

Exelon Nuclear

Job Performance Measure

SHUTDOWN A REACTOR RECIRC PUMP

JPM Number: S-N-a

Revision Number: 05

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 04 Bank JPM.

Revision 05 Revised for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 10, so that BOTH Recirc Pumps are operating at MINIMUM speed.

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

2. Insert following Malfunctions and/or Remotes:

- Imf SER0341 ON (drives up annunciator 902-4 E-4, 2A Recirc M-G Temp High).

3. Setup the following Triggers:

- None.

DOCUMENT PREPARATION

1. Clean copy of DOP 0202-03
2. Clean copy of DOP 0202-04.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. Annunciator 902-4 E-4 has annunciated due to a high fluid drive oil temperature condition for the 2A Recirc Pump MG Set.
3. Temperature is currently at 202^oF and rising.

INITIATING CUE

1. The Unit Supervisor has directed you to perform a normal shutdown of the 2A Reactor Recirc Pump in accordance with DOP 0202-04 step G.2, but do NOT isolate it from the reactor.
2. Inform the Unit Supervisor when the task is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- 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)

JPM Start Time: _____

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide the Examinee with the supplied copy of DOP 0202-03 and DOP 0202-04.					
1.	Transfer both Recirc Pumps to Manual Control.	Refers to DOP 0202-03 to perform actions.	_____	_____	_____
2.	Verifies MASTER RECIRC FLOW CONTRL, 2-262-22, is in MAN.	Outer dial in MAN.	_____	_____	_____
<u>NOTE:</u> During performance of the following steps, either 'A' or 'B' pump may be performed in any order.					
3.	Verifies 2A RECIRC PP SPEED CONTRL, 2-262-25A, in BAL.	Outer dial in BAL.	_____	_____	_____
4.	Verifies 2B RECIRC PP SPEED CONTRLs, 2-262-25B, in BAL.	Outer dial in BAL.	_____	_____	_____
<u>NOTE:</u> When operating at minimum pump speed, the deviation meters will NOT indicate below the zero (null) point during performance of the following steps:					
5.	Adjust 2A RECIRC PP SPEED CONTRL, 2-262-25A, potentiometer to raise AND lower deviation meter above zero point.	Rotates potentiometer both directions and deviation meter deflects both directions.	_____	_____	_____
6.	Adjust 2B RECIRC PP SPEED CONTRL, 2-262-25B, potentiometer to raise AND lower deviation meter above zero point.	Rotates potentiometer both directions and deviation meter deflects both directions.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
	7.	Adjust 2A RECIRC PP SPEED CONTRL, 2-262-25A to indicate zero.	Rotates potentiometer so that deviation meter indicates zero.	_____	_____	_____
	8.	Adjust 2B RECIRC PP SPEED CONTRL, 2-262-25B to indicate zero.	Rotates potentiometer so that deviation meter indicates zero.	_____	_____	_____
*	9.	Place 2A RECIRC PP SPEED CONTRL, 2-262-25A in MAN.	Outer dial in MAN.	_____	_____	_____
*	10.	Place 2B RECIRC PP SPEED CONTRL, 2-262-25B in MAN.	Outer dial in MAN.	_____	_____	_____
<u>CUE:</u> If asked as EO, respond that Seal Purge is in service to the 2A Recirc Pump.						
*	11.	Take 2A M G SET DRIVE MOTOR to STOP.	RED light illuminated.	_____	_____	_____
	12.	Verify 2A Recirc Pump has stopped.	Is indicated by one or more of the following: <ul style="list-style-type: none"> • FI 2-260-5A, 2A PP FLOW, lowers to near zero <u>and/or</u> <ul style="list-style-type: none"> • FR 2-260-7, 2A RECIRC PP FLOW (red pen), lowers to near zero <u>and/or</u> <ul style="list-style-type: none"> • Annunciator 902-4 A-3, 2A RECIRC PP DP LO, illuminates. 	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
*	13.	Close MO 2-202-5A, 2A PP DISCH VLV.	RED light illuminated.	_____	_____	_____
	14.	Verify 2B Recirc Pump speed is approximately 30%.	Speed indicates ~ 30%.	_____	_____	_____
<u>CUE:</u> Inform the candidate that 5 minutes have elapsed.						
	15.	Open MO 2-202-5A, 2A PP DISCH VLV.	GREEN light illuminated.	_____	_____	_____
<u>CUE:</u> If candidate informs that he/she will enter DGP 03-03, inform him/her another NSO will perform.						
	16.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	_____	_____	_____
<u>CUE:</u> Acknowledge report of task completion.						
			END			

