT switch is placed to START.

   trgset 1 "vgdstrta"|2

   imf cigp2i (1 45)|2

   Running a-e-g NRC JPM.cae will setup the above malfunction as trigger 1.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. 2/3B SBGT train is operable and 2/3A SBGT train is in day 2 of a 7 day LCO per ITS 3.6.4.3 Action A.
2. Minor maintenance has been completed on the 2/3 A SBGT train and the train is back in service.
3. The prerequisites of DOS 7500-02 have been completed and IST testing is NOT required.
4. The Initial Cumulative Run Time has been recorded.
5. You are the Center Desk NSO.

INITIATING CUE

1. The Unit 2 Supervisor has directed you to perform DOS 7500-02 for the 2/3A SBGT train.
2. Notify the Unit 2 Supervisor when the task is complete up to step I.3.j.

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 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 #
1. Ensure the following: • 2/3 A and B AIR HEATERs are OFF. • 2/3 A and B Fans are OFF. • The following Annunciators are not in alarm: • 923-5 A-6, STBY GAS TRT SYS A TROUBLE • 923-5 B-6, STBY GAS TRT SYS B TROUBLE	Correctly verifies.	_____	_____	_____
* 2. Verify "B" SBGT SELECT SWITCH in STBY position.	Places 2/3 B SBGT SELECT switch in STBY.	_____	_____	_____
* 3. Place "A" SBGT SELECT SWITCH to START position	STARTS "A" SBGT.	_____	_____	_____
Note The Initial Run Time data has already been recorded. (This was in the initial cues)				
4. Records the Initial Run Time data for SBGT Train "A" on Checklist A.	Verifies the Initial Run Time data for SBGT Train "A" on Checklist A.	_____	_____	_____
Note 45 sec. after the 2/3A SBGT control switch is placed to START, the following malfunction is inserted automatically: **CIGP2I**. (Spurious Group II isolation)				
5. Verifies the 2/3A SBGT train initiated properly.	Verifies the 2/3A SBGT train is initiated properly. When the Group 2 isolation signal is received, recognizes the need to perform the required Limitation and Action steps.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
* 6. Place the SELECT SWITCH for the non-running train to PRI.	Places the SELECT SWITCH for "B" SBGT train to PRI.	_____	_____	_____
* 7. Place the control switch for the train under test to OFF.	Places the control switch for "A" SBGT train to OFF.	_____	_____	_____
8. Verify train in PRI has sufficient flow and the heater is operating.	Correctly verifies.	_____	_____	_____
* 9. Place the Train previously under test to STBY.	Places the control switch for "A" SBGT train to STBY.	_____	_____	_____
10. Verifies a Reactor Building Isolation has occurred on Panel 923-4.	Uses the Limitations and Actions section of DOS 7500-02, step G.1, or any other appropriate procedure to verify the Reactor Building Isolation. (DAN 923-5 A-1 or A-2, Group 2 hard card.)	_____	_____	_____
11. Notifies Unit Supervisor of the change in status of the surveillance.	Unit Supervisor notified.	_____	_____	_____
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: NLO❑ RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: SBGT Post Maintenance Testing with receipt of an Auto Initiation Signal
JPM Number: S-N-g **Revision Number**: 05
Task Number and Title: 261L002, Start the SBGT system.

K/A Number and Importance: 261000A2.10 3.1/3.2

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑Simulator ❑Plant ❑Control Room

Testing Method: ❑ Simulate **Faulted:** ❑ Yes ☑ No
☑ Perform **Alternate Path:** ☑ Yes ❑ No

Time Critical: ❑Yes ☑No

Estimated Time to Complete: 15 minutes **Actual Time Used:** _____minutes

References: DOS 7500-2, 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. 2/3B SBGT train is operable and 2/3A SBGT train is in day 2 of a 7 day LCO per ITS 3.6.4.3 Action A.

