Facility: LaSalle County Station **Date of Examination:** 08/18/08

Exam Level: RO ☒ SRO-I ☐ SRO-U ☐ **Operating Test No.:** 05000373

Control Room Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. Reactor Recirculation / Upshift the RR Pumps IAW LOP-RR-05 (202001 A4.01)	D,P,S	1
b. High Pressure Core Spray / Initiate HPCS with Failure of the Manual Initiation Pushbutton (295031 EA1.04)	A,D,EN,P,S	2
c. Automatic Depressurization System / Initiate ADS per the Hard Card with a Failure of 3 SRVs to Open (218000 A2.04)	A,D,EN,S	3
d. Main T/G and Aux. Systems / Anticipate RPV Blowdown (245000 A4.07)	N,S	4
e. PCIS / Recover from a Group 10 Isolation (223002 A4.03)	D,E,EN,S	5
f. Reactor Protection System / Reset a Half Scram with a Blown Group Scram Fuse (212000 A2.19)	A,D,E,P,S	7
g. Fire Protection system / Starting Service Water Pumps to Maintain Fire Header Pressure (286000 A2.08)	E,S,N	8
h. Offgas System / Start-up of the Mechanical Vacuum Pump (271000 A2.03)	A,L,N,S	9
In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. Emergency Generators / Emergency Start of the 0 D/G IAW LOA-DG-201 via the K98 Relay (264000 A2.09)	A, D, E, R	6
j. Safety Relief Valves / Remove SRV Fuses to Close a Stuck Open SRV (239002 A2.03)	D, E	3
k. Line up the CRD System for Injection into the RPV (295031 EA1.10)	D, E, R	2

[@] All RO and SRO control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety function; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for: RO	SRO-I	SRO-U
(A)lternate path - - - - - - - - - - - - - - - - - - - (C)ontrol room	- - - - - - - - - 4-6	4-6	2-3
(D)irect from bank - - - - - - - - - - - - - - - - -	- - - - - - - - - ≤9	≤8	≤4
(E)mergency or abnormal in-plant - - - - - -	- - - - - - - - - ≥1	≥1	≥1
(EN)gineered safety feature	- -- - - - - - - - -	-	≥ 1
(L)ow-Power / Shutdown - - - - - - - - - - - -	- - - - - - - - - ≥1	≥1	≥1
(N)ew or (M)odified from bank including 1(A) -	- - - - - - - - - ≥2	≥2	≥1
(P)revious 2 exams - - - - - - - - - - - - - - -	- - - - - - - - - ≤3	≤3	≤2 (randomly selected)
(R)CA -	- - - - - - - - - ≥1	≥1	≥1
(S)imulator			

Facility: LaSalle County Station **Date of Examination:** 08/18/08

Exam Level: RO ☐ SRO-I ☒ SRO-U ☐ **Operating Test No.:** 05000373

Control Room Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. Reactor Recirculation / Upshift the RR Pumps IAW LOP-RR-05 (202001 A4.01)	D,P,S	1
b. High Pressure Core Spray / Initiate HPCS with Failure of the Manual Initiation Pushbutton (295031 EA1.04)	A,D,EN,P,S	2
c. Not Applicable		
d. Main T/G and Aux. Systems / Anticipate RPV Blowdown (245000 A4.07)	N,S	4
e. PCIS / Recover from a Group 10 Isolation (223002 A4.03)	D,E,EN,S	5
f. Reactor Protection System / Reset a Half Scram with a Blown Group Scram Fuse (212000 A2.19)	A,D,E,P,S	7
g. Fire Protection system / Starting Service Water Pumps to Maintain Fire Header Pressure (286000 A2.08)	E,S,N	8
h. Offgas System / Start-up of the Mechanical Vacuum Pump (271000 A2.03)	A,L,N,S	9
In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. Emergency Generators / Emergency Start of the 0 D/G IAW LOA-DG-201 via the K98 Relay (264000 A2.09)	A, D, E, R	6
j. Safety Relief Valves / Remove SRV Fuses to Close a Stuck Open SRV (239002 A2.03)	D, E	3
k. Line up the CRD System for Injection into the RPV (295031 EA1.10)	D, E, R	2

[@] All RO and SRO control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety function; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for: RO	SRO-I	SRO-U
(A)lternate path - - - - - - - - - - - - - - - - - - - (C)ontrol room	- - - - - - - - - 4-6	4-6	2-3
(D)irect from bank - - - - - - - - - - - - - - - - -	- - - - - - - - - ≤9	≤8	≤4
(E)mergency or abnormal in-plant - - - - - -	- - - - - - - - - ≥1	≥1	≥1
(EN)gineered safety feature	- -- - - - - - - - - -	-	≥ 1
(L)ow-Power / Shutdown - - - - - - - - - - - -	- - - - - - - - - ≥1	≥1	≥1
(N)ew or (M)odified from bank including 1(A) -	- - - - - - - - - ≥2	≥2	≥1
(P)revious 2 exams - - - - - - - - - - - - - - -	- - - - - - - - - ≤3	≤3	≤2 (randomly selected)
(R)CA -	- - - - - - - - - ≥1	≥1	≥1
(S)imulator			

LaSalle Training

Job Performance Measure

Upshift the Reactor Recirc Pumps IAW LOP-RR-05

JPM Number: a.07-01 NRC SRO-RO Sim RR

Revision Number: 12

Procedure: LOP-RR-05, Rev. 38

Date: 07/28/2008

Simulator
RO/SRO
3.1 Reactivity Control
202001 Recirculation
K/A: A4.01
I.R. 3.7/3.7
D, P, S

Developed By: _____ _____
Facility Author Date

Validated By: _____ _____
Facility Author Date

Review By: _____ _____
Facility Representative Date

Approved By: _____ _____
Training Department Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

Revision Record (Summary)

1. Revision 08	Utilized new template and made minor editorial changes.
2. Revision 09	Verified against current revision of LOP-RR-05 and revised procedure references. Revised task number to coincide with new task list.
3. Revision 10	Updated for LGP step changes, simulator IC sets and current version of LOP-RR-05.
4. Revision 11	Updated to match criteria of NuReg 1021, Rev. 9 Supplement 1 and NuReg 1123, Rev. 2, Supplement 1. Also performed minor formatting and editorial changes.

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 77.

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. a.) Run

. b.) Reset FCV lockups by depressing silver buttons on 1H13-P602.

c.) Put RR pump display on simulator screen.

d.) Freeze the simulator until the candidate is ready to begin.

3. After the above steps are completed for this and other JPMs to be run concurrently, validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist located on page 2.

4. This completes the setup for this JPM.

Materials:

The following materials are to be available to the examinee:

LOA-RR-101, Unit 1 Reactor Recirculation System Abnormal
LORs 1H13-P602-A104 or 1H13-P602-B104
LORs 1H13-P602-A305 or 1H13-P602-B305

The following materials are to be provided to the examinee:

LOP-RR-05 marked up with steps B.1 through B.3 and C.8 marked complete.

Job Performance Measure

INITIAL CONDITIONS

- Unit 1 is starting up following a refueling outage and the reactor is at approximately 32% power.
- LGP 1-1 is in progress and has been completed to the point where RR pumps are directed to be upshifted per LOP-RR-05, “Changing Reactor Recirc Pump speed From Slow to Fast Speed”.
- LOP-RR-05 Prerequisites, B.1, B.2, and B.3 are met.
- Reactor water level is approximately 37".
- Both RR pumps are operating in slow speed.
- OD-3 Flow Control Line < 66.7% has been verified.
- Operators are standing by to assist you.
- Another Operator and IMD have been briefed on LOA-RM-101 per LOP-RR-05 Precaution C.8.

INITIATING CUE

The Unit Supervisor has directed you to upshift the "A" and "B" Reactor Recirc Pumps to fast speed IAW LOP-RR-05, beginning at Step E.1.

You are to INFORM the Unit Supervisor when the Low Power/Low Flow interlocks are returned to normal.

