Exelon Nuclear
Job Performance Measure

. **Downshift RR Pumps /Failure of one RR pump to downshift**

JPM Number: SRO/RO - a

Revision Number: 00

Date: 05/05/2010

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **Date**

Job Performance Measure (JPM)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

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

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

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

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating and terminating cues are properly identified.

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

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

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

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

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

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

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

_____ _____
SME/Instructor Date

Job Performance Measure (JPM)

Revision Record (Summary)

1. **Revision 06,** Reformatted, revised to current procedure
2. **Revision 07,** Revised format IAW NTAFT JLOR03 Rev. 2. Revised to include new Task number and title. Revised IAW with LOP-RR-08, Rev. 23.
3. **Revision 08,** Added steps for digital RR modification. Updated Procedure revisions for current procedure.
4. **Revision 09,** Deleted LOA-RR-101 sub-steps for Tech Spec 3.4.1.
5. **Revision 10,** Revised for formatting and procedure revision.
6. **Revision 0** Rev. 0 based on Rev. 10, for ILT NRC 09-1 exam.

Job Performance Measure (JPM)

SIMULATOR SETUP

1. Reset the simulator to IC 38/26 or similar setup (where conditions are met to downshift the RR pumps).

   NOTE: It is okay 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. Input the “B” RR Pump fails to downshift, trips to zero malfunction (MRC015) is present on the malfunction summary.
3. Verify FCL is <66.7% FCL.
4. Ensure the performance of this JPM does not interfere with the performance of any other JPMs.
5. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist.
6. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- A reactor shutdown is in progress.
- LGP 2-1 is complete up to step E.1.6.
- A & B Reactor Recirc LFMG set prestarts have been completed.

INITIATING CUE

The Unit Supervisor has directed you to downshift the Reactor Recirc Pumps IAW LOP-RR-08.

You are to inform the Unit Supervisor when both Reactor Recirc Pumps are downshifted.

Fill in the JPM Start Time when the examinee 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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	All steps of this JPM are to be completed at control room panel H13-P602 unless otherwise noted.				
1.	VERIFY the bottom head drain valve, 1G33-F101, is OPEN to insure greater than 25 gpm bottom head drain flow for correct bottom head temperature indication.	Examinee verifies the bottom head drain valve, 1G33-F101, is open.	____	____	____
Note	Having this valve open helps to eliminate thermal stratification of the water in the bottom head.				
2.	At the 1DS001 Operator Station RRFC Process Review Screen, for A AND B RR Loops, Check the "Accumulated Time for Delta Temp Low"	Examinee checks at 1DS001 that "Accumulated Time for Delta Temp Low " is 0. NOTE: May not be "0". If not, log per step 3.	____	____	____
3.	If the "Accumulated Time for Delta Temp Low" is not zero log in the Unit log and notify System Engineer	Examinee notifies Unit NSO to record accumulated time in Unit log and notifies System Engineer.	____	____	____
CUE	As the System Engineer/ Unit NSO, acknowledge the "Accumulated Time for Delta Temp Low" value.				
*4.	CLOSE MG Set Motor Feed Breakers 1A and 1B.	Examinee closes MG Set Motor Feed Breakers 1A and 1B.	____	____	____
5.	VERIFY LFMG output voltage increases to 600 volts in <30 seconds.	Examinee verifies LFMG output voltage increases to 600 volts in <30 seconds.	____	____	____
6.	VERIFY FCL is < 66.7%, or value determined by QNE.	Examinee verifies FCL <66.7% by the use of any one of the following:			
		❑ Reactor power and flow indications on the P/F Map	____	____	____
		OR			
		❑ OD-3.	____	____	____