2. The minor maintenance has been completed on the 2/3 A SBGT train and the train is back in service.

3. The prerequisites of DOS 7500-02 have been completed and IST testing is NOT required.

4. The Initial Cumulative Run Time has been recorded.

5. You are the Center Desk NSO.

INITIATING CUE

1. The Unit 2 Supervisor has directed you to perform DOS 7500-02 for the 2/3A SBGT train.

2. Notify the Unit 2 Supervisor when the task is complete up to step I.3.j.

Exelon Nuclear

Job Performance Measure

Vent Scram Air Header to Perform Alternate Insertion of Control Rods

JPM Number: IP-N-i

Revision Number: 09

Date: 03/22/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 06, Update to comply with Rev. 12 of DEOP 0500-05. Change K/A to 295037EA1.05.

Revision 07, Changed validation time to 15 minutes.

Revision 08, Update JPM to new format.

Revision 09, Modified for application to Unit 3 scram air header.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS:

None

REMOTES/ALARMS REQUIRED

None

MALFUNCTIONS REQUIRED

None

Job Performance Measure (JPM)

INITIAL CONDITIONS

An ATWS has occurred on Unit 3 and the Operating Team has been unable to insert Control Rods from the Control Room.

You are an extra NSO.

INITIATING CUE

The Unit 3 Unit Supervisor has directed you to vent the Unit 3 Scram Air Header in accordance with DEOP 500-05.

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 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 #
1. Obtain an adjustable wrench for use in instrument test connection removal.	Obtains adjustable wrench from the DEOP Equipment Storage Cabinet in the Control Room or other suitable location.	_____	_____	_____
CUE The equipment you identified is in your hand.				
2. Proceeds to the Unit 3 CRD Flow Control Station Area.	LOCATES the Unit 3 CRD Flow Control Station Area.	_____	_____	_____
* 3. Close manual valve 3-0301-109, U3 SCRAM AIR HDR SUPPLY ISOL VLV.	Rotates 3-0301-109 valve CW until handwheel and stem are full in.	_____	_____	_____
CUE The valve is in the position you described.				
* 4. Remove instrument test connection from manual valve 3-0301-102, U3 SCRAM AIR HDR PI 3-302-80 TEST CONN SV.	Rotates manual valve 3-0301-102 instrument test connection CCW until off.	_____	_____	_____
CUE The component is in the condition you have described.				

*	5. Open manual valve 3-0301-102, U3 SCRAM AIR HDR PI 3-0302-80 TEST CONN SV.	Rotates 3-301-102 valve CCW until handwheel and stem are full out.	_____ _____ _____
CUE	As the examinee opens the valve inform them that a loud rush of air is heard and eventually stops. The component is in the condition you have described.		
	6. Notify Unit 3 Unit Supervisor that the Unit 3 Scram Air Header is vented.	Notifies the Unit Supervisor that scram air header is vented.	_____ _____ _____
CUE	Utilizing three way communications, repeat back the message as given as the Unit Supervisor Control rods are moving toward position 00.		
		END	

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: ☐ NLO ☐ RO ☑ SRO ☐ STA ☐ SRO Cert

JPM Title: Vent Scram Air Header to Perform Alternate Insertion of Control Rods
JPM Number: IP-N-i **Revision Number**: 09
Task Number and Title: 295L106, Correctly vent the Unit 3 Scram Pilot Air Header to insert control rods.

K/A Number and Importance: 295037EA1.05 3.9/4.0

Suggested Testing Environment: In Plant

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ☑ Simulate **Faulted:** ☐Yes ☑ No
☐ Perform **Alternate Path:** ☐Yes ☑ No

Time Critical: ☐ Yes☑ No

Estimated Time to Complete: _15__minutes **Actual Time Used:** _____minutes

References: DEOP 0500-05

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

An ATWS has occurred on Unit 3 and the Operating Team has been unable to insert Control Rods from the Control Room.

You are an extra NSO.

INITIATING CUE

The Unit 3 Unit Supervisor has directed you to vent the Unit 3 Scram Air Header in accordance with DEOP 500-05.

Exelon Nuclear

Job Performance Measure

Restore U-2 125 VDC Battery System to Operable Following a Failure of One or More of the Battery Busses.

JPM Number: IP-N-j

Revision Number: 10

Date: 02/10/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

REVISION 06, Add steps to comply with Rev. 06 of DOP 6900-08.