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 page 13. 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 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. The candidate can choose which pump to upshift first. Steps 1-12 of this JPM apply to both RR pumps. The second RR pump upshift steps begin at step 19.					
1.	E.1 First RR Pump Transfer from Slow to Fast Speed from Panel 1H13-P602 E.1.1 CHECK the following: Both RR pumps are in SLOW speed and Flow Control Valves are full open.	Slow speed operation and flow control valve position verified by the following: - LFMG SET GEN BRKR 2A and 2B are closed. - LFMG SET DRIVE MOTOR BKR 1A and 1B are closed. - "A" and "B" RR MOTOR BKRs 3A and 3B are open. - "A" and "B" RR motor speeds are 450 rpm. - "A" and "B" RR Loop flow controllers indicate FCV position at 100%.	____	____	____
2.	Reactor power between 25% and 35%,	Control room panel H13-P603 APRM recorders are verified to be indicating between 25% and 35% reactor power.	____	____	____
CUE IF examinee questions whether the FCL < 66.7%, remind him/her that initial conditions provided the FCL <66.7%.					
3.	Flow Control Line <66.7%.	Use initial conditions data -or- Control room panel H13-P603 reactor power and core flow indications are compared and reactor is verified to be below the 66.7% flow control line using the graph on the rod sequence book,	____	____	____
4.	Both 1B33-P611A and B Flow Controller M/A stations A and B in MANUAL.	"A" and "B" Loop flow controller "Manual" pushbuttons are verified backlit.	____	____	____

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
5.	Both RR MOTOR BKR 4A and 4B are closed.	"A" RR MOTOR BKR 4A and "B" RR MOTOR BKR 4B verified closed.	____	____	____
6.	Feedwater flow is greater than 2.83 Mlbm/hr.	Feedwater flow verified to be >2.83 Mlbm/hr at control room panel H13-P603.	____	____	____
7.	Differential temperature between Reactor Recirc Pump suction and Steam Dome >10.1° F for the loop to be upshifted.	At 1DS001 Interlock panel, verifies that recirc loop suction to steam dome ΔTs are >10.1° F not solid blue.	____	____	____
8.	Reactor water level is between the high and low level alarms (31.5" to 40.5").	Reactor water level is verified to be 31.5" to 40.5" at control room panel H13-P603.	____	____	____
	E.1.2 At the 1DS001 Operator Station RRFC Interlock screen, BYPASS both A & B RR Interlocks as follows:				
*9. Critical Step	Select “Low Flow Bypass” for Loop A and then PRESS the “Activate” button.	• At the 1DS001, examinee selects Loop A "Low Flow Bypass" and then PRESSES the ACTIVATE button.	____	____	____
*10. Critical Step	Select “Low Flow Bypass” for Loop B and then PRESS the “Activate” button.	• At the 1DS001, examinee selects Loop B "Low Flow Bypass" and then PRESSES the ACTIVATE button.	____	____	____
*11. Critical Step	Select “Low Power Bypass” for Loop A and then PRESS the “Activate” button.	• At the 1DS001, examinee selects Loop A "Low Power Bypass" and then PRESSES the ACTIVATE button.	____	____	____
*12. Critical Step	Select “Low Power Bypass” for Loop B and then PRESS the “Activate” button.	• At the 1DS001, examinee selects Loop B "Low Power Bypass" and then PRESSES the ACTIVATE button.	____	____	____

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*13. Critical Step	E.1.3 DEPRESS the Lower pushbutton on the RR Loop A/B M/A Station for loop in which pump speed will be changed until 1B33-F060A/B Flow Control Valve is at Minimum (≤20% indicated).	• A (B) RR loop flow control station lower pushbutton depressed until the FCV indicates minimum position (<20% indicated).	____	____	____
14.	E.1.4 At the 1DS001, Operator Station Interlocks Screen, verify the following interlocks are RESET: A RR Loop “Feedwater Flow Low”’ B RR Loop “Feedwater Flow Low”’ A RR Loop “Suction Delta T Low”’ B RR Loop “Suction Delta T Low”’	VERIFIES the following are RESET: A RR Loop “Feedwater Flow Low”’ B RR Loop “Feedwater Flow Low”’ A RR Loop “Suction Delta T Low”’ B RR Loop “Suction Delta T Low”’	____	____	____
15.	E.1.5 VERIFY HI Speed Start Permissive indicating light 1B33-DS202A/B is ON.	1A (1B) RR PMP START PERMISSIVE "HI SPEED" light verified to be LIT.	____	____	____
*16. Critical Step	E.1.6 PLACE Selected Breaker RR Motor Bkr 3A/B Control Switch to START position and RELEASE.	• Control switch for 1A (1B) RR MOTOR BKR 3A (3B) taken to START and RELEASED.	____	____	____

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
17.	E.1.7 OBSERVE the following in the selected loop: E.1.7.1 1A/B breaker opens. E.1.7.2 2A/B breaker opens. E.1.7.3 3A/B breaker closes after pump speed decreases to 350 rpm. E.1.7.4 Pump speed increases to approximately 1750 rpm. E.1.7.5 Reactor level drops then returns to level controller setpoint. E.1.7.6 Reactor Power initially increases then stabilizes	Sequence monitored by observing the following: ____ 1A/B breaker opens. ____ 2A/B breaker opens. ____ 3A/B breaker closes after pump speed decreases to 350 rpm. ____ Pump speed increases to approximately 1750 rpm. ____ Reactor level drops then returns to level controller setpoint. ____ Reactor Power initially increases then stabilizes	____	____	____
18.	E.1.7.7 If Reactor Recirc pump fails to upshift…….	Step is identified to NOT apply and is marked N/A.	____	____	____

Note:

The candidate should allow plant conditions to stabilize prior to upshifting the second pump keeping in mind that LOP-RR-05 gives the following precaution:

DO NOT delay changing the speed of the second RR pump as the excessive temperature differential between loops may occur due to cooling of the “slow speed loop”.

If the student does not allow the plant to stabilize or does not display steady progress towards starting the second pump, document the occurrence in the comment section for consideration when assessing the examinee’s overall performance of the JPM.

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*19. Critical Step	E.2 Second RR Pump Transfer from Slow to Fast Speed from Panel 1H13-P602 E.2.1 DEPRESS the Lower pushbutton on the RR Loop A/B M/A Station for loop in which pump speed will be changed until 1B33-F060A/B Flow Control Valve is at Minimum (≤20% indicated).	• A (B) RR loop flow control station lower pushbutton depressed until the FCV indicates minimum position (<20% indicated).	____	____	____
20.	E.2.2 At the 1DS001, Operator Station Interlocks Screen, verify the following interlocks are RESET: A RR Loop “Feedwater Flow Low”’ B RR Loop “Feedwater Flow Low”’ A RR Loop “Suction Delta T Low”’ B RR Loop “Suction Delta T Low”’	VERIFIES the following are RESET: A RR Loop “Feedwater Flow Low”’ B RR Loop “Feedwater Flow Low”’ A RR Loop “Suction Delta T Low”’ B RR Loop “Suction Delta T Low”’	____	____	____
21.	E.2.3 VERIFY HI Speed Start Permissive indicating light 1B33-DS202A/B is ON.	1A (1B) RR PMP START PERMISSIVE "HI SPEED" light verified to be LIT.	____	____	____
*22. Critical Step	E.2.4 PLACE second pump’s Breaker 3A/B Control Switch to START position and RELEASE.	• Control switch for 1A (1B RR MOTOR BKR 3A (3B) taken to START and RELEASED.	____	____	____

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
23.	E.2.5 OBSERVE the following: E.2.5.1 1A/B breaker opens. E.2.5.2 2A/B breaker opens. E.2.5.3 3A/B breaker closes after pump speed decreases to 350 rpm. E.2.5.4 Pump speed increases to approximately 1750 rpm. E.2.5.5 Reactor level drops then returns to level controller setpoint. E.2.5.6 Reactor Power initially increases then stabilizes E.2.5.7 Loop A flow is approximately the same as Loop B flow.	Sequence monitored by observing the following: ____ 1A/B breaker opens. ____ 2A/B breaker opens. ____ 3A/B breaker closes after pump speed decreases to 350 rpm. ____ Pump speed increases to approximately 1750 rpm. ____ Reactor level drops then returns to level controller setpoint. ____ Reactor Power initially increases then stabilizes. ____ Loop A and B flows are approximately the same.	____	____	____
24.	E.2.6 If Reactor Recirc Pump fails to upshift…	Step is identified to NOT apply and is marked N/A.	____	____	____
CUE The next step in LOP-RR-05, (E.2.7) directs the operator to increase power per LGP 1-1. Inform the student that power will be increased soon, and to continue with the procedure.					
25.	E.2.8 OBSERVE Feedwater Flow from Control room Recorder at the 1H13-P603 panel to ensure Feedwater Flow is >20% of rated (>2.83 million pounds per hour).	Feedwater flow is checked to be >2.83 Mlbm/hr on control room panel H13-P603.	____	____	____