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	If requested, as the QNE state the FCL is acceptable if less than 66.7% FCL (ensure <66.7%).				
Note **Sim Op**	The B RR pump will downshift to zero in the following step. ENSURE the malfunction is INSERTED to trip B RR pump to OFF. (MRC015)				
*7.	TURN Motor Control Breaker 3 Control Switches for BOTH A and B Reactor Recirc Pumps to the TRANSFER-MG position.	Examinee turns BOTH Motor Control Breaker 3 Control Switches for A and B Reactor Recirc Pumps to the TRANSFER-MG position.	____	____	____
8.	OBSERVE the 3A and 3B breakers OPEN.	Examinee observes that Breakers 3A and 3B open	____	____	____
9.	OBSERVE A and B Pump Speed decreases to between 350 and 480 RPM as observed on speed indicator 1B33-R651.	Examinee observes A and B Pump Speed decreases to between 350 and 480 RPM as observed on speed indicator 1B33-R651.	____	____	____
Note	Steps 10 -13 apply only to the A RR pump.				
10.	OBSERVE the MG Set Generator Output Breakers 2A and 2B CLOSE.	Examinee observes the MG Set Generator Output Breaker 2A closes.	____	____	____
11.	OBSERVE A and B Pump speed stabilizes at approximately 445 RPM.	Examinee observes A Pump speed stabilizes at approximately 445 RPM.	____	____	____
12.	OBSERVE A and B Pump differential pressure stabilizes at approximately 30 psid.	Examinee observes A differential pressure stabilizes at approximately 30 psid.	____	____	____
13.	OBSERVE A and B MG set amps stabilize at approximately 60 amps.	Examinee observes A MG set amps stabilize at approximately 60 amps.	____	____	____
Note	Values listed above are from LOP-RR-08 and are for two-loop operation, they may be slightly different for single loop ops.				
Note	Steps 10 - 13 may not be performed by the Examinee until after taking actions per LOA-RR-101 or may be marked N/A.				
CUE	Inform the Examinee that core instability will be verified IAW LOS-RR-SR1 by another operator.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
14.	NOTIFY the Unit Supervisor that the "B" Reactor Recirc Pump tripped to zero.	Examinee notifies the Unit Supervisor that the "B" Reactor Recirc Pump tripped to zero.	____	____	____
CUE	As Unit Supervisor, acknowledge the report. Direct the Examinee to perform the actions of LOA-RR-101. "Inform me (US) when the actions are complete."				
	ALTERNATE PATH BEGINS HERE				
15.	Enter LOA-RR-101.	Examinee enters and performs the actions of LOA-RR-101.	____	____	____
16.	CHECK at least one Recirc pump operating.	Examinee verifies at least one running RR pump.	____	____	____
17.	CHECK that 1H13-P603-A109, OPRM Hi Alarm is CLEAR	Examinee verifies 1H13-P603-A109, OPRM Hi Alarm is CLEAR			
CUE	Inform the Examinee that another operator will perform section B.1, Core Instabilities.				
18.	VERIFY both RR Loop M/A stations are in MANUAL	Examinee verifies that both RR Loop M/A stations are in MANUAL	____	____	____
19.	CHECK operating Recirc Pump in HIGH SPEED.	Examinee checks to see if the running RR pump is in HIGH SPEED.	____	____	____
*20.	OPEN FCV on LOW SPEED Recirc pump.	Examinee opens the FCV on the low speed recirc pump.	____	____	____
21.	INITIATE required actions of Tech Spec 3.4.1 for Single Loop Operation.	Examinee initiates actions for SLO by notifying the Unit Supervisor of procedural requirements.	____	____	____
CUE	As the Unit Supervisor, acknowledge the report. Inform the Examinee that the actions will be taken.				
22.	NOTIFY IMD to perform LIS-NR-107, Unit 1 APRM/RBM Flow Converter to Total Core Flow Adjustment.	Examinee informs the Unit Supervisor of the need to contact IMD to perform LIS-NR-107.	____	____	____

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	As Unit Supervisor, acknowledge the request. Inform the Examinee that the actions will be taken.				
*23.	DECREASE FCV position to minimum for tripped Recirc pump.	Examinee decreases FCV position to minimum for tripped 1B Recirc pump.	____	____	____
*24.	When <350 rpm, PLACE all breakers for tripped RECIRC pump in PTL.	Examinee places all breakers for tripped RECIRC pump (1B,2B,3B and 4B) in PTL when speed is <350 rpm.	____	____	____
25.	Inform the Unit Supervisor that the 1B RR breakers are in PTL.	Examinee informs the Unit Supervisor that the 1B RR breakers are in PTL.	____	____	____

Terminating Cue	Acknowledge the report. The JPM is complete at this time.

JPM Stop Time: _____

Job Performance Measure (JPM)

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

JPM Title: Downshift Reactor Recirc Pumps IAW LOP-RR-08 with a Failure of One Pump to Off
JPM Number:S-RR-08 Revision Number: 00
Task Number and Title: 22.004 Given Unit Supervisor authorization, Transfer Reactor Recirc Pumps from Fast to Slow Speed, IAW station procedures.
K/A Number and Importance: 202001, A4.01, 3.7/3.7

Suggested Testing Environment: Simulator

Actual Testing Environment: ☒ Simulator ☐ Plant ☐ Control Room

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

Time Critical: ☐ Yes ☒ No

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

References: LOP-RR-08 (rev 34); LOA-RR-101 (rev 28) ; LGP 2-1 (rev 84)

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

- A reactor shutdown is in progress.
- LGP 2-1 is complete up to step E.1.6.
- A & B Reactor Recirc LFMG set prestarts have been completed.

INITIATING CUE

The Unit Supervisor has directed you to downshift the Reactor Recirc Pumps IAW LOP-RR-08.

You are to inform the Unit Supervisor when both Reactor Recirc Pumps are downshifted.

Exelon Nuclear

Job Performance Measure

Loss of TDRFP speed feedback signal/restore to Auto

JPM Number: SRO/RO – b.

Revision Number: 00

Date: 05/05 /10

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **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.

_____ 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 _____ Rev: _____
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 00, New JPM developed for 09-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to a full power IC.

NOTE:	It is okay 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. Run S:/OPENSIM/CAEP/ILT/Abnormal Ops/TDRFPA Speed Demand.cae and Trigger 1.
3. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
4. This completes the setup for this JPM.

INITIAL CONDITIONS

Unit 1 is at 100% power. A loss of speed feedback signal occurred on the 1A TDRFP.