REVISION 07, Update val. Time from 10 min to 11.5 min.

REVISION 08, Update to comply with Rev. 07 of DOP 6900-08.

REVISION 09, Changed validation time to 23 minutes.

REVISION 10, **Update JPM to new format.**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS:

NONE

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A failure of 125 VDC Bus feed breaker B-1 from the Unit 2 125 VDC Batteries and Chargers resulted in the de-energization of the Unit 2 125 VDC system.
2. Electrical Maintenance has replaced the B-1 breaker on the Unit 2 125 VDC Turbine Building Main Bus 2A-1.
3. 125 Vdc Bus 2A-1 is de-energized.
4. Unit 2 and Unit 3 are both in Cold Shutdown conditions.
5. You are an extra NSO.

INITIATING CUE

1. The Unit 2 Unit Supervisor has directed you to re-energize 125 VDC Turbine Building Main Bus 2A-1 utilizing DOP 6900-08.
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.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment #
Note	Examinee should begin on step G.2 which directs performance of step G.1.				
	1. Verify breaker A1, U3 125 VDC TURB BLDG RESERVE BUS 3B (MAIN FEED), open.	VERIFIES breaker A1 is in the OFF position.	____	____	____
CUE	The breaker is in the position you have described.				
	2. Verify breaker A2, U2 125 VDC RX BLDG DIST PANEL. (MAIN FEED), open.	VERIFIES breaker A2 is in the OFF position.	____	____	____
CUE	The breaker is in the position you have described.				
	3. Verify breaker A3, U2 125 VDC TURB BLDG RESERVE BUS 2B (RESERVE FEED), open.	VERIFIES breaker A3 is in the OFF position.	____	____	____
CUE	The breaker is in the position you have described.				
	4. Verify breaker B1, U2 125 VDC TURB BLDG MAIN BUS 2A-1, open.	VERIFIES breaker B1 is in the OFF position.	____	____	____
CUE	The breaker is in the position you have described.				

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment #
5. Verify breaker C1, U2 125 VDC TURB BLDG MAIN BUS 2A-2, open.	VERIFIES breaker C1 is in the OFF position.	____	____	____
CUE The breaker is in the position you have described.				
6. Open all breakers on U2 125 VDC TURB BLDG MAIN BUS 2A-1 DIST PNL (ESS DIV I).	Opens all breakers on U2 125 VDC TURB BLDG MAIN BUS 2A-1 DIST PNL (ESS DIV I), U2 TBX Main bus Switchgear inside Cubicle C-2.	____	____	____
CUE The breakers are in the position you have described.				
* 7. At Cubicle D1, place the 125 VDC VOLTMETER SELECTOR SWITCH in BATT and determine Unit 2 125 VDC Battery Voltage.	VERIFIES the 125 VDC VOLTMETER SELECTOR SWITCH in BATT and determine Unit 2 125 VDC Battery Voltage.	____	____	____
CUE The component is in the position you have described. Indicate U-2 Battery Voltage reads ~130 volts.				
* 8. Close Breaker B1, U2 125 VDC TURB BLDG MAIN BUS 2A-1.	Rotates Breaker B1 CCW to the ON position.	____	____	____
CUE The breaker is in the position you have described.				

	9. At Cubicle D1, place the 125 VDC VOLTMETER SELECTOR SWITCH in BUS 2A-1.	PLACES the 125 VDC VOLTMETER SELECTOR SWITCH in Bus 2A-1.	_____ _____ _____
CUE	The component is in the position you have described.		
	10. Verify Bus 2A-1 voltage is greater than 125 VDC.	VERIFES Bus 2A-1 voltage.	_____ _____ _____
CUE	Indicate Bus 2A-1 Voltage reads ~130 volts.		
	11. Informs Unit Supervisor Task is complete.	Informs Unit Supervisor Task is complete.	_____ _____ _____
CUE	Acknowledge report that task is complete.		
END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: NLO❒ RO❒ SRO☑ STA❒ SRO Cert❒