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
26.	E.2.9 At the 1DS001, Operator Station Interlocks Screen, verify the following Interlocks are RESET: A RR Loop “Feedwater Flow Low”’ B RR Loop “Feedwater Flow Low”’ A RR Loop “Suction Delta T Low”’ B RR Loop “Suction Delta T Low”’	VERIFIES the following are RESET: A RR Loop “Feedwater Flow Low”’ B RR Loop “Feedwater Flow Low”’ A RR Loop “Suction Delta T Low”’ B RR Loop “Suction Delta T Low”’	____	____	____
	E.2.9.1 At the 1DS001 Operator Station RRFC Interlock screen, PLACE both A & B RR Interlocks in NORMAL as follows:				
27.	Select “Low Flow Bypass” for Loop A and then PRESS the “Deactivate” button.	At the 1DS001, examinee selects Loop A "Low Flow Bypass" and then PRESSES the DEACTIVATE button.	____	____	____
28.	Select “Low Flow Bypass” for Loop B and then PRESS the “Deactivate” button.	At the 1DS001, examinee selects Loop B "Low Flow Bypass" and then PRESSES the DEACTIVATE button.	____	____	____
29.	Select “Low Power Bypass” for Loop A and then PRESS the “Deactivate” button.	At the 1DS001, examinee selects Loop A "Low Power Bypass" and then PRESSES the DEACTIVATE button.	____	____	____
30.	Select “Low Power Bypass” for Loop B and then PRESS the “Deactivate” button.	At the 1DS001, examinee selects Loop B "Low Power Bypass" and then PRESSES the DEACTIVATE button.	____	____	____

Note

This JPM is complete when both RR pumps are operating in fast speed, and the Unit Supervisor is informed that the FW LOW FLOW/LOW POWER interlocks are returned to normal.

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Upshift the Reactor Recirc Pumps IAW LOP-RR-05

JPM Number: a. 07-01 NRC SRO-RO Sim RR **Rev. Number:** 12

Task Number and Title: 22.002, Given Unit Supervisor authorization, transfer Reactor Recirc Pumps from slow to fast speed IAW station procedures.

Safety Function: 3.1 Reactivity Control

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

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐CR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☐Yes ☒No **SRO Only** ☐Yes ☒No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 40 minutes

Actual Time Used: _____minutes

References: LOP-RR-05, Rev. 37

EVALUATION SUMMARY:

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

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

Comments:_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

STUDENT COPY

INITIAL CONDITIONS

- Unit 1 is starting up following a refueling outage and the reactor is at approximately 32% power.
- LGP 1-1 is in progress and has been completed to the point where RR pumps are directed to be upshifted per LOP-RR-05, “Changing Reactor Recirc Pump speed From Slow to Fast Speed”.
- LOP-RR-05 Prerequisites, B.1, B.2, and B.3 are met.
- Reactor water level is approximately 37".
- Both RR pumps are operating in slow speed.
- OD-3 Flow Control Line < 66.7% has been verified.
- Operators are standing by to assist you.
- Another Operator and IMD have been briefed on LOA-RM-101 per LOP-RR-05 Precaution C.8.

INITIATING CUE

The Unit Supervisor has directed you to upshift the "A" and "B" Reactor Recirc Pumps to fast speed IAW LOP-RR-05, beginning at Step E.1.

You are to INFORM the Unit Supervisor when the Low Power/Low Flow interlocks are returned to normal.

LaSalle Training

Job Performance Measure

Initiate HPCS with a Failure of the Manual Initiation Pushbutton

JPM Number: b. 07-01 NRC SRO-RO Sim HPCS

Revision Number: 08

Procedure: LGA-001

Date: 07/28/2008

Simulator
RO/SRO
3.2 Reactor Water Inventory Control
E/APE 295031
K/A EA1.04
I.R. 4.3/4.2
A, D, EN, P, S

Developed by: _____ _____
Facility Author **Date**

Validated by: _____ _____
Facility Author **Date**

Reviewed by: _____ _____
Facility Representative **Date**

Approved by: _____ _____
Training Department **Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

Revision Record (Summary)

1. **Revision 05** Utilize new template and minor editorial changes.

2. **Revision 06** Reformatted to reflect NTAFT JLOR03 rev 02
   Revised to reflect NUREG 1123 Rev 2
   Made minor editorial changes

3. **Revision 07** Changed initiating cue based on additional operator feedback

4. **Revision 08** Updated to align with NuReg 1021, Rev. 9, Supplement 1 criteria.

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Any IC is acceptable for use with this JPM. The only requirements are that level remains above – 50 inches and a high drywell signal is not initiated so that HPCS will not auto start due to plant conditions during the performance of this JPM.

NOTE: It is okay to use any IC, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Ensure the performance of this JPM does not interfere with the performance of any other JPMs.
3. When the above steps are completed for this and other JPMs to be run concurrently, validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist.
4. This completes the setup for this JPM.

Job Performance Measure

INITIAL CONDITIONS

- You are an Assist NSO.
- A loss of all feedwater has resulted in the scram of the unit.
- The LGAs have been entered.
- Reactor water level is slightly above -50".
- RCIC is OOS for mechanical maintenance.

INITIATING CUE

The Unit Supervisor directs you to manually initiate HPCS using the pushbutton.

Notify the Unit Supervisor when HPCS is injecting.

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 examinee 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 examinee acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note: All steps of this JPM are to be completed at control room panel 1H13-P601 unless otherwise noted.					
1.	Arm manual initiation logic.	Examinee turns HPCS MANUAL INITIATION pushbutton to ARM	___	___	____
2.	Initiate HPCS.	Examinee depresses HPCS MANUAL INITIATION pushbutton	___	___	____
3.	Recognize failure to initiate and reports to SRO.	Examinee recognizes failure to initiate and reports to US.	___	___	____
NOTE: An Alternate Path is required to be followed beginning in the next step.					
CUE: As US, acknowledge report. If examinee asks for guidance, inform them to continue until HPCS is injecting					
*4. Critical Step	Manually start HPCS pump.	Examinee turns HPCS PMP control switch to START	___	___	____
5.	VERIFY HPCS pump start.	Examinee verifies pump start by observation of pump amp meter and discharge pressure.	___	___	____
Note: If examinee immediately opens the injection valve after starting the HPCS pump, 1E22-F012; HPCS MIN FLOW VLV may not open.					
6.	VERIFY 1E22-F012, HPCS MIN FLOW VLV opens.	Examinee verifies1E22-F012, HPCS MIN FLOW VLV opens	___	___	____
*7. Critical Step	Open 1E22-F004 HPCS INJECTION VLV	Examinee turns 1E22-F004, HPCS INJECTION VLV control switch to OPEN.	___	___	____
8.	Verify HPCS system injection.	Flow verified using system flow indications and/or reactor water level increasing.	___	___	____

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
9.	INFORM Unit Supervisor that HPCS is injecting to the reactor.	Examinee informs the Unit Supervisor that HPCS is injecting to the reactor (task is complete).	___	___	____

Terminating Cue

AS Unit Supervisor, acknowledge information.

This JPM is complete.

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Initiate HPCS with a failure of the Manual Initiation Pushbutton

JPM Number: : b. 07-01 NRC SRO-RO Sim HPCS **Rev. Number:** 08

Task Number and Title: 2092.05 Manually Initiate HPCS

Safety Function: 3.2 Reactor Water Inventory Control

K/A Number and Importance: 295031 EA1.04 I.R. 4.3/4.2

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☒Yes ☐No **SRO Only** ☐Yes ☒No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 5 minutes

Actual Time Used: _____minutes

References: 1) LGA-001 Rev. 9, 2) HU-AA-104-101, Rev. 0

EVALUATION SUMMARY:

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

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

Comments:_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

STUDENT COPY

INITIAL CONDITIONS

- You are an Assist NSO.
- A loss of all feedwater has resulted in the scram of the unit.
- The LGAs have been entered.
- Reactor water level is slightly above -50".
- RCIC is OOS for mechanical maintenance.