INITIATING CUE

The Unit Supervisor has directed you to respond the 1A TDRFP feedback signal loss IAW LOA-FW-101 section B.2.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
01	CHECK TDRFP Manual Backup Station Auto Enable light not illuminated.	Examinee verifies 1A TDRFP Manual Backup Station Auto Enable light is not illuminated.	___	___	___
02	Control Reactor Water Level using Manual Backup Station Raise/Lower Pushbuttons.	Examinee maintains Reactor Water Level using Manual Backup Station Raise/Lower Pushbuttons.	___	___	___
*03	At the Manual Backup Station, Depress the Alarm Reset Pushbutton.	Examinee depresses the Alarm Reset Pushbutton.	___	___	___
04	CHECK loss of speed demand alarm clear.	Verifies speed demand alarm clear.	___	___	___
CUE	After the examinee has verified the speed demand alarm is clear, as the Unit Supervisor, inform him that “repairs to the speed control system have been made and place the 1A TDRFP in AUTO per LOP-RL-01”. Inform him when complete.				
*05	Verify TDRFP Manual Backup Station Mode Selector switch is in Manual.	Verifies TDRFP Manual Backup Station Mode Selector switch is in Manual.	___	___	___
SIM OP – TRG 2 when Mode Selector switch placed in Manual to delete malfunctions.					
*06	PLACE TDRFP Manual Backup Station Mode Selector switch in AUTO.	TDRFP Manual Backup Station Mode Selector switch placed in AUTO.	___	___	___
07	CHECK TDRFP Manual Backup Station Auto Enabled Light Illuminated.	Checks TDRFP Manual Backup Station Auto Enabled Light Illuminated.	___	___	___
	Per LOP-RL-01, VERIFY for component to be placed in AUTO:	N/A	N/A	N/A	N/A
08	No signal failures which will affect operation of the component to be placed in auto	Verifies no signal failures present.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
09	No Lockout actuation which will affect operation of the component to be placed in auto.	N/A - No Lockout on the 1A TDRFP verified.	N/A	N/A	N/A
10	If the component is a TDRFP, it has been readied for operation per LOP-FW-04.	N/A, 1A TDRFP in operation.	N/A	N/A	N/A
11	The associated component's Min Flow M/A Station must be in AUTO or the min flow valve must be opened manually enough to protect the pump.	Examinee checks 1A TDRFP Min Flow Valve in Manual.	___	___	___
12	No Level Signal Failure (No failure of 3 out of 4 level channels).	Examinee verifies no level signal failures.	___	___	___
*13	DEPRESS AUTO Pushbutton on the associated components M/A station and VERIFY level control is stable.	Examinee depresses AUTO on the 1A TDRFP M/A station and monitors for stable Reactor Water Level.	___	___	___
14	Informs Unit Supervisor that 1A TDRFP is in Auto control per LOP-RL-01	Unit Supervisor informed.	___	___	___
CUE	Inform examinee JPM is complete..				

JPM Stop Time: _____

JPM SUMMARY

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

JPM Title: Respond to a failure of the 1A TDRFP speed demand signal.

JPM Number: SRO/RO – b.

K/A Number and Importance: 259002, A4.03 3.8,

Suggested Testing Environment: Simulator

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

Reference(s): LOA-FW-101 Rev. 9, Reactor Level Feedwater Pump Control Trouble, LOP-RL-01, Rev. 20, Operation of Reactor Level Control System

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 25 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

Unit 1 is at 100% power. A loss of speed feedback signal occurred on the 1A TDRFP.

INITIATING CUE

The Unit Supervisor has directed you to respond the 1A TDRFP feedback signal loss IAW LOA-FW-101 section B.2.

Exelon Nuclear

Job Performance Measure

RPV Depressurization via RT per LGA-RT-102/ Subsequent leak

JPM Number: SRO/RO – c.

Revision Number: 00

Date: 05/05/10

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **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.

_____ 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 _____ Rev: _____
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 00, New JPM written for 09-1 ILT NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to an “at pressure” IC, following a scram.

NOTE:	It is okay 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. Lineup RT with the RT F/D’s bypassed IAW LGA-RT-102, ready to start RPV depressurization per step E.5
3. Throttle the 1G33-F354 open while throttling the 2G33-F042 closed to set flow at approximately 180 gpm.
4. Run cae SRO-RO-C.(installs RT isolation jumpers and a trigger to initiate leak following throttling of the 1G33-F042).
5. Provide marked up copy of LGA-RT-102.
6. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
7. This completes the setup for this JPM.

INITIAL CONDITIONS

LGA-001 has been entered and LGA-RT-102, RPV Depressurization Using RWCU in Recirculation Mode, has been performed up to step E.5, ready to start RPV depressurization.