JPM Title: Restore U-2 125 VDC Battery System to Operable Following a Failure of One or More of the Battery Busses.
JPM Number: IP-N-j **Revision Number**: 10
Task Number and Title: 263L007, Restore U-2 125 VDC Battery System to Operable Following a Failure of One or More of the Battery Busses.
K/A Number and Importance: 263000A4.01 3.3/3.5

Suggested Testing Environment: In Plant

Actual Testing Environment: ❒ Simulator ❒Plant ❑ Control Room

Testing Method: ☑ Simulate **Faulted:** ❒ Yes ☑ No
❒ Perform **Alternate Path:** ❒ Yes ☑ No

Time Critical: ❒Yes ☑No

Estimated Time to Complete: _20__minutes **Actual Time Used:** _____minutes

References: DOP 6900-08

EVALUATION SUMMARY:
Were all the Critical Elements performed satisfactorily? ❒Yes ❒No

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

Comments:_____
_____
_____
_____
_____
_____
_____
_____
_____

Evaluator's Name: _____
(Print)

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

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. A failure of 125 VDC Bus feed breaker B-1 from the Unit 2 125 VDC Batteries and Chargers resulted in the de-energization of the Unit 2 125 VDC system.
2. Electrical Maintenance has replaced the B-1 breaker on the Unit 2 125 VDC Turbine Building Main Bus 2A-1.
3. 125 Vdc Bus 2A-1 is de-energized.
4. Unit 2 and Unit 3 are both in Cold Shutdown conditions.
5. You are an extra NSO.

INITIATING CUE

1. The Unit 2 Unit Supervisor has directed you to re-energize 125 VDC Turbine Building Main Bus 2A-1 utilizing DOP 6900-08.
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

Supply RPS Bus A from RPS MG 3B with MG Failure to Start Initially

JPM Number: IP-N-k

Revision Number: 00a

Date: 03/25/04

Developed By: _____ _____

Instructor **Date**

Approved By: _____ _____

Facility Representative **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 through 11 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, or simulator)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____

_____ 9. Pilot test the JPM:
a. verify cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

_____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 00 New JPM for LORT Requal

Revision 00a Change JPM to Unit 3 and 3B bus to 3A RPS Bus for ILT 03-1 NRC Exam and conform to Rev 24 of DOP 0500-03

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

NONE

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. Pre Job Brief has been completed.
2. Unit 3 is at 95% power.
3. The 3A RPS Bus normal feed has tripped. EMD and an NLO are standing by to assist as needed.
4. EMD has verified no damage to equipment and the RPS bus can be safely re-energized.
5. MCCs 35-2, 38-3 and 39-2 are energized.
6. The 3A RPS Bus NORMAL supply RPS MG Set is NOT running.
7. The Load Dispatcher has been notified of the evolution.
8. QNE has been contacted and powerplex has been shut down.
9. No testing is in progress on U3.
10. Scram fuse integrity in the 2203-22A through H panels has been verified.
11. RWCUs have tripped and isolated on loss of HELB.
12. Reactor Building Ventilation has isolated and SBGT is operating.
13. The Unit 3 NSO is standing by to perform Main Control Room manipulations if required.
14. You are an extra NSO.

INITIATING CUE

1. The Unit 3 Unit Supervisor has directed you perform the in-plant actions required to energize RPS Bus 3A from its NORMAL power supply in accordance with DOP 0500-03.
2. Notify 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.

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 #
	1. Determine that Step G.2 is the correct step of DOP 0500-03	Determines that Step G.2 is the correct step of DOP 0500-03	_____	_____	_____
	2. Verify prerequisites: • MCC 39-2 available • LD notified • No testing is in progress. • Scram fuse integrity has been verified. • Powerplex has been shutdown.	Verifies prerequisites (supplied in initiating conditions)	_____	_____	_____
	3. Bypass APRM #6.	DIRECTS the Unit 3 NSO to place APRM #6 in Bypass.	_____	_____	_____
CUE	APRM #6 is in Bypass.				
Note	Examinee will determine unit is NOT in shutdown and RWCU is isolated.				
Note	Breaker E2 at MCC 39-2 is open when the student verifies the breaker position. The student must then CLOSE Breaker E2 at MCC 39-2. (May request NLO to turn on breaker)				
*	4. Verify breaker to RPS MG 3B is closed.	Verifies MCC 39-2 Breaker E2, 3-0501-B REACTOR PROTECTION MG SET 3B is in the ON position.	____	_____	_____
CUE	The breaker is in the position you described.				