INITIATING CUE

The Unit Supervisor directs you to manually initiate HPCS using the pushbutton.

Notify the Unit Supervisor when HPCS is injecting.

LaSalle Training

Job Performance Measure

Initiate ADS per the Hardcard with Failure of 3 ADS Valves

JPM Number: c.07-1 NRC SRO-RO Sim ADS

Revision Number: 02

Procedure: ADS Hard Card

Date: 07/28/08

Simulator
RO/SRO
3.3 Reactor Pressure Control
218000 ADS
K/A A2.04
I.R. 4.1/4.2
A, D, S

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

Validated By: _____ _____
Facility Author **Date**

Review by: _____ _____
Facility Representative **Date**

Approved By: _____ _____
Training Department **Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

Revision Record (Summary)

1. **Revision 00:** This JPM was written by J.E. Ross for the 2005-01 ILT Certification Exam. This JPM will be given to ILT Class 2005-01 the week of 10/16/2006.

2. **Revision 01:** Incorporated Validation Comments, 09/19/2006.

3. **Revision 02:** Updated JPM to include criteria from NuReg 1021, Rev.9, Supplement 1 and NuReg 1123, Rev.2, Supplement 1. Also performed minor editorial and formatting changes.

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any full power IC (IC-64 is preferred).

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. Scram the reactor and complete the Scram Hardcard as necessary to stabilize level and pressure.

3. Load the Computer Aided Exercise Program if used (CAEP information provided on next page.) This JPM is best setup using the CAEPs and NOT manually entering expert commands.

   If a CAEP is not used, insert the following malfunctions:

   Fail 3 ADS SRV Solenoids. This will require manually opening SRVs to get 7 SRVs open per the ADS hardcard.
   imf mes008
   imf mes014
   imf mes010

   Prevent the 1B21-F013V hands switch from working
   ior k1l29bnl false

4. Silence, Acknowledge and Reset the annunciators. Then Acknowledge the Process Computer Alarms.

5. Clear BOTH Sequence of Events Recorder (SER) monitor screens.

6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.

7. This completes the setup for this JPM.

Job Performance Measure

ASSOCIATED CAEPs

```
# Setup for 2005-01 Certification JPM Simulator-E
#
# Author: J.E. Ross
# Date Written: June 26, 2006
# Filename: Simulator-E.0.cae
#########################################################################
# Revision: 00
# Revision Date: 06/26/2006
# Revised By: J.E. Ross
#########################################################################
# This CAEP sets up the following events:
#     1)
#########################################################################

# Fail 3 ADS SRV Solenoids. This will require manually opening
# SRVs to get 7 SRVs open per the ADS hardcard.
imf mes008
imf mes014
imf mes010

# Prevent the 1B21-F013V hands switch from working
ior k1l29bnl false

# This is the END of the CAEP
```

Job Performance Measure

INITIAL CONDITIONS

You are the Unit-1 Assist NSO and the following conditions exist on Unit-1:

- LOCA conditions exist in the drywell
- LGA-001, RPV Control and LGA-003, Primary Containment Control, have been entered.
- Reactor Water level is –190 inches on the Fuel Zone instruments and CANNOT be restored and maintained above -150 inches on Wide Range Level indicators.

INITIATING CUE

The Unit Supervisor has directed you to initiate ADS per LGA-004 RPV Blowdown.

Hardcard use is authorized.

Inform the Unit Supervisor when ADS has been initiated.

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.

- Denotes critical elements of a critical step.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE This is an Alternate Path JPM. The examinee will initiate ADS using the Hardcard and discover that only 4 of the required 7 ADS valves automatically open. The examinee will then manually open 3 other SRVs until a total of 7 SRVs are open.					
1.	Examinee obtains the ADS Hardcard	Gets the ADS Hardcard from the holder in front of the SRVs.	___	___	___
	Per the ADS Hardcard:				
*2. Critical Step	ARM and DEPRESS both ADS Manual Initiation push buttons	• Turns the arm collars and then depresses both ADS Manual Initiation pushbuttons in ADS Div. 1.	___	___	___
*3 Critical Step	ARM and DEPRESS both ADS Manual Initiation push buttons	• Turns the arm collars and then depresses both ADS Manual Initiation pushbuttons in ADS Div 2.	___	___	___
4.	VERIFY Seven ADS Valves Open	Determines that less than seven ADS valves are open.	___	___	___
	Alternate Path Begins Here				
*5.	If Seven ADS Valves are not Open after Initiation, Open SRVs as necessary to make seven total open.	• Use Individual Control Switches at panel 1H13-P601 to open 3 additional SRVs until a total of seven valves are open.	___	___	___

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6.	Reports to the Unit Supervisor.	Tells the Unit Supervisor that ADS is initiated and seven SRVs are open.	___	___	___
CUE Acknowledge report as Unit Supervisor and tell the examinee that this JPM is complete. Record completion time in the block below.					

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Initiate ADS per the Hardcard with Failure of 3 ADS Valves

JPM Number: **c. 07-01 NRC SRO-RO Sim ADS** **Rev. Number:** 02

Task Number and Title: 428.000 Given entry in LGA-004/006, RPV Blowdown, evaluate plant conditions and rapidly depressurize the RPV using SRVs via the ADS system, per station procedures.

Safety Function: 3.3 Reactor Pressure Control

K/A Number and Importance: 218000 A.2.04 4.1/4.2

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☒Yes ☐No **SRO Only** ☐Yes ☒No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 2 minutes

Actual Time Used: _____minutes

References: LGA-004, Rev. 5

EVALUATION SUMMARY:

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

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

Comments:_____

_____

_____

_____

_____

_____

_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

Job Performance Measure

STUDENT COPY

INITIAL CONDITIONS

You are the Unit-1 Assist NSO and the following conditions exist on Unit-1:

- LOCA conditions exist in the drywell
- LGA-001, RPV Control and LGA-003, Primary Containment Control, have been entered.
- Reactor Water level is –190 inches on the Fuel Zone instruments and CANNOT be restored and maintained above -150 inches on Wide Range Level indicators.

INITIATING CUE

The Unit Supervisor has directed you to initiate ADS per LGA-004 RPV Blowdown.

Hardcard use is authorized.

Inform the Unit Supervisor when ADS has been initiated.

LaSalle Training

Job Performance Measure

Anticipate RPV Blowdown

JPM Number: d.07-01 NRC SRO-RO Sim

Revision Number: 00

Procedure: LPGP-PSTG-01S14, Rev. 2

Date: 07/28/2008

Simulator
RO/SRO
3.4 Heat Removal from Reactor Core
245000
K/A A4.07 Turbine Valve Position
I.R. 2.9/2.9
N, S

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

Validated By: _____ _____
Facility Author **Date**

Reviewed By: _____ _____
Facility Representative **Date**

Approved By: _____ _____
Training Department **Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

Revision Record (Summary)

1. **Revision 00:** This JPM was written by Mike Entwistle for the 07-01 NRC ILT Exam and reflects the criteria of NuReg 1021, Rev. 9, Supplement 1 and NuReg 1123 Rev. 2, Supplement 1.

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any full power IC (IC 64 is preferred).

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. Place the simulator in RUN.

3. Scram the reactor and complete the Scram Hardcard as necessary to stabilize level and pressure.

4. Silence, Acknowledge and Reset the annunciators.

5. Acknowledge the Process Computer Alarms.

6. Clear BOTH Sequence of Events Recorder (SER) monitor screens.

7. After the above steps are completed for this and other JPMs to be run concurrently, validate the concurrently run JPMs using the JPM Validation Checklist.

8. This completes the setup for this JPM.

Job Performance Measure

INITIAL CONDITIONS

You are the Unit -1 Assist NSO:

- The Unit has scrammed following the loss of feedwater pumps.
- It is anticipated that RPV level cannot be held above -150" on wide range level indication and a blowdown per LGA-004 will be required.