INITIATING CUE

The Unit Supervisor has directed you to review the already performed steps of LGA-RT-102 then commence RPV depressurization per step E.5 of LGA-RT-102. Monitor RPV pressure and inform the Unit Supervisor of every 50 psig reduction in RPV pressure.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	If requested as US, direct the examinee to throttle open the 1G33-F042, for 2 seconds to determine effects on depressurization.				
*01	THROTTLE 1G33-F042, RWCU Return Upstream Isolation Valve to maintain adequate flow, NOT to exceed 360 gpm, as read on RWCU System Flow, 1G33-R609, and to control RPV depressurization rate.	THROTTLES 1G33-F042, RWCU Return Isolation Valve to maintain adequate flow, NOT to exceed 360 gpm, as read on RWCU System Flow, 1G33-R609,.	___	___	___
NOTE	Forty five (45) seconds after the 1G33-F042, RWCU Return Isolation Valve is throttled, a RWCU leak will occur.(1H13-P601-B507 and C511, Div 1 and 2 Hi Delta Flow) The examinee should notify the Unit Supervisor and take actions per step E.1.a.				
CUE	If requested, RWCU not required for depressurization.				
NOTE	Alternate path starts here.				
*02	Stop the running RWCU pump	Examinee stops the running pump.	___	___	___
NOTE	One (1) of the step 3 and 4 valves are critical, not both. As long as one of the valves is isolated, the critical step is met.				
*03	CLOSE 1G33-F001, RWCU Suct. Inbd. Isol. Vlv.	CLOSES 1G33-F001, RWCU Suct. Inbd. Isol. Vlv.	___	___	___
*04	CLOSE 1G33-F004, RWCU Suct Otbd. Isol. Vlv.	CLOSES 1G33-F004, RWCU Suct Otbd. Isol. Vlv.	___	___	___
NOTE	One (1) of the step 5 and 6 valves are critical, not both. As long as one of the valves is isolated, the critical step is met.				
*05	CLOSE 1G33-F040, RWCU Return Dwnst. Isol. Vlv.	CLOSES 1G33-F040, RWCU Return Dwnst. Isol. Vlv.	___	___	___
*06	CLOSE 1G33-F042, RWCU Return Upstrm. Isol. Vlv.	CLOSE 1G33-F042, RWCU Return Upstrm. Isol. Vlv.	___	___	___
*07	Locally close CRD purge valve 1C11-F450A	Directs EO to locally close CRD purge valve 1C11-F450A	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*08	Locally close CRD purge valve 1C11-F450B	Directs EO to locally close CRD purge valve 1C11-F450B	___	___	___
09	Notifies Unit Supervisor that the RT system has been isolated per LGA-RT-102.	Notifies Unit Supervisor that the RT system has been isolated per LGA-RT-102.	___	___	___
CUE: JPM is complete.					

JPM Stop Time: _____

JPM SUMMARY

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

JPM Title: RPV Depressurization via RT per LGA-RT-102 / Subsequent Leak

JPM Number: SRO/RO-c. Revision Number: 00

Task Number and Title: 2.2.44 Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions.

K/A Number and Importance: Emergency,295025 G.2.2.44, 4.2/4.4

Suggested Testing Environment: Simulator

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

Reference(s): LGA-RT-102, RPV Depressurization using RWCU in Recirculation Mode

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

LGA-001 has been entered and LGA-RT-102, RPV Depressurization Using RWCU in Recirculation Mode, has been performed up to step E.5, ready to start RPV depressurization.

INITIATING CUE

The Unit Supervisor has directed you to review the already performed steps of LGA-RT-102 then commence RPV depressurization per step E.5 of LGA-RT-102. Monitor RPV pressure and inform the Unit Supervisor of every 50 psig reduction in RPV pressure.

Exelon Nuclear

Job Performance Measure

Perform RCIC S/D following spurious init. with failure of the injection valve to close

JPM Number: SRO/RO - d

Revision Number: 00

Date: 05/05/2010

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **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.

_____ 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 _____ Rev: _____
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)

1. **Revision 00,** New JPM written for the 2005 NRC Annual Exam by Gordon W. Beale.
2. **Revision 01,** Revised for formatting and current procedure revision.
3. Revision 00 Rev. 0, based on Rev. 1, for ILT NRC 09-1 exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 130, or similar simulator IC conditions.

   NOTE: It is okay 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. Initiate RCIC by increasing the auto initiation setpoint.
   imf MNB080 55

3. Freeze the simulator as soon as 1E51-F045,F013, and F065 are full open. Then set the stroke time [in expert **set vmrj013r=1e8**] to 1e8 seconds.

4. Place the simulator in RUN after the examinee has acknowledged the initiating cue.

5. Ensure the performance of this JPM does not interfere with the performance of any other JPMs.

6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist.

7. This completes the setup for this JPM.

THIS JPM IS TIME CRITCIAL

INITIAL CONDITIONS

- You are the Unit Assist NSO.
- Unit 1 is at full power.
- The ‘RCIC RUNNING’ alarm has just been received.

INITIATING CUE

The Unit Supervisor has directed you to respond to the RCIC initiation. Inform the Unit Supervisor when all required actions to shutdown the RCIC system are complete. Do not reset the RCIC turbine.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
01	Refer to LOR-1H13-P601-D406, RCIC Running.	Examinee refers to annunciator procedure.	___	___	___
02	Determine that RCIC injection was inadvertent.	Examinee checks Reactor water level to determine RCIC initiation is inadvertent.	___	___	___
*03	TRIP RCIC Turbine.	Examinee performs the following:			
		Depresses the RCIC Turbine Trip pushbutton.	___	___	___
Note	Examinee should either verbalize that he will check LORs for RCIC turbine trip OR actually check LORs.				
Note	ALTERNATE PATH BEGINS HERE.				
Note	Either action is acceptable when performing Step 4. Mark the other action "N/A".				
04	VERIFY 1E51-F013 and 1E51-F065 are full closed following the RCIC Turbine trip.	Examinee verifies 1E51-F065 is full closed. **AND**	___	___	___
		Examinee verifies 1E51-F013 is full closed.	___	___	___
Note	1E51-F013 is full open. Examinee will notice this and take actions				
Note	Step 5 must be completed within 4 minutes of the start of the JPM. The time critical portion of this JPM is satisfied when step 5 is performed.				
*05	IF 1E51-F013 and/or 1E51-F065 is NOT full closed following the RCIC Turbine trip, PLACE Feedwater Turbine Trip NORMAL-BYPASS keylock **SWITCHES** to BYPASS until problem is corrected.	Examinee places **BOTH** 1E51-F013 Open U1 Main & FW Turb Trip Logic Bypass AND 1E51-F065 Open U1 Main & FW Turb Trip Logic Bypass in BYPASS. Post examination discussion determined that only 1 logic system must be bypassed. -drm	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
06	Examinee Notifies Unit Supervisor of Issue and that RCIC needs to be S/D per LOP-RI-03.	Examinee Informs Unit Supervisor and determines follow-up per LOP-RI-03.	___	___	___
TERMINATING CUE : Acknowledge Report and Inform the Examinee that the JPM is complete.					