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment #
Note	If the examinee did NOT verify the breaker above was closed the indicating lights for the RPS MG SET B control switch will NOT be illuminated and the MG Set will NOT start.				
	5. Hold MOTOR STARTER switch in CLOSE UNTIL operating speed is obtained (sound of full rpm).	STARTS the MG SET by HOLDING the MOTOR STARTER switch in the CLOSE position until the MG SET is up to speed.	_____	_____	_____
CUE	You hear the MG set has started and it sounds like it is up to speed. If asked, the status of the indicating lights state that the RED light is lit and the GREEN and AMBER lights are OFF.				

*	6. Release MOTOR STARTER switch to allow Start Contactor to drop out and Run Contactor to pick up.	RELEASES MOTOR STARTER switch.	_____ _____ _____
CUE	You have released the MOTOR STARTER switch. The MG Set stopped running after the control switch was released. If asked, provide the following cues: The amber and green lights are on, the red light is off. If the student contacts the control room and request permission to attempt to start the RPS MG again give them permission to try again. If asked to reset the thermals at 39-2, as the NLO, inform the student the thermals have been reset.		
*	7. Hold MOTOR STARTER switch in CLOSE UNTIL operating speed is obtained (sound of full rpm).	STARTS the MG SET by HOLDING the MOTOR STARTER switch in the CLOSE position until the MG SET is up to speed.	_____ _____ _____
CUE	You hear the MG set has started and it sounds like it is up to speed.		
*	8. Release MOTOR STARTER switch to allow Start Contactor to drop out and Run Contactor to pick up.	RELEASES MOTOR STARTER switch.	_____ _____ _____
CUE	The MG set remains running after the switch is released.		

CUE	If asked: "Underfrequency flag is up on the seal in relay."		
*	9. Depress AUXILIARY RESET to reset UNDERFREQ AND OVERVOLTAGE seal-in relays.	DEPRESSES AUXILIARY RESET for 7 -10 seconds to reset UNDERFREQ AND OVERVOLTAGE seal-in relays.	_____ _____ _____
CUE	UNDERFREQ AND OVERVOLTAGE seal-in relays are reset.		
	10. Verify VOLTMETER TRANSFER Switch in the GEN position.	Voltmeter transfer switch is in the GEN position.	_____ _____ _____
CUE	The component is in the position you described.		
	11. Ensure AC VOLTS indicates 111 to 123.	VERIFIES AC VOLTS indication normal.	_____ _____ _____
CUE	Point on the Meter indicated by the examinee to read what they stated they expect to see (~120 volts).		
	12. Verify POWER IN, MOTOR GEN red indicating light ON at EPA Relay 3B-1.	VERIFIES POWER IN, MOTOR GEN red indicating light is ON.	_____ _____ _____
CUE	The component is in the condition you described.		
	13. Verifies OVERVOLTAGE, UNDERVOLTAGE and UNDERFREQUENCY lights are OFF at EPA Relay 3B-1	VERIFIES indicating lights are OFF.	_____ _____ _____
CUE	The components are in the condition you described.		