INITIATING CUE

The Unit Supervisor has directed you to depressurize the RPV rapidly using main turbine bypass valve per the hard card. It is OK to exceed a 100 degrees F. per hour cooldown rate.

Inform the Unit Supervisor when the bypass valves are ramping open.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* * Denotes critical steps.
* • Denotes critical elements of a critical step.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE All actions can be completed at the EHC Control Station at either the 1PM02J panel or the NSO's desk.					
1.	Examinee obtains the "Anticipate ADS (LGA-001)" Hard Card.	Examinee obtains the hard card from the EHC control station at the 1PM02J panel.	___	___	___
*2. Critical Step	Step 1. SELECT Control Menu	Examinee SELECTS Control Menu.	___	___	___
*3. Critical Step	Step 2. SELECT BPV Jack	Examinee SELECTS BPV Jack.	___	___	___
*4. Critical Step	Step 3. SELECT stpt/Ramp.	Examinee SELECTS stpt/Ramp	___	___	___
*5. Critical Step	Step 4. ENTER 100 in Set Point.	Examinee ENTERS 100 in Set Point	___	___	___
6.	Step 5. VERIFY 100 in Ramp.	Examinee VERIFIES ramp rate is set at 100.	___	___	___
*7. Critical Step	Step 6. OK (or ENTER) to Proceed.	Examinee clicks on OK or presses ENTER.	___	___	___
*8. Critical Step	Step 7. OK (or ENTER) to Confirm.	Examinee clicks on OK or presses ENTER to confirm the order.	___	___	___

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
9.	Step 8. CHECK BPVs ramping open	Examinee monitors BPV position indication to ensure BPVs are ramping open.	___	___	___
10.	Reports to the Unit Supervisor the Bypass Valves are ramping open.	Informs the Unit Supervisor that the Bypass Valves are ramping open.	___	___	___
CUE Acknowledge report as Unit Supervisor. Inform the Examinee the JPM is complete. Record the JPM Stop Time in the blank below.					

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Anticipate RPV Blowdown

JPM Number: d.07-01 NRC SRO-RO Sim **Rev. Number:** 00

Task Number and Title: 411.000 Depressurize the RPV at the appropriate cooldown rate.

Safety Function: 3.4 Heat Removal from Reactor Core

K/A Number and Importance: K/A 245000 A4.07 I.R. 2.9/2.9

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☐Yes ☒No **SRO Only** ☐Yes ☒No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 5 minutes

Actual Time Used: _____minutes

References: Anticipate ADS Hard Card (LPGP-PSTG-01S14, Rev. 2)

EVALUATION SUMMARY:

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

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

Comments:_____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

Job Performance Measure

STUDENT COPY

INITIAL CONDITIONS

You are the Unit-1 Assist NSO:

- The Unit has scrammed following the loss of feedwater pumps.
- It is anticipated that RPV level cannot be held above -150” on wide range level indication and a blowdown per LGA-004 will be required.

INITIATING CUE

The Unit Supervisor has directed you to depressurize the RPV rapidly using main turbine bypass valve per the hard card. It is OK to exceed a 100 degrees F. per hour cooldown rate.

Inform the Unit Supervisor when the bypass valves are ramping open.

LaSalle Training

Job Performance Measure

Recover from a Group 10 Isolation

JPM Number: e.07-01 NRC SRO-RO Sim

Revision Number: 01

Procedure: LOA-IN-101, Rev. 06

Date: 07/28/2008

Simulator
RO/SRO
3.6 Containment Integrity
223002 PCIS
K/A A4.03
I.R. 3.6/3.5
D, E, S

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

Validated By: _____ _____
Facility Author **Date**

Reviewed By: _____ _____
Facility Representative **Date**

Approved By: _____ _____
Training Department **Date**

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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

Revision Record (Summary)

1. **Revision 00:** This JPM was written by G.W. Beale for the 2006 NRC Annual Examination and titled SIN01r00.

2. **Revision 01:** Minor editorial and formatting changes were made to the JPM. The JPM was also updated to reflect the criteria of NuReg 1021, Rev. 9, Supplement 1 and NuReg 1123 Rev. 2, Supplement 1.

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any full power IC (IC 64).

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. Place the simulator in RUN.

3. Close the following valves.

- 1IN001A
- 1IN001B
- 1IN017
- 1IN074
- 1IN075

4. OPEN the 1IN059/1IN060 IA Cross-tie valves

5. Silence, Acknowledge and Reset the annunciators.

6. Acknowledge the Process Computer Alarms.

7. Clear BOTH Sequence of Events Recorder (SER) monitor screens.

8. After the above steps are completed for this and other JPMs to be run concurrently, validate the concurrently run JPMs using the JPM Validation Checklist.

9. This completes the setup for this JPM.

Job Performance Measure

INITIAL CONDITIONS

You are the Unit-1 Assist NSO:

- There has been an inadvertent Group 10 isolation.
- The cause has been corrected.
- The rupture disc 1IN22M has been verified intact.

INITIATING CUE

The Unit Supervisor has directed you to recover from the Group 10 Isolation per section B.3 of LOA-IN-101, “Loss of Drywell Pneumatic Air Supply”.

Inform the Unit Supervisor when the Group 10 Isolation is reset.

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

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

* * Denotes critical steps.
* • Denotes critical elements of a critical step.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1.	Examinee obtains a copy of LOA-IN-101.	Examinee obtains a copy of LOA-IN-101.	___	___	___
CUE Provide the examinee with a copy of LOA-IN-101 after the examinee locates the procedure.					
2.	LOA-IN-101, Step B.3.1 CHECK a Group 10 Primary Containment Isolation - NORMAL. • Greater than RPV Level 1	Examinee verifies RPV Level greater than Level 1 **and**	___	___	___
3.	• Less than High DW Pressure Setpoint.	Examinee verifies High Drywell Pressure less than the High Drywell Pressure Setpoint.			
4.	B.3.2 CHECK containment rad levels - NORMAL.	Examinee checks containment rad levels - NORMAL. (Various indications in Control Room can be used)	___	___	___
5.	B.3.3 CHECK rupture disc 1IN22M - NORMAL.	Examinee determines that the rupture disc is NORMAL based on initial conditions	___	___	___
*6. Critical Step	B.3.4 At 1H13-P601, DEPRESS the INBOARD **and**	• Examinee depresses the INBOARD isolation reset pushbuttons. **and**	___	___	___
*7. Critical Step	OUTBOARD isolation reset pushbuttons	• OUTBOARD isolation reset pushbuttons.			

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE The following valves may be opened in any order. • 1IN001A • 1IN001B • 1IN017 • 1IN074 • 1IN075					
*8 Critical Step	At 1PM13J OPEN the following: • 1IN001A	• Examinee opens 1IN001A DW Pneumatic Suction Upstream Isolation	___	___	___
*9 Critical Step	• 1IN001B	• Examinee opens 1IN001B DW Pneumatic Suction Downstream Isolation	___	___	___
*10 Critical Step	• 1IN017	• Examinee opens 1IN017 DW Pneumatic 100 lb Header Isolation	___	___	___
*11 Critical Step	• 1IN074	• Examinee opens 1IN074 DW Dryer Purge Outlet Downstream Isolation.	___	___	___
*12 Critical Step	• 1IN075	• Examinee opens 1IN075 DW Dryer Purge Outlet Upstream Isolation.	___	___	___
CUE If the Examinee takes actions to restart the IN system, inform the examinee that subsequent steps in LOA-IN-101 will be completed by another NSO.					
13.	Reports to the Unit Supervisor the Group 10 isolation has been reset.	Informs the Unit Supervisor that the Group 10 Isolation has been reset.	___	___	___

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE					
Acknowledge report as Unit Supervisor. Inform the Examinee that the JPM is complete. Record the JPM Stop Time in the blank below.					