JPM Stop Time: _____

JPM SUMMARY

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

JPM Title: Perform RCIC Shutdown Following A Spurious Initiation with a Failure of 1E51-F013 to close

JPM Number: SRO/RO-d Revision Number: 00

Task Number and Title: 32.004 Given Unit Supervisor Authorization, perform Control Room actions to shutdown the RCIC System following operation, IAW Station Procedures.

K/A Number and Importance: 217000 A2.01 3.8/3.7

Suggested Testing Environment: Simulator

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

Reference(s): LOR-1H13-P601-D406, RCIC Running, Rev. 4

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 04 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

- You are the Unit Assist NSO.
- Unit 1 is at full power.
- The ‘RCIC RUNNING’ alarm has just been received.

INITIATING CUE

The Unit Supervisor has directed you to respond to the RCIC initiation. Inform the Unit Supervisor when all required actions to shutdown the RCIC system are complete. Do not reset the RCIC turbine.

Exelon Nuclear

Job Performance Measure

RPIS data fault/ substitute rod position

JPM Number: SRO/RO-e.

Revision Number: 00

Date: 05/05/2010

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **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.

_____ 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 _____ Rev: _____
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 00,** This is a New JPM for 2009 Annual Exams based on RCMS modification.
- **Revision 01,** Revised to reflect RCMS installation into Unit 1.
- **Revision 00,** Revised from Rev. 01 for ILT NRC 09-1 exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to a full power IC.

NOTE:	It is okay 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. Run SRORO-e.cae
   - This cae will create a data fault on rod 42-07 and set a trigger to delete the malfunction on trigger #6 when the insert pushbutton is pushed.
3. Clear any alarms and clear the SER Typer.
4. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
5. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Assist NSO.

Rod 42-07 just lost position information and now shows XX.

There is a DATA FAULT on RCMS.

INITIATING CUE

The Unit Supervisor has directed you to enter LOA-RM-101 Section B.5 for Loss of one or more Control Rod(s) Position Information.

You are to inform the Unit Supervisor when you have completed all actions necessary for this control rod.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1.	IMMEDIATELY: • NOTIFY Shift Manager (SM) • CONTACT QNE • REFER to TS 3.1.3.	Examinee Notifies Unit Supervisor that the Shift Manager (SM) needs NOTIFIED, the QNE should be CONTACTED and should REFER to TS 3.1.3.	___	___	___
CUE: Acknowledge Report.					
2.	CHECK Control Rod Position – INDICATES "XX" o SELECT ROD	Examinee CHECKS Control Rod 42-07 Position INDICATES "XX" and then SELECTS ROD 42-07.	___	___	___
3.	CHECK Control Rod – NOT at position 00/FI prior to indication loss.	Examinee CHECKS Control Rod was NOT at position 00/FI prior to indication loss. (rod 42-07 was full out)	___	___	___
NOTE: If Examinee Reviews a Control Rod Position report, CUE the examinee that the rod was at a full out position.					

*4.	INSERT control rod one notch: • PLACE CRD DRIVR FLOW TRIP BYPASS Switch to BYPASS o SET RWM Blocks to LPSP o Bypass the Rod within RCMS per LOP-RM-02 o Bypass RWM, o If ≤ 10% RTP, REFER to TS 3.3.2.1	Examinee PLACES CRD DRIVR FLOW TRIP BYPASS Switch to BYPASS Examinee INSERTS control rod 42-07 one notch by Bypassing the RWM or Bypassing the Rod within the RCMS per LOP-RM-02. Bypasses the RWM by turning the RWM Bypass switch. • APPLY one single notch Insert command only, • OBSERVE Drive Flow and INSERT/SETTLE Indicators	___ ___ ___	___ ___ ___	___ ___ ___
5.	CHECK Control Rod – INDICATES new, valid position.	Examinee CHECKS that Control Rod 42-07 INDICATES new, valid position.	___	___	___
NOTE: Rod 42-07 should indicate position 46 at this point.					
6.	CHECK Sequence – CURRENTLY REQUIRES rod to be withdrawn past the Data Faulted (XX) position.	Examinee CHECKS the Sequence REQUIRES rod to be withdrawn past the bad position.	___	___	___
NOTE: Answer is NO – the rod is INSERTED one notch past its sequence position.					
7.	POSITION Rod per SM/QNE guidance (refer to C.5.6). o SET Alternate Limit for rod per LOP-RM-02.	Examinee DETERMINES that he/she needs to LEAVE the ROD at the NEW position and SET an Alternate Limit for rod per LOP-RM-02	___	___	___
NOTE: If the Examinee inquires, provide SM/QNE guidance to leave rod 42-07 at the valid position.					