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: SHUTDOWN A REACTOR RECIRC PUMP

Revision Number: 05

JPM Number: S-N-a

Task Number and Title: 202L004, Shutdown the 2A Reactor Recirc Pump

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

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 12 minutes **Actual Time Used:** _____ minutes

References: DOP 0202-03, rev 33 and DOP 0202-04, rev 28

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. Annunciator 902-4 E-4 has annunciated due to a high fluid drive oil temperature condition for the 2A Recirc Pump MG Set.
3. Temperature is currently at 202°F and rising.

INITIATING CUE

1. The Unit Supervisor has directed you to perform a normal shutdown of the 2A Reactor Recirc Pump in accordance with DOP 0202-04 step G.2, but do NOT isolate it from the reactor.
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

CORE SPRAY - PERFORM PUMP TEST WITH PUMP TRIP

JPM Number: S-N-b

Revision Number: 04

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 03 Bank JPM.

Revision 04 Revised for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Core Spray pump operability surveillance can be performed from any IC with Core Spray in the normal standby lineup

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

2. Start the LPCI/CS room cooler fans.
3. Enter the following Expert commands to set up an automatic trigger to trip the Core Spray pump after the test valve is opened:

NOTE: The trigger assignment can be changed to any other available trigger to accommodate running this JPM concurrently with other JPMs.

- **trgset 1 "cssbkppb .and. cslop4b" (Trigger 1 Activates when 2B Core Spray pump is running AND when MO 1402-4B OPEN light turns ON)**
- **ior csdtpppb (1 10) trip (After 10 sec, inserts a 2B Core Spray pump trip)**
- **ior csdclppb (1 10) off (After 10 sec, inserts a 2B Core Spray pump trip)**
- **trgset 2 "(et_array(1) .and. (.not. cssbkppb))"|2 (Trigger 2 Activates when Trigger 1 is active AND when 2B Core Spray pump is NOT running)**
- **trg 2 "dor csdtpppb"|2 (Deletes 2B Core Spray pump trip)**

DOCUMENT PREPARATION

1. Markup a copy of DOS 1400-05 as complete up through Step I.7. (Ready to start 2B Core Spray Pump per step I.8).

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. The Unit 2 Core Spray 'B' Pump operability surveillance is required due to maintenance.
3. The operability surveillance for the 2A Core Spray pump is NOT needed.
4. The system is filled and vented.
5. The required valve operability surveillance has been completed.
6. Vibration data is NOT required.
7. The Unit 2 NLO is standing by in the corner room.
8. The LPCI/Core Spray Room Coolers are running.

INITIATING CUE

1. The Unit Supervisor directs you to perform DOS 1400-05 step I.8 for the 2B Core Spray pump.
2. All applicable Prerequisites have been met.
3. Inform the Unit Supervisor upon completion of step I.8.

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

Job Performance Measure (JPM)

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

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

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

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Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide Examinee a copy of DOS 1400-05.				
1.	Verify the following valve line up: <ul style="list-style-type: none"> MO 2-1402-4B Closed MO 2-1402-38B Open 2-1402-6B Open MO 2-1402-25B Closed MO 2-1402-3B Open 2-1402-40B-SV Closed 	Verifies the following: <ul style="list-style-type: none"> Green light illuminated. Green light illuminated. Green light illuminated. Green light illuminated. Green light illuminated. Directs NLO to Verify 2-1402-40B-SV Closed 	_____	_____
<u>CUE:</u> 2-1402-40B-SV, INST SV is closed.				
<u>NOTE:</u> The next three (3) actions may be requested to be performed at the same time.				
2.	Verify 2B CORE SPRAY MOTOR has adequate lubrication.	Contacts NLO to verify 2B CS Motor oil level +0 to – 1/8 inch of the Oil Sightglass Standstill Line.	_____	_____
<u>CUE:</u> 2B Core Spray motor oil level is normal (within +0 to –1/8 inch band).				
3.	Verify 2B LPCI/CS Room Cooler is operating properly.	Contacts NLO to verify proper room cooler operation.	_____	_____
<u>CUE:</u> 2B LPCI/CS room cooler is operating normally.				