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Recover from a Group 10 Isolation

JPM Number: e.07-01 NRC SRO-RO Sim **Rev. Number:** 01

Task Number and Title: 97.015 Recover from a Group 10 Isolation

Safety Function: 3.5 Containment Integrity

K/A Number and Importance: K/A 223002 A4.03 I.R. 3.6/3.5

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☐Yes ☒No **SRO Only** ☐Yes ☒No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 10 minutes

Actual Time Used: _____minutes

References: LOA-IN-101, Rev. 06

EVALUATION SUMMARY:

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

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

Comments:_____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

Job Performance Measure

STUDENT COPY

INITIAL CONDITIONS

You are the Unit-1 Assist NSO:

- There has been an inadvertent Group 10 isolation.
- The cause has been corrected.
- The rupture disc 1IN22M has been verified intact.

INITIATING CUE

The Unit Supervisor has directed you to recover from the Group 10 Isolation per section B.3 of LOA-IN-101, “Loss of Drywell Pneumatic Air Supply”.

Inform the Unit Supervisor when the Group 10 Isolation is reset.

LaSalle Training

Job Performance Measure

Reset a Half Scram with Blown Group Scram Fuse

JPM Number: f. 07-01 NRC SRO-RO Sim

Revision Number: 01

Procedure: LOA-RP-101, Rev. 9

Date: 07/28/2008

Simulator
RO/SRO
3.7 Instrumentation
212000 RPS
K/A A2.19
I.R. 3.8/3.9
A, D, E, P, S

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

Validated By: _____ _____
Facility Author **Date**

Reviewed By: _____ _____
Facility Representative **Date**

Approved By: _____ _____
Training Department **Date**

Job Performance Measure

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 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

Revision Record (Summary)

1. **Revision 00:** This JPM was written by J.E. Ross for the 2003-01 ILT NRC Exam given on the week of 03/07/2005.

2. **Revision 01:** Minor formatting and editorial changes were made to the JPM. Also, the JPM was revised to reflect the criteria in NuReg 1021, Rev. 9, Supplement 1 and NuReg 1123, Rev. 2, Supplement 1.

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any full power IC (IC-64)

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Load the Computer Aided Exercise Program from the thumb drive (NRC-Simulator-07.0.cae) or manually enter the following:
   - imf mni098 125
   - irf iasff18e removed

   May or may not need to insert the following based on the APRM Malfunction.
   - ior k3k06b97 false
   - ior k3k06pz7 depressed
   - dor k3k06b97
   - dor k3k06pz7

3. DO NOT Bypass 1C APRM.

4. Silence, Acknowledge and Reset the annunciators, then Acknowledge the Process Computer Alarms.

5. Clear BOTH Sequence of Events Recorder (SER) monitor screens.

6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.

7. This completes the setup for this JPM.

Job Performance Measure

ASSOCIATED CAEPs

```
# Setup for NRC Simulator JPM Simulator-07
#
# Author: J.E. Ross
# Date Written: October 23, 2004
#Modified by J. Nugent on 7/22/08
# Filename: A:NRC-Simulator-07.0.cae
################################################################################
# Revision: 00
# Revision Date: 10/23/2004
# Revised By: jer
################################################################################
# This is an Alternate Path JPM. The examinee will be told to reset a
# half scram. After resetting, one group light will be out. The
# will then enter LOA-RP-101 and replace the light bulb. This will not
# work and the examinee will then have to re-insert a half scram.
#

# Fail 1C APRM upscale
imf mni098 125

# Simulate a blown group scram fuse on 1A RPS (A2)
irf iasff18e removed    | 1 | 1

# This ends this CAEP.
```

Job Performance Measure

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1:

- APRM 1C failed upscale a few minutes ago.
- APRM 1C has NOT been bypassed

INITIATING CUE

The Unit Supervisor has directed you to complete the actions required by LOR-1H13-P603-A405 starting at Step B.6.

Report to the Unit Supervisor when you have completed resetting the half-scram.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* * Denotes critical steps.
- Denotes critical elements of a critical step.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1.	B.6.a DETERMINE if one APRM has failed Upscale or is Inoperable.	Determines that APRM C has failed upscale from information given in the Initial Conditions of this JPM (1C APRM Failed Upscale).	___	___	___
*2. Critical Step	B.6.b BYPASS inoperable/upscale APRM if no other APRMs are bypassed in Channel A.	• PLACE APRM Bypass Joystick in the C position.	___	___	___
*3. Critical Step	B.6.c RESET RPS Channel A.	• ROTATES the RPS Scram Reset Switch to the 1/4 (2/3) position and then ROTATES it back to the 2/3 (1/4) position, then releases the switch.	___	___	___
NOTE Alternate path begins at the next step when one Group Scram Light remains EXTINGUISHED					
*4. Critical Step	RECOGNIZE that one RPS Group Light is EXTINQUISHED in RPS Channel A.	• DETERMINES that the A2 White Group Scram Light is EXTINQUISHED.	___	___	___
NOTE Examinee may Enter LOA-RP-101 at this point, and not attempt to replace the light bulb until directed by the procedure. If the examinee goes directly to LOA-RP-101 from here, then mark the next actions as N/A and jump ahead to the step labeled Step 7. **NOTE** If the examinee immediately inserts a ½ scram and reports status to the Unit Supervisor – inform the examinee to attempt to reset the ½ scram and report the status.					
5.	DETERMINE if light is burned out or if possible blown fuse.	DETERMINES that the light bulb is NOT the problem.	___	___	___

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE WHEN the examinee attempts to change the light bulb, tell the examinee that the light bulb has been replaced and the light is still OUT.					
6.	REPORTS to the Unit Supervisor	Informs Unit Supervisor that the half-scram is reset and A2 Group Light is Out.	___	___	___
CUE As the Unit Supervisor acknowledge the report, and if asked, inform the examinee to take what ever actions are required per the appropriate procedures.					
7.	ENTERS LOA-RP-101	OBTAINS current copy of LOA-RP-101.	___	___	___
8.	B.4.1 CHECK only one RPS Bus affected and Control Rods NOT moving.	VERIFIES only RPS Bus A affected and no rods moving.	___	___	___
9.	B.4.2 SUSPEND any HALF SCRAM testing in progress.	DETERMINES no half scram testing in progress.	___	___	___
10.	B.4.3 CHECK more than one RPS BUS LIVE light out on a single Channel.	DETERMINES only one light out.	___	___	___
CUE WHEN the examinee attempts to change the light bulb, tell the examinee that the light bulb has been replaced and the light is still OUT.					
11.	B.4.3.1 (move to right hand column of the LOA) REPLACE the affected light bulb.	REPLACES affected bulb.	___	___	___

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*12. Critical Step	B.4.3.2 If light remains de-energized, immediately INSERT a HALF SCRAM on the affected RPS Bus.	• DETERMINES bulb was NOT the problem and IMMEDIATELY inserts Half-Scram on RPS Channel A by ARMING and DEPRESSING the A1 or A2 Manual Scram Pushbutton.	___	___	___
NOTE The examinee is required to determine which fuse is to be checked first for failure as part of this JPM.					
13.	B.4.4 (moves back to left hand column of the LOA) VERIFY affected 1C71-F18 fuse is NOT blown at panels 1H13-P609 and 1H13–P611.	Takes action to check affected 1C71-F18 fuses.	___	___	___
CUE WHEN examinee attempts to dispatch an operator to check for a blown fuse, OR displays efforts to determine this information, tell the examinee to call the Unit-2 Assist NSO and specifically identify which fuse is to be checked first.					
*14. Critical Step	C.8.4 (Discussion section) Determine that the Group Light 2 (Top) for RPS Channel A is associated with Fuse F18E and should be checked first.	• Examinee reviews the table provided in the Discussion section and determines that Group Light 2 (Top) for RPS Channel A is associated with Fuse F18E and should be checked first.	___	___	___
15.	B.4.4 (continued) Direct the Unit 2 Assist NSO to check Fuse F18 first.	Examinee directs the Unit 2 Assist NSO to check Fuse F18 first.	___	___	___
SIM OP WHEN called to check the fuse, MODIFY the remote function (iasff18e) to install the fuse. AFTER replacing the fuse, CALL and INFORM the NSO that a fuse was blown and you have replaced the fuse with a like-for-like fuse per the appropriate procedures.					