ALTERNATE PATH APPLIES HERE. **NOTE:** To enable the Alternate Limits of a Control Rod, PERFORM the following: **CUE:** If asked, no HLA is required.					
*8.	DETERMINE desired rod to which Alternate Limits are to be set.	Examinee DETERMINES desired rod to which Alternate Limits are to be set. (Control Rod 42-07)	___	___	___
*9.	SELECT 'SET PARAMETERS' on the ROD SELECT Display or the STATUS Display, whichever is in the CONTROL mode.	Examinee SELECTS 'SET PARAMETERS' on the ROD SELECT Display or the STATUS Display, whichever is in the CONTROL mode.	___	___	___
*10.	SELECT 'SET/RESTORE ALTERNATE LIMITS' on the SET HCU/ROD screen.	Examinee SELECTS 'SET/RESTORE ALTERNATE LIMITS' on the SET HCU/ROD screen.	___	___	___
11.	SELECT the control rod(s) to be provided Alternate Limits.	Examinee SELECTS the control rod (42-07) to be provided Alternate Limits.	___	___	___
NOTE: Control Rod 42-07 MAY already be selected – this step may be Conditions Met or N/A.					
*12.	PRESS 'ACCEPT' to change the desired control rod(s) Alternate Limit.	Examinee PRESSES 'ACCEPT' to change the desired control rod (42-07) Alternate Limit of position 46.	___	___	___
13.	ACKNOWLEDGE the popup message "This operation will modify system data. Are you sure you want to proceed?"	Examinee ACKNOWLEDGES the popup message.	___	___	___
NOTE: The control rods with alternate limits set will appear in white text on semidark gray background with an orange border.					

15	RETURN to the SELECT screen, if desired, when all alternate limit operations are completed.	Examinee will RETURN to the SELECT screen, if desired, when all alternate limit operations are completed.	___	___	___

TERMINATING CUE:

INFORM Examinee that the JPM is complete when the Alternate Limits are Set per LOP-RM-02.

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: . Rod Position Indication System/RPIS data fault/ substitute rod position

JPM Number: S-RM-01 Revision Number: 00

Task Number and Title: 47.012 Provided initial indications, perform the Main Control Room actions for a Loss of Control Rod Position Information System

48.002 Given Unit Supervisor authorization, perform actions to substitute rod position in the RWM

K/A Number and Importance: 214000 Rod Position Information System A4.02 Ability to manually operate and/or monitor Control rod position in the control room: (3.8/3.8)

Suggested Testing Environment: Simulator

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

Reference(s): LOA-RM-101, LOP-RM-02

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 15 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

You are the Assist NSO.

Rod 42-07 just lost position information and now shows XX.

There is a DATA FAULT on RCMS.

INITIATING CUE

The Unit Supervisor has directed you to enter LOA-RM-101 Section B.5 for Loss of one or more Control Rod(s) Position Information.

You are to inform the Unit Supervisor when you have completed all actions necessary for this control rod.

Exelon Nuclear

Job Performance Measure

Manually Initiate SBGT in response to irradiated fuel assembly damage

JPM Number: SRO/RO-f.

Revision Number: 00

Date: 05/05/10

Developed By: _____ _____
Facility Author **Date**

Approved By: _____ _____
Facility Representative **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.

_____ 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 _____ Rev: _____
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 00, New JPM for ILT 09-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to a post scram condition with level and pressure stable.

NOTE: It is okay 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. Run SRO-RO-f cae to insert a high rad condition that causes VR and VP to isolate but SBGTS fails to auto initiate. Also disables the initiation P.B.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the U-1 assist NSO. A dropped fuel bundle during fuel shuffles has caused increased radiation conditions in the Secondary Containment. LGA-002 has been entered. U-2 SBGT system is OOS.

INITIATING CUE

The Unit Supervisor has directed you to perform LOA-FH-001, irradiated fuel damage.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
01	CHECK Reactor Building Exhaust Radiation – LESS THAN 10mr/hr.	Examinee discovers radiation levels > 10mr/hr.	___	___	___
02	VERIFY Reactor Building Ventilation System isolated.	Examinee verifies VR fans off and VR isolation dampers closed.	___	___	___
03	VERIFY Primary Containment Ventilation and Purge system isolated.	Examinee verifies Primary Containment Ventilation and Purge system isolated.	___	___	___
04	VERIFY SBGT system started.	Examinee determines SBGT system failed to start and notifies Unit Supervisor.	___	___	___
CUE	Unit supervisor directs examinee to start U-1 SBGT IAW LGA-VG-101 and inform him when it is running.				
CUE	If requested at any time, both WRGM's operating properly.				
*05	VERIFY 1VG001 U1 SBGT Inlet Isol. Vlv., open.	OPENS 1VG001 U1 SBGT Inlet Isol. Vlv., open.	___	___	___
*06	VERIFY U1 SBGT Primary Fan, 1VG01C, on.	STARTS U1 SBGT Primary Fan, 1VG01C, on.	___	___	___
07	VERIFY 1VG003, U1 SBGT Dsch. Vlv. Open.	VERIFIES 1VG003, U1 SBGT Dsch. Vlv. Open.	___	___	___
08	VERIFY U1 SBGT Elec Heating Coil, 1VG01A, on.	Verifies U1 SBGT Elec Heating Coil, 1VG01A, on.	___	___	___
09	VERIFY U1 SBGT Cooling Fan, 1VG02C, off.	Verifies U1 SBGT Cooling Fan, 1VG02C, off.	___	___	___
10	VERIFY SBGT flow 3,600 to 4,400 CFM on U1 SBGT Outlet Flow, 1FR-VG009.	Verifies SBGT flow 3,600 to 4,400 CFM on U1 SBGT Outlet Flow, 1FR-VG009.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
11	VERIFY SBGT flow 3,600 to 4,400 CFM on U1 SBGT Inlet Flow, 1FI-VG003.	Verifies SBGT flow 3,600 to 4,400 CFM on U1 SBGT Inlet Flow, 1FI-VG003.	___	___	___
TERMINATIN CUE – Inform examinee JPM is complete when US notified that SBGT is in operation.					