Job Performance Measure (JPM)

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	4. Direct NLO to open 2-1402-40B-SV and report pressure.	Directs 2-1402-40B-SV Open.	_____	_____	_____
<u>CUE:</u> When asked, report: "2-1402-40B-SV Inst SV is Open and pressure is 7 psig".					
	5. Record suction pressure provided by NLO.	Pressure of 7 psig recorded on Data Sheet 1.	_____	_____	_____
	6. Calculate 2-1402-8B initial closed DP.	DP Calculated: 2-1450-1B _____ psig Minus 2-1402-40B <u> 7 </u> psig Records 2-1450-1B pressure as 75 psig (\pm 5 psig)	_____	_____	_____
<u>CUE:</u> If examinee requests the above calculation to be verified, <u>sign the "verified by" line.</u> If the student informs the SRO that the Core Spray System should be declared inoperable, acknowledge the report.					
*	7. Start 2B CORE SPRAY Pump.	Red light illuminated.	_____	_____	_____
<u>NOTE:</u> 2B Core Spray Pump overcurrent trip malfunction is automatically inserted 10 seconds after the 2-1402-4B valve has dual indication.					
*	8. Open FLOW TEST VLV MO 2-1402-4B.	Rotates and holds MO 2-1402-4B Control switch CW to Open.	_____	_____	_____
BEGIN ALTERNATE PATH					
	9. Acknowledge and report alarm for 2B CS pump trip.	Acknowledges alarm and makes report.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
<u>CUE:</u> Acknowledge report.					
*	10.	Immediately Close 2-1402-4B.	Green light illuminated. Red light illuminated.	<div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div>	
<u>CUE:</u> If examinee enters DOA 6500-10, respond that the assist NSO will execute that procedure.					
<u>CUE:</u> If examinee terminates, or requests permission to terminate the surveillance OR If examinee references the DAN for pump trip and has at least considered the actions to take, then provide the cue: Terminate the surveillance. Leave the system in the current lineup. Someone else will be assigned to verify the system is restored to normal.					
	11.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	<div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div>	
<u>CUE:</u> Acknowledge report of task completion.					
			END		

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: CORE SPRAY - PERFORM PUMP TEST WITH PUMP TRIP

Revision Number: 04

JPM Number: S-N-b

Task Number and Title: 209L004, Perform a CS pump operability test and determine if the results meet the acceptance criteria as stated in DOS 1400-05

K/A Number and Importance: 209001.A4.01 3.8 / 3.6

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

Estimated Time to Complete: 22 minutes **Actual Time Used:** _____ minutes

References: DOS 1400-05, rev 39

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. The Unit 2 Core Spray 'B' Pump operability surveillance is required due to maintenance.
3. The operability surveillance for the 2A Core Spray pump is NOT needed.
4. The system is filled and vented.
5. The required valve operability surveillance has been completed.
6. Vibration data is NOT required.
7. The Unit 2 NLO is standing by in the corner room.
8. The LPCI/Core Spray Room Coolers are running.

INITIATING CUE

1. The Unit Supervisor directs you to perform DOS 1400-05 step I.8 for the 2B Core Spray pump.
2. All applicable Prerequisites have been met.
3. Notify the Unit Supervisor upon completion of step I.8.

Exelon Nuclear

Job Performance Measure

MAIN STEAM - UNISOLATE ONE LINE USING PREFERRED METHOD

JPM Number: S-N-c

Revision Number: 09

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 08 Bank JPM.

Revision 09 Revised for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 16 (<50% power).

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

2. Power needs to be low enough so that isolating one main steam line will NOT cause a Group 1 high flow isolation.

3. Close 'D' Main Steam Line Isolation Valves:

- AO-2-203-1D
- AO-2-203-2D

4. Verify Main Steam Line drain valves closed:

- MO 2-220-1, 2, 3 & 4
- MO 2-220-90A, B, C & D

5. Insert following Malfunctions and/or Remotes:

- None.

6. Setup the following Triggers:

- None.

DOCUMENT PREPARATION

1. Clean copy of DOP 0250-02.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Following maintenance work on the AO 2-203-2D MSIV, the “D” Main Steam Line is ready to be unisolated.

INITIATING CUE

1. The Unit Supervisor has directed you to unisolate the “D” Main Steam Line in accordance with DOP 0250-02, step G.4.
2. Inform the Unit Supervisor when the task is complete.