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*16. Critical Step	B.4.5 RESET HALF SCRAM	• ROTATES the RPS Scram Reset Switch to the 1/4(2/3) position and then ROTATES it back to the 2/3(1/4) position, and then releases the switch.	___	___	___
17.	B.4.6 VERIFY proper rod position per Auto Scan of all Rod Positions.	Examinee takes actions to VERIFY proper rod position per Auto Scan of all Rod Positions	___	___	___
CUE INFORM the examinee that another NSO will verify rod positions.					
18.	REPORTS to the Unit Supervisor.	INFORMS the Unit Supervisor that the Half Scram has been reset.	___	___	___
CUE ACKNOWLEDGE report as Unit Supervisor and INFORM the student that the JPM is complete. Record completion time in the block below.					

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Reset a Half Scram with Blown Group Scram Fuse

JPM Number: f. 07-01 NRC SRO-RO Sim **Rev. Number:** 01

Task Number and Title: 49.017 Given Unit Supervisor authorization, reset the RPS system scram per station procedures.

Safety Function: 3.7 Instrumentation

K/A Number and Importance: 212000 A2.19 I.R. 3.8/3.9

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test 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: 1) LOR 1H13-P603-A405, 2) LOA-RP-101

EVALUATION SUMMARY:

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

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

Comments:_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

Job Performance Measure

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1:

- APRM 1C failed upscale a few minutes ago.
- APRM 1C has NOT been bypassed

INITIATING CUE

The Unit Supervisor has directed you to complete the actions required by LOR-1H13-P603-A405 starting at Step B.6.

Report to the Unit Supervisor when you have completed resetting the half-scram.

LaSalle Training

Job Performance Measure

Starting Service Water Pumps to Maintain Fire Header Pressure

JPM Number: g. 07-01 NRC SRO-RO Sim

Revision Number: 00

Procedure: LOA-FP-101

Date: 07/28/2008

Simulator
RO/SRO
3.8 Plant Service Systems
286000 Fire Protection
K/A A2.08
I.R. 3.2/3.3
E, N, S

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

Validated By: _____ _____
Facility Author **Date**

Reviewed By: _____ _____
Facility Representative **Date**

Approved By: _____ _____
Training Department **Date**

Job Performance Measure

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 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

Revision Record (Summary)

1. **Revision 00:** This is a new JPM written for the 07-01 ILT NRC

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any full power IC (IC-64)

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Scram the unit.

3. Trip both Diesel Fire Pumps and both Jockey Fire Pumps.

4. Line up Service Water with the following pumps running:
   - 1A Service Water pump
   - Common Service Water pump
   - 0A Service Water Jockey pump.

5. Turn the following alarms ON:
   - 1PMJ10 B101
   - 1PMJ10 B102
   - 1PMJ10 B302
   - 1PMJ10 B303
   - 1PMJ10 B401
   - 1PMJ10 B407

6. Arrange the following lights ON or OFF as indicated:
   - A and B Diesel Fire Pump ON light **OFF**
   - A and B Diesel Fire Pump TRIP light **ON**
   - A and B Diesel Fire Pump OFF light **ON**

7. Force the Fire Header Pressure to approximately 100 psi on the 1PMJ10

8. Place the control switch for 0A Service Water Jockey Pump in the After-start position on the simulator Remote Shutdown Panel.

9. Silence, Acknowledge and Reset the annunciators, then acknowledge the Process Computer Alarms.

10. Clear BOTH Sequence of Events Recorder (SER) monitor screens.

11. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.

12. This completes the setup for this JPM.

Job Performance Measure

MATERIALS

The following materials will be provided to the examinee:

1. None.

The following materials will be available to the examinee:

1. LOA-FP-101, Unit 1 Fire Protection System Abnormal
2. LOP-WS-03, Service Water Pump Shutdown

Job Performance Measure

ASSOCIATED CAEPs

None.

Job Performance Measure

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1.

A large fire is in progress inside the lake screen house. The fire is on the west side of the ground floor.

Both Diesel Fire Pumps and the Jockey Fire Pumps have tripped due to the fire. The Intermediate Jockey Fire Pump remains running

Normal AC power remains available to the Lake Screen House.

INITIATING CUE

The Unit Supervisor has directed you to start additional Service Water pumps to maintain fire header pressure greater than or equal to 125 psig in accordance with LOA-FP-101, “Unit 1 Fire Protection System Abnormal”, Attachment A.

You are to INFORM the Unit Supervisor when LOA-FP-101 Attachment A is completed up to and including step 5.

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

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

* * Denotes critical steps.
* • Denotes critical elements of a critical step.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
IMPORTANT !!! **VERIFY that the Remote Shutdown Panel control switch for the 0A Service Water Jockey is placed in the AFTER-START position prior to beginning this JPM.**					
NOTE Provide a copy of LOA-FP-101 Attachment A after the examinee has acknowledged the initiating cue.					
1.	Attachment A, Step 1: If a fire is in progress, GO TO Step 3.	Determines that a fire is in progress and GOES TO Step 3.	___	___	___
*2. Critical Step	Attachment A, Step 3: START desired Service Water Pump at 1PM09J: o 1WS01PA o 1WS01PB o 2WS01PA o 2WS01PB o 0WS01PA	• Determines that an additional Service Water Pump must be started and STARTS the pump by taking the appropriate control switch to START.	___	___	___
SIM OPERATOR: As the 1WS01PB pump is started, Fire Header pressure should be driven to approximately 135 psi and the Low Pressure Alarm should be cleared by the simulator operator.					
3.	Attachment A, Step 4: VERIFY Service Water PMP Amps are normal at 1PM10J: • ≤ 160 amps	• VERIFIES that running Service Water Pump amps are ≤ 160 amps.	___	___	___

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
4.	Attachment A, Step 5: If a Service Water Jockey Pump is running, SHUT it down per LOP-WS-03 while continuing with subsequent actions.	Determines that 0A Service Water Jockey Pump 0WS02PA is running and is required to be shutdown.	___	___	___
SIM OPERATOR: As the Service Water Jockey Pump is Shutdown, Fire Header pressure should be driven to approximately 127 psi by the simulator operator.					
CUE **Provide the examinee with a copy of LOP-WS-03 when it is identified that the procedure is needed and the examinee has located the procedure in the simulator.**					
*5. Critical Step	LOP-WS-03, Step E.1 On panel 1PM09J, STOP desired pump.	Examinee takes control switch 0WS-02PA to Stop.	___	___	___
6.	LOP-WS-03, Step E.2 VERIFY stopped Service Water Pump or Service Water Jockey Pump discharge check valve is closed by observing the pump shaft stops rotating and does not begin to rotate in reverse.	Directs an NLO to check that 0WS02PA shaft stopped rotating when the pump was stopped	___	___	___
CUE Inform the examinee that the shaft has been checked for Service Water Jockey pump 0WS02PA and the shaft is stopped.					
7.	LOP-WS-03, Step E.2.1 If the pump discharge check does not close …….	Identifies that this step does not apply, marks the step N/A and continues on to step E.3 of LOP-WS-03.	___	___	___
NOTE IF the examinee directs an NLO to perform the following step, inform the examinee that the examinee is to perform the action at the simulator Remote Shutdown Panel.					

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
8.	LOP-WS-03, E.3 At Remote Shutdown Panel 1C61-P001, PLACE the control switch for a stopped Service Water Jockey Pump 0A to the AFTER STOP position.	The examinee goes to the simulator Remote Shutdown Panel 1C61-P001, and PLACES the control switch for a stopped Service Water Jockey Pump 0A to the AFTER STOP position.	___	___	___
9.	LOP-WS-03, E.4 Notify chemistry to adjust Chemical Feed System in accordance with LTP-500-11, Determine Chemical Feed System Flow Rates.	NOTIFIES chemistry to adjust Chemical Feed System in accordance with LTP-500-11, Determine Chemical Feed System Flow Rates.	___	___	___
CUE As Chemistry personnel, inform the examinee the Chemical Feed System will be adjusted as required.					
10.	INFORM the Unit Supervisor when LOA-FP-101 Attachment A is completed up to and including step 5.	INFORMS the Unit Supervisor that LOA-FP-101 Attachment A is completed up to and including step 5.	___	___	___
CUE ACKNOWLEDGE report as Unit Supervisor and INFORM the examinee that the JPM is complete. Record completion time in the block below.					