*	14. Close circuit breaker on EPA Relay 3B-1.	Circuit Breaker on EPA Relay 3B-1 CLOSED.	_____ _____ _____
CUE	The component is in the condition you have described.		
	15. Ensure POWER OUT, RPS BUS red indicating light ON at EPA Relay 3B-1.	VERIFIES POWER OUT, RPS BUS red indicating light ON at EPA Relay 3B-1.	_____ _____ _____
CUE	The component is in the condition you described.		
	16. Verify POWER IN, MOTOR GEN red indicating light on at EPA Relay 3B-2.	VERIFIES POWER IN, MOTOR GEN red indicating light ON at EPA Relay 3B-2.	_____ _____ _____
CUE	The component is in the condition you described.		
	17. Verifies OVERVOLTAGE, UNDERVOLTAGE and UNDERFREQUENCY LIGHTS are OFF on EPA Relay 3B-2	VERIFIES OVERVOLTAGE, UNDERVOLTAGE and UNDERFREQUENCY LIGHTS are OFF.	_____ _____ _____
CUE	The component is in the condition you described.		
*	18. Close circuit breaker on EPA Relay 3B-2.	Circuit breaker on EPA Relay 3B-2 CLOSED.	_____ _____ _____
CUE	The component is in the position you described.		
	19. Ensure POWER OUT, RPS BUS red indicating light ON at EPA Relay 3B-2.	Makes Control Room notification by telephone.	_____ _____ _____
CUE	The component is in the condition you described.		

	20. Notify Control Room that 3A RPS Bus will be powered from 3B RPS MG Set.	Makes Control Room notification by telephone.	_____ _____ _____
CUE	Acknowledge as Unit 3 NSO that 3A RPS Bus will be powered from 3B RPS MG Set.		
Note	The breaker will not stay closed unless the AUXILIARY RESET pushbutton was depressed earlier. (JPM step #9)		
*	21. Close 3B M-G SET FEED TO 3A RPS BUS NORMAL breaker.	CLOSES 3B M-G SET FEED TO 3A RPS BUS NORMAL breaker (up position).	_____ _____ _____
CUE	The component is in the position you described.		
	22. Place VOLTMETER TRANSFER switch in BUS.	Rotates Voltmeter Transfer switch to BUS.	_____ _____ _____
CUE	The component is in the position you described.		
	23. Verify AC VOLTS is 111 to 123 volts.	VERIFIES AC VOLTS normal.	_____ _____ _____
CUE	Point on the Meter indicated by the examinee to read what they stated they expect to see (~120 volts).		
	24. Notify the control room to reset the ½ scram.	Control Room notification done by telephone.	_____ _____ _____
	25. Informs US the task is complete		_____ _____ _____
CUE	Respond as Unit Supervisor.		
		END	

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name:_____
Job Title: NLO❑ RO❑ SRO☑ STA❑ SRO Cert❑

JPM Title: Supply RPS Bus A from RPS MG 3B with MG failure to start initially
JPM Number: IP-N-k **Revision Number**: 00a
Task Number and Title: 212L001, Perform RPS Power Supply Operations

K/A Number and Importance: 212000 2.1.30 3.9/3.4
Suggested Testing Environment: Plant

Actual Testing Environment: ❑Simulator ❑Plant ❑Control Room

Testing Method: ☑ Simulate **Faulted:** ❑ Yes ☑ No
❑ Perform **Alternate Path:** ☑ Yes ❑ No

Time Critical: ❑Yes ☑No

Estimated Time to Complete: 27 minutes **Actual Time Used:** _____minutes

References: DOP 0500-03

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. Pre Job Brief has been completed.
2. Unit 3 is at 95% power.
3. The 3A RPS Bus normal feed has tripped. EMD and an NLO are standing by to assist as needed.
4. EMD has verified no damage to equipment and the RPS bus can be safely re-energized.
5. MCCs 35-2, 38-3 and 39-2 are energized.
6. The 3A RPS Bus NORMAL supply RPS MG Set is NOT running.
7. The Load Dispatcher has been notified of the evolution.
8. QNE has been contacted and powerplex has been shut down.
9. No testing is in progress on U3.
10. Scram fuse integrity in the 2203-22A through H panels has been verified.
11. RWCUs have tripped and isolated on loss of HELB.
12. Reactor Building Ventilation has isolated and SBGT is operating.
13. The Unit 3 NSO is standing by to perform Main Control Room manipulations if required.
14. You are an extra NSO.

INITIATING CUE

1. The Unit 3 Unit Supervisor has directed you perform the in-plant actions required to energize RPS Bus 3A from its NORMAL power supply in accordance with DOP 0500-03.
2. Notify the Unit Supervisor when the task is complete.