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

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- 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)

JPM Start Time: _____

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide the Examinee with the supplied copy of DOP 0250-02.					
	1.	Reviews procedure to determine appropriate method.	Determines MOs 2-220-1 AND 2-220-2 are available, and selects the preferred method.	_____	_____
*	2.	Open MO 2-220-1 (MSL DRN VLV).	RED light illuminated.	_____	_____
*	3.	Open MO 2-220-2 (MSL DRN VLV).	RED light illuminated.	_____	_____
*	4.	Open MO 2-220-3 (MSL DRN VLV) is OPEN.	RED light illuminated.	_____	_____
	5.	Wait a minimum of 5 minutes.	5 minutes elapsed OR verbal cue received.	_____	_____
<u>CUE:</u> Inform examinee that 5 minutes has elapsed.					
*	6.	Open MO 2-220-90D (MSL DRN VLV to Cond).	RED light illuminated.	_____	_____
	7.	Wait a minimum of 5 minutes.	5 minutes elapsed OR verbal cue received.	_____	_____
<u>CUE:</u> Inform examinee that 5 minutes has elapsed.					
*	8.	Open AO 2-203-2D ("D" OUTBOARD MSIV).	GREEN light illuminated.	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
	9.	Wait a minimum of 5 minutes,	5 minutes elapsed OR verbal cue received.	_____	_____	_____
<u>CUE:</u> Inform examinee that 5 minutes has elapsed.						
*	10.	Open AO 2-203-1D ("D" INBOARD MSIV).	GREEN light illuminated.	_____	_____	_____
	11.	Close MO 2-220-90D (MSL DRN VLV to Cond).	GREEN light illuminated.	_____	_____	_____
	12.	Close MO 2-220-1 (MSL ISOL DRN VLV).	GREEN light illuminated.	_____	_____	_____
	13.	Close MO 2-220-2 (MSL DRN VLV).	GREEN light illuminated.	_____	_____	_____
	14.	Close MO 2-220-3 (MSL DRN VLV).	GREEN light illuminated.	_____	_____	_____
	15.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	_____	_____	_____
<u>CUE:</u> Acknowledge report of task completion.						
			END			

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: MAIN STEAM – UNISOLATE ONE LINE USING PREFERRED METHOD

Revision Number: 09

JPM Number: S-N-c

Task Number and Title: 239L004 Unisolating, One Main Steam Line

K/A Number and Importance: 239001.A4.01 4.2 / 4.0

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

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

References: DOP 0250-02, rev 12

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Following maintenance work on the AO 2-203-2D MSIV, the “D” Main Steam Line is ready to be unisolated.

INITIATING CUE

1. The Unit Supervisor has directed you to unisolate the “D” Main Steam Line in accordance with DOP 0250-02, step G.4.
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

ISO COND - STARTUP, WITH FAILURE OF THE M/U SYSTEM

JPM Number: S-N-d

Revision Number: 01

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 00 Bank JPM.

Revision 01 Revised for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC.

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

2. Verify the Isolation Condenser is in its normal standby lineup.
3. Ensure 2/3A Clean Demin Pump is operating.
4. Ensure 2/3B Clean Demin Pump is **NOT** operating.
5. Place 2/3B ISOL CNDR M U PP control switch in PTL.
6. Place a CO tag on the 2/3B ISOL CNDR M U PP control switch.
7. Enter the following Simulator Expert commands which trips the 2/3A Diesel Driven Iso Makeup Pump a few seconds after starting:
 - `trgset 1 "wmsdp(1)" { Trigger 1 Activates when 2A IC M-U PP is started}`
 - `imf wmpmpaf (1 2) { After 2 sec, inserts a trip of 2A IC M-U PP}`
8. Verify Reactor Pressure is < 1050 psig.
9. Acknowledge / Reset alarms.

DOCUMENT PREPARATION

1. Clean copy of DOP 1300-03.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. The U2 Isolation Condenser (IC) has been verified in Standby per DOP 1300-01.
3. A pressure transient has occurred which requires the manual initiation of the U2 IC.
4. An NLO is in the field to monitor operation of the U2 IC Makeup Pump.
5. 2/3B ISOL CNDR M U PP is OOS for pump replacement.
6. The time of IC initiation in Unit 2 Reactor Log Book will be recorded by another NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to startup the U2 Isolation Condenser to full flow per DOP 1300-03 Step G.4.
2. Hard Cards are NOT authorized.
3. Inform the Unit Supervisor when the task is complete.