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Starting Service Water Pumps to Maintain Fire Header Pressure

JPM Number: g. 07-01 NRC SRO-RO Sim **Rev. Number:** 00

Task Number and Title: 125.021 Provide an alternate supply to the Fire Protection system when required.

Safety Function: 3.8 Plant Service Systems

K/A Number and Importance: 286000 Fire Protection Systems, A2.08 I.R. 3.2/3.3

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☐Yes ☒No **SRO Only** ☐Yes ☒No

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 14 minutes

Actual Time Used: _____minutes

References: 1) LOA-FP-101, Rev. 9 2) LOP-WS-03, Rev. 7

EVALUATION SUMMARY:

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

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

Comments:_____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

Job Performance Measure

STUDENT COPY

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1.

A large fire is in progress inside the lake screen house. The fire is on the west side of the ground floor.

Both Diesel Fire Pumps and the Jockey Fire Pumps have tripped due to the fire. The Intermediate Jockey Fire Pump remains running

Normal AC power remains available to the Lake Screen House.

INITIATING CUE

The Unit Supervisor has directed you to start additional Service Water pumps to maintain fire header pressure greater than or equal to 125 psig in accordance with LOA-FP-101, “Unit 1 Fire Protection System Abnormal”, Attachment A.

You are to INFORM the Unit Supervisor when LOA-FP-101 Attachment A is completed up to and including step 5.

LaSalle Training

Job Performance Measure

Startup of the Mechanical Vacuum Pump

JPM Number: h. 07-01 NRC SRO-RO Sim

Revision Number: 00

Procedure: LOP-OG-01, Rev. 13

Date: 074/28/2008

Simulator
RO/SRO
3.9 Radioactivity Release
271000 Offgas System
K/A A2.03
I.R. 3.5/3.8
A, L, N, S

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

Validated By: _____ _____
Facility Author **Date**

Reviewed By: _____ _____
Facility Representative **Date**

Approved By: _____ _____
Training Department **Date**

Job Performance Measure

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 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

Revision Record (Summary)

1. **Revision 00:** This is a new JPM written for the 07-01 ILT NRC

Job Performance Measure

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any low power IC (IC-11 is preferred)

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. Close 1IN62-F003A and 1IN62-F003B.

3. Setup the following alarms on a trigger:

    - 1H13P601 F402 MSL A/B RAD MON DOWNSCALE/INOP/HI
    - 1H13P601 E402 MSL C/D RAD MON DOWNSCALE/INOP/HI
    - 1H13P601 F403 MSL A/B RAD MON HI-HI – 10 second time delay
    - 1H13P601 E403 MSL C/D RAD MON HI-HI – 10 second time delay

If required, annunciate the above HI-HI alarms by inserting the following:

    - imf r1282 ON
    - imf r0301 ON

4. Silence, Acknowledge and Reset the annunciators, then Acknowledge the Process Computer Alarms.

5. Clear BOTH Sequence of Events Recorder (SER) monitor screens.

6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.

7. This completes the setup for this JPM.

MATERIALS

The following materials will be provided to the examinee:

1. A marked copy of LOP-OG-01, completed through step E.6

Job Performance Measure

ASSOCIATED CAEPs

None.

Job Performance Measure

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1

Unit 1 is starting up following a refueling outage, with reactor pressure currently at approximately 50 psig with conditions met for establishing condenser vacuum.

LGP 1-1, Step E.3.14 is directing the start-up of the Mechanical Vacuum Pump per LOP-OG-01.

LOP-OG-01 has been completed up to and including step E.6 in preparation for the start-up of the Mechanical Vacuum Pump.

INITIATING CUE

The Unit Supervisor has directed you to start-up the Unit 1 Mechanical Vacuum Pump per LOP-OG-01, beginning at step E.7.

You are to INFORM the Unit Supervisor when the Mechanical Vacuum Pump has been started and main condenser back pressure is DECREASING.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* * Denotes critical steps.
* • Denotes critical elements of a critical step.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE Provide the examinee with the marked up copy of LOP-OG-01.					
*1. Critical Step	E.7 At 1N62-P601, PERFORM the following: o PLACE the 1N62-F300A control switch to OPEN and VERIFY the valve opens o PLACE the 1N62-F300B control switch to OPEN and VERIFY the valve opens	The control switch for ONE (or both) of the TWO listed valves is taken to the OPEN position, and light indication is checked to VERIFY the valve has opened.	___	___	___
*2. Critical Step	E.8 At 1N62-P601, PLACE 1OG02P, Mech Vac Pmp control switch to START and RELEASE.	• 1OG02P, Mech Vac Pmp control switch is taken to START by rotating clockwise	___	___	___
3.	E.9 At 1PM03J CHECK the following for main condenser back pressure DECREASING (vacuum increasing). • 1PR-ES062, 1C Cond Line Back Press • 1PR-ES058, 1A/1B Cond Line Back Press	At 1PM03J BOTH of the following indications are checked to determine if main condenser back pressure is DECREASING (vacuum increasing). • 1PR-ES062, 1C Cond Line Back Press • 1PR-ES058, 1A/1B Cond Line Back Press	___	___	___
NOTE Alternate path begins at the next step when a MSL Hi-Hi alarm is received.					

Job Performance Measure

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
SIM OP Insert MSL Hi and HI-Hi Rad condition after the examinee is at the 1PM03J checking condenser back pressure for a short period of time.					
NOTE Alternate Path starts at this point. RECORD THE TIME THE MSL RAD MON HI-HI ALARM IS RECEIVED IN ORDER TO TRACK THE SECURING OF THE MECHANICAL VACUUM PUMP WITHIN 15 MINUTES OF THE ALARM. TIME MSL Hi-HI Rad Alarm received: _____					
4.	MSL Rad Mon Hi-Hi alarm annunciator alarms due to a valid MSL Hi-Hi Rad condition.	Responds to MSL Rad Mon Hi-Hi alarm by referring to LOR and checking MSL Rad recorders in backpanel.	___	___	___
CUE: MSL Rad Recorders indicate 2200 mr/HR.					
*5. Critical Step	Per CAUTION statement in LOP-OG-01, If a valid MSL A/B/C/D Rad Mon Hi-Hi alarm is received, TRIP Mechanical Vacuum Pump within 15 minutes to prevent exceeding the radioactivity release dose limit.	TRIPS the Mechanical Vacuum Pump by taking the 1OG02P, Mech Vac Pmp control switch to STOP by rotating counterclockwise, within 15 minutes of receiving the MSL Rad Mon Hi-Hi alarm	___	___	___
6.	INFORMS that Unit Supervisor that the Mechanical Vacuum Pump has been TRIPPED due to a valid MSL Rad Mon Hi-Hi alarm.	INFORMS the Unit Supervisor that the Mechanical Vacuum Pump has been TRIPPED due to a valid MSL Rad Mon Hi-Hi alarm.	___	___	___
CUE ACKNOWLEDGE report as Unit Supervisor and INFORM the examinee the JPM is complete. Record completion time in the block below.					

JPM Stop Time: _____

Job Performance Measure

Operator's Name: _____

Job Title: ☐RO ☐SRO-I ☐SRO-U

JPM Title: Startup of the Mechanical Vacuum Pump

JPM Number: h. 07-01 NRC SRO-RO Sim **Rev. Number:** 00

Task Number and Title: 080.00.14, Given an Off-Gas System line-up, evaluate system indications/responses and determine if the responses are expected and normal.

Safety Function: 3.9 Radioactivity Release

K/A Number and Importance: 271000 Offgas System A2.03 I.R. 3.5/3.8

Suggested Testing Environment: Simulator

Actual Test Environment: ☒Simulator ☐Plant ☐MCR ☐Other _____

Test Method: ☐ Simulate ☒ Perform

Alternate Path: ☒Yes ☐No **SRO Only** ☐Yes ☒No

Time Critical: ☒ Yes ☐ No

Estimated Time to Complete: 14 minutes

Actual Time Used: _____minutes

References: 1) LOP-OG-01, Rev. 13

EVALUATION SUMMARY:

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

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

Comments:_____

Evaluator's Name:_____(Print)

Evaluator's Signature:_____ Date:_____

Job Performance Measure

STUDENT COPY

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1

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