JPM Stop Time: _____

JPM SUMMARY

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

JPM Title: Manually Initiate SBGT in response to irradiated fuel assembly damage

JPM Number: SRO/RO-f. Revision Number: 00

Task Number and Title: A2.12, High Fuel Pool Vent Rad

K/A Number and Importance: SBGT, A2.12, 3.2/3.4

Suggested Testing Environment: Simulator

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

Reference(s): LGA-VG-101, Rev. 2, Secondary Containment Pressure Control, LOA-FH-001, Rev.2, Irradiated Fuel Assembly Damage.

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

You are the U-1 assist NSO. A dropped fuel bundle during fuel shuffles has caused increased radiation conditions in the Secondary Containment. LGA-002 has been entered. U-2 SBGT system is OOS.

INITIATING CUE

The Unit Supervisor has directed you to perform LOA-FH-001, irradiated fuel damage.

Exelon Nuclear

Job Performance Measure

Installation of Control Rod Block IAW LFP-100-1

JPM Number: SRO/RO-g.

Revision Number: 00

Date: 05/05/10

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **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.

_____ 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 _____ Rev: _____
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 00, New JPM developed for 09-1 ILT NRC exam.

SIMULATOR SETUP INSTRUCTIONS

1. N/A – performed in control room.
2. Have a copy of LFP-100-1 with the top of Att. D filled out, ready to provide the examinee for the lifted lead task.

INITIAL CONDITIONS

U-1 is in REFUEL. Rod shuffles are about to commence. An extra NSO is available to assist you.

INITIATING CUE

The Shift Manager has decided to provide criticality protection by electrically preventing control rod withdrawal per LFP-100-1 step E.3.3. The Unit Supervisor has provided you with two lifted lead tags and has directed you to perform Attachment D of LFP-100-1 per step E.3.3. Inform the Unit Supervisor when Att. D actions are ready to be entered in the Degraded Equipment log.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	Provide the examinee with a marked copy of Att. D of LFP-100-1, electrical print 1E-1-4206AK/AL, 1E-1-4606AB/AD, and two (2) numbered lifted lead tags (simulated).				
01	Examinee describes where to obtain appropriate personnel protective equipment required to lift the leads.	Examinee should indicate Class 00 gloves and eye protection are required.	___	___	___
*02	Examinee locates 1H13-P608 TB21-5, and lifts lead.	1H13-P608 TB21-5 lead lifted.	___	___	___
CUE	The lead you indicated is lifted.				
*03	Examinee locates 1H13-P608 TB21-5, and tags lead.	1H13-P608 TB21-5 tagged.	___	___	___
CUE	The lead you indicated is tagged.				
*04	Examinee locates 1H13-P608 TB42-5, and lifts lead.	1H13-P608 TB42-5 lead lifted.	___	___	___
CUE	The lead you indicated is lifted.				
*05	Examinee locates 1H13-P608 TB42-5, and tags lead.	1H13-P608 TB42-5 tagged.	___	___	___
CUE	The lead you indicated is tagged.				
06	Examinee signs/dates Att. D for both lifted leads.	Att. D, signed/dated.	___	___	___
07	Examinee states the need to place an Equipment Status Tag on 1H13-P603 W/D block light.	Examinee states need for Equipment Status Tag on 1H13-P603 W/D block light.	___	___	___
CUE	Inform the examinee that an Equipment Status Tag has been placed on the 1H13-P603 W/D block light.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
07	Examinee informs Unit Supervisor that Att. D of LFP-100-1 is complete and ready for DEL entry.	Unit Supervisor informed that Att. D of LFP-100-1 is complete and ready for DEL entry.	___	___	___
TERMINATING CUE - When Unit Supervisor informed of Att. D. completion and ready for DEL entry, inform the examinee JPM is complete.					

JPM Stop Time: _____

JPM SUMMARY

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

JPM Title: Installation of Control Rod Block IAW LFP-100-1

JPM Number: SRORO-g. Revision Number: 00

Task Number and Title: 605.020, Apply admin requirements of a temp. mod

K/A Number and Importance: Fuel Handling, 234000, A4.02, 3.4/3.7

Suggested Testing Environment: Simulator

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

Reference(s): LFP-100-1 Rev. 47, Master Refuel Procedure

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

U-1 is in REFUEL. Rod shuffles are about to commence. An extra NSO is available to assist you.

INITIATING CUE

The Shift Manager has decided to provide criticality protection by electrically preventing control rod withdrawal per LFP-100-1 step E.3.3. The Unit Supervisor has provided you with two lifted lead tags and has directed you to perform Attachment D of LFP-100-1 per step E.3.3. Inform the Unit Supervisor when Att. D actions are ready to be entered in the Degraded Equipment log.

Exelon Nuclear

Job Performance Measure

Perform Loss of Bus 141Y Hard Card – Failure to Bus Tie

JPM Number: RO-h.