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

Information For Evaluator's Use:

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- 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.

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The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide the examinee with the supplied copy of DOP 1300-03.				
*	1. Place AO 2-1301-17 AO 2-1301-20, VENT VLV, control switch in CLOSE and verify closed.	Both RED lights illuminated.	_____	_____
	2. Rotate RX INLET ISOL VLV HAND/RESET to HAND.	Places switch to HAND position and releases.	_____	_____
	3. Verify annunciator 902-3 B-4, ISOL CONDR VLVS OFF NORMAL, alarms.	Annunciator 902-3 B-4, ISOL CONDR VLVS OFF NORMAL illuminated.	_____	_____
*	4. Open AND throttle MO 2-1301-3, RX INLET ISOL, as necessary.	RED light illuminated.	_____	_____
	5. Monitor IC shell level using ISOL CONDR LVL, LI 2-1340-2, on Panel 902-3.	Pointer in normal GREEN band.	_____	_____
<u>CUE:</u> If contacted as Makeup Demin Control Room, report the Dilution Pumps are NOT operating.				
	6. Open MO 2-4399-74, CLEAN DEMIN VLV.	RED light illuminated.	_____	_____
	7. Start 2/3A ISOL CNDR M-U PP.	RED Light illuminated.	_____	_____
<u>NOTE:</u> 2/3A ISOL CNDR M U PP will trip a few seconds after starting, due to a malfunction inserted in setup.				

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
BEGIN ALTERNATE PATH					
*	8.	Directs NLO to close 2-4399-756, 2/3 ISOL CDSR CLEAN DEMIN MAKEUP SYS DISCH HDR TO U2 ISOL CDSR ISOL VLV.	Directs NLO to close the valve.	_____	_____
<u>CUE:</u> 2-4399-756, ISOL CDSR CLEAN DEMIN M/U SYS DISCH HDR TO U2 ISOL CDSR ISOL VLV is closed.					
*	9.	Starts 2/3B CLEAN DEMIN water Pump.	BLUE light illuminated.	_____	_____
*	10.	Directs NLO to unlock and open 2-4399-72, U2 ISOL CDSR CLEAN DEMIN WTR SUPPLY.	Directs NLO to unlock and open the valve.	_____	_____
<u>CUE:</u> 2-4399-72, U2 ISOL CDSR CLEAN DEMIN WTR SUPPLY valve is unlocked and open.					
<u>NOTE:</u> IC level requires a long time for level to increase.					
	11.	Cycle MO 2-4399-74, CLEAN DEMIN VALVE, as needed to maintain LI 2-1340-2, ISOL CONDR LVL, in green band.	Maintains level in green band.	_____	_____
<u>CUE:</u> Inform examinee that another NSO will now assume duties for the IC.					
	12.	Informs Unit Supervisor the Iso Cond Makeup Pumps did NOT start and is currently maintaining IC level with the Clean Demin valves and that the task is complete	Examinee notifies the Unit Supervisor.	_____	_____
<u>CUE:</u> Acknowledge report of task completion.					

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
	END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: ISO COND – Startup, With Failure Of The M/U System

Revision Number: 01

JPM Number: S-N-d

Task Number and Title: DRE207LN008, Given a set of conditions, analyze the conditions and determine the corrective actions required to return the Isolation Condenser to a stable condition. .

K/A Number and Importance: 207000.A4.01 3.7 / 3.8

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

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

References: DOP 1300-03, rev 29

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. The U2 Isolation Condenser (IC) has been verified in Standby per DOP 1300-01.
3. A pressure transient has occurred which requires the manual initiation of the U2 IC.
4. An NLO is in the field to monitor operation of the U2 IC Makeup Pump.
5. 2/3B ISOL CNDR M U PP is OOS for pump replacement.
6. The time of IC initiation in Unit 2 Reactor Log Book will be recorded by another NSO.

INITIATING CUE

1. The Unit Supervisor has directed you to startup the U2 Isolation Condenser to full flow per DOP 1300-03 Step G.4.
2. Hard Cards are NOT authorized.
3. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

PCIS - VERIFY GROUP 2 ISOLATION. WITH INCOMPLETE ISOLATION

JPM Number: S-N-e

Revision Number: 00

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 00 Modified for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any shutdown IC.

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

2. Insert a spurious Group 3 isolation.
3. Manually OPEN the following valves (ensure can be re-closed):
 - MO 2-205-24
 - AO 2-1599-61
 - AO 2-1599-62
4. Insert following Malfunctions and/or Remotes:
 - None.
5. Setup the following Triggers:
 - None.

DOCUMENT PREPARATION

1. Clean copy of DAN 902-5 E-5 Hard Card.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. A spurious Group 2 isolation has occurred.

INITIATING CUE

1. The Unit Supervisor has directed you to verify the Group 2 isolation is complete, utilizing the hard card.
2. Inform the Unit Supervisor when the task is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- 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)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<p><u>NOTE:</u></p> <p>Examinee should locate the hard card, then provide the included copy.</p> <p>The following steps may be performed in any order.</p>				
<p>1.</p> <p>On the 902-3 panel, verifies the following valves closed:</p> <ul style="list-style-type: none"> • AO 2-8501-3A • AO 2-8501-1A • AO 2-8501-5A • AO 2-8501-3B • AO 2-8501-1B • AO 2-8501-5B • AO 2-9205A • AO 2-9206A • AO 2-9207A • AO 2-9208A • AO 2-9205B • AO 2-9206B • AO 2-9207B • AO 2-9208B 	<ul style="list-style-type: none"> • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. 	<p>_____</p>		

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
	2.	<p>On the 902-3 panel, verifies the following valves closed:</p> <ul style="list-style-type: none"> • AO 2-1601-55 • AO 2-1601-22 • AO 2-1601-21 • AO 2-1601-56 • MO 2-1601-57 • AO 2-1601-59 • AO 2-1601-58 • AO 2-1601-63 • AO 2-1601-62 • AO 2(3) 1601 23 • AO 2(3) 1601 24 • AO 2(3) 1601 61 • AO 2(3) 1601 60 	<ul style="list-style-type: none"> • RED light illuminated. • GREEN light illuminated. • GREEN light illuminated. • RED light illuminated. • RED light illuminated. • RED light illuminated. • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. 	_____	_____	_____
	3.	<p>On the 902-13 panel, verifies the following valves closed and components tripped:</p> <ul style="list-style-type: none"> • TIPS withdraw • TIP Ball Valves Close 	<ul style="list-style-type: none"> • WHITE in-shield lights illuminated. • RED lights extinguished. 	_____	_____	_____
	4.	<p>On the 902-4 panel, verifies the following valves closed:</p> <ul style="list-style-type: none"> • AO 2-2001-105 • AO 2-2001-106 • AO 2-2001-5 • AO 2-2001-6 	<ul style="list-style-type: none"> • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. • GREEN light illuminated. 	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
BEGIN ALTERNATE PATH						
*	5.	On the 902-4 panel, verifies the following valves closed: • MO 2-205-24	Examinee recognizes that the following did NOT close: • MO 2-205-24	_____	_____	_____
*	6.	Examinee CLOSES: • MO 2-205-24	Takes manual action for failed auto action by placing the following in the CLOSED position: • MO 2-205-24	_____	_____	_____
*	7.	On the 902-6 panel, verifies the following valves closed: • AO 2-1599-61 • AO 2-1599-62	Examinee recognizes that the following did NOT close: • AO 2-1599-61 • AO 2-1599-62	_____	_____	_____
*	8.	Examinee CLOSES both: • AO 2-1599-61 • AO 2-1599-62.	Takes manual action for failed auto action by placing the following in the CLOSED position: • AO 2-1599-61 • AO 2-1599-62	_____	_____	_____
	9.	On the 923-4 panel, verifies the following components tripped: • U2 RBEDT Pump Trips • 2A, B, C, D RBFD Sump Pumps Trip	• GREEN light illuminated. • GREEN light illuminated.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
10.	On the 923-4 panel, verifies the following valves closed: <ul style="list-style-type: none"> AO 2 & 3 5741A AO 2 & 3 5741B AO 2 & 3 5742A AO 2 & 3 5742B 	<ul style="list-style-type: none"> RED light illuminated. RED light illuminated. RED light illuminated. RED light illuminated. 	_____	_____	_____
11.	On the 923-4 panel, verifies the following tripped and started: <ul style="list-style-type: none"> 2 <u>and</u> 3A, B, & C RBX Vent Fans Trip 2 <u>and</u> 3A, B, & C RBX Exh Fans Trip 2 <u>and</u> 3A & B Drywell & Torus Purge Fans for both Unit 2 <u>and</u> Unit 3 Trip SBGT Auto Start 	<ul style="list-style-type: none"> GREEN lights illuminated. GREEN lights illuminated. GREEN lights illuminated. RED lights illuminated for 2/3A train. 	_____	_____	_____
12.	Informs Unit Supervisor task is complete.	Reports Group 2 complete and the following failed to close automatically. <ul style="list-style-type: none"> MO 2-205-24 AO 2-1599-61 AO 2-1599-62 	_____	_____	_____
<u>CUE:</u> Acknowledge report of task completion.					
			END		