Revision Number: 00

Date: 05/05/2010

Developed By: _____ _____

Facility Author **Date**

Approved By: _____ _____

Facility Representative **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.

_____ 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 _____ Rev: _____
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)

1. Revision: New JPM written for the 2007 NRC Annual Exam by G.W. Beale

2. Revision 02 Revised for current procedure revision and JPM template.

3. Revision 00 Revised to 00 from 02 for ILT NRC 09-1 exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to the LORT normal full power IC set.
2. Go to RUN.
3. Run JPM RO-h.cae
4. Silence and acknowledge annunciators. Freeze the simulator until the first Candidate enters
5. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist.
6. This completes the setup for this JPM.

INITIAL CONDITIONS

1. You are an assist NSO.
2. Unit 1 has had a Loss of 141Y due to a Breaker 1412 opening.
3. 0 DG did not start and LOA-DG-101 is in progress.
4. Unit 2 is at 100% Power with a normal electric plant lineup.
5. 0 WR Pump is lined up to Unit 2.
6. Operators are standing by to assist you.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform Loss of 141Y Hard Card.

You are to inform the Unit 1 Supervisor when the Loss of 141Y Hard Card is complete.

Another NSO will perform RPS Quick Swap Hard Card.

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.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
01	Verify one WR Pump is running.	Examinee starts 1B WR Pump.	___	___	___
CUE	Another NSO will follow up with LOP-WR-02.				
02	Verify CRD Charging Header Pressure is >500 psig.	Examinee verifies CRD Charging Header Pressure is>500psig.	___	___	___
*03	START standby CRD Pump by HOLDING Control Switch to START position for at least 5 seconds, and then release.	Examinee starts 1B CRD Pump by HOLDING Control Switch to START position for at least 5 seconds, and then releases the switch.	___	___	___
CUE: Another NSO will follow up with LOP-RD-01.					
NOTE: As stated in the cue, another NSO will perform the RPS Quick Swap.					
NOTE: Step 4 is on the IA to IN Cross-Tie Hard Card					
04	Check IN Supplying drywell loads.	Examinee verifies that IN is NOT supplying drywell loads	___	___	___
*05	OPEN 1IN059 and 1IN060, Instrument Air to Drywell Pneumatics Crosstie Valves.	Examinee opens 1IN059 and 1IN060, Instrument Air to Drywell Pneumatics Crosstie Valves.	___	___	___
06	OPEN 1IN017, Drywell Pneumatics 100 lb. Header Isolation Valve.	Examinee verifies open 1IN017, Drywell Pneumatics 100 lb. Header Isolation Valve.	___	___	___
07	At Panel 1PM01J, CHECK A214 CLEAR.	Examinee checks Panel 1PM01J A214 CLEAR.			
08	Verify all three phase voltages are approximately equal using the 141X/Y Voltmeter switch.	Examinee verifies all three phases of voltages equal using the 141X/Y Voltmeter switch.			
*09	If 141X is energized, synchronize and close ACB 1415.	Examinee places Synchroscope Select Switch to ON for breaker 1415			

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
		Examinee attempts to close ACB 1415 and determines it will not close			
NOTE : Alternate Path must apply.					
CUE: If required, the Examiner should state that the Unit Supervisor has determined it is desirable to align 141Y to 241Y.					
*10	CHECK BUS 241Y powered from SAT 242/UAT 241.	The Examinee checks that Bus 241Y is powered from the SAT/UAT.			
CUE : Bus 241Y is powered from the Unit 2 SAT 242 as provided in initial conditions.					
*11	CHECK ACB 2415 - OPEN	The Examinee checks that ACB 2415 is open.			
CUE: Unit 2 NSO reports that ACB 2415 is open.					
NOTE: ACB 2414 was closed in the initial setup for the JPM.					
*12	SYNCHRONIZE and CLOSE ACB 2414.	The Examinee requests that Unit 2 close ACB 2414.			
CUE	Unit 2 NSO reports ACB 2414 is closed.				
*13	SYNCHRONIZE and CLOSE ACB 1414.	Examinee places Synchroscope Select Switch to ON for breaker 1414			
		Examinee closes ACB 1414			
NOTE: Power is restored to Bus 141Y					
14	INFORM the Unit Supervisor.	The Examinee informs the Unit 1 Supervisor that Bus 141Y is energized.			
NOTE: The JPM is complete Bus 141Y is energized and the Unit 1 Supervisor is notified.					

JPM Stop Time: _____

JPM SUMMARY

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

JPM Title: Perform Loss of Bus 141Y Hard Card – Failure to Bus Tie

JPM Number: RO-h Revision Number: 00

Task Number and Title: 5.008, Provided initial conditions respond to a loss of 4Kv ESS bus

K/A Number and Importance: 295003, AA1.01, 3.7/3.8

Suggested Testing Environment: Simulator

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

Reference(s): Loss of 141Y Hard Card Rev 29

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 15 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 assist NSO.

6. Unit 1 has had a Loss of 141Y due to a Breaker 1412 opening.

7. 0 DG did not start and LOA-DG-101 is in progress.

8. Unit 2 is at 100% Power with a normal electric plant lineup.

9. 0 WR Pump is lined up to Unit 2.

6. Operators are standing by to assist you.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform Loss of 141Y Hard Card.

You are to inform the Unit 1 Supervisor when the Loss of 141Y Hard Card is complete.

Another NSO will perform RPS Quick Swap Hard Card.