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: PCIS - Verify Group 2 Isolation, With Incomplete Isolation

Revision Number: 00

JPM Number: S-N-e

Task Number and Title: 295L022, Initiate/Verify automatic actuations of Emergency Systems.

K/A Number and Importance: 223002.A4.01 3.6 / 3.5

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

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

References: DAN 902-5 E-5 hardcard, rev 31

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. A spurious Group 2 isolation has occurred.

INITIATING CUE

1. The Unit Supervisor has directed you to verify the Group 2 isolation is complete, utilizing the hard card.
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

EDG - PERFORM SURVEILLANCE TESTING, WITH SCRAM

JPM Number: S-N-f

Revision Number: 02

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 01 Bank JPM.

Revision 02 Revised for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC 12.

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

2. U2 Diesel Generator should be started and loaded to Bus 24-1, per DOS 6600-01 up to and including step I.12. (inclusive).
3. Insert following Malfunctions and/or Remotes:
 - IRF T02 = TRUE (Set Diesel Generator 2 droop to 55).
4. Acknowledge all applicable alarms (locally and on the 902-8 panel).
5. Setup the following remote functions set to triggers, for when directed by examinee:
 - IRF T02 = FALSE (When directed by examinee to set droop to 5).
 - IRF T20 = ACKNOWLEDGE (A few seconds after the droop has been set to 55 acknowledges U2 D/G Local Panel Trouble Alarms).

DOCUMENT PREPARATION

1. Marked up copy of DOS 6600-01, up to and including step I.14.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. DOS 6600-01 is in progress on the Unit 2 Diesel Generator, which is currently paralleled and loaded to Bus 24-1.
3. The surveillance run will be completed in approximately 5 minutes.
4. The operator performing the surveillance in the control room had to leave for an urgent family emergency.
5. An EO is in the field, with the appropriate portions of DOS 6600-01 (pages 46 - 71)

INITIATING CUE

1. The Unit Supervisor has directed you to review Sections F. and G. of DOS 6600-01 and then complete the procedure, starting at step I.15. to secure the Unit 2 Diesel Generator.
2. Inform the Unit Supervisor when the task is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- 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)

JPM Start Time: _____

	PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide the Examinee with the supplied copy of DOS 6600-01.					
1.	Verifies Chemistry Department has completed all required samples per CY-DR-120-413.	Asks if Chemistry Department has completed all required samples per CY-DR-120-413.	_____	_____	_____
<u>CUE:</u> All required samples have been completed.					
2.	Verifies the fuel oil transfer pump has recharged the day tank at least once during the engine run.	Asks if the fuel oil transfer pump has recharged the day tank at least once during the engine run.	_____	_____	_____
<u>CUE:</u> The day tank level is in the normal band and has been recharged during the engine run.					
3.	Data Sheet 1 complete.	Asks if Data Sheet complete.	_____	_____	_____
<u>CUE:</u> Data sheet 1 is complete.					
4.	Reduce U2 DG load	Places the U2 DG Governor c/s to DECR to reduce load until less than 100 kW.	_____	_____	_____
BEGIN ALTERNATE PATH					
<u>CUE:</u> As soon as the examinee begins to reduce load, announce: "UNIT 2 HAS JUST SCRAMMED".					

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
	5.	Proceed to Attachment "A".	Recognizes need to perform Attachment "A".	_____	_____	_____
*	6.	Open circuit breaker U2 D/G TO BUS 24-1 ACB.	Green light illuminated.	_____	_____	_____
	7.	Records time of Circuit Breaker opening.	Records time of Circuit Breaker opening on attachment A.	_____	_____	_____
*	8.	Set droop setting to 5.	Directs EO to set 2 DG Droop to 5.	_____	_____	_____
<p style="text-align: center;"><u>NOTE:</u></p> <p style="text-align: center;">If requested to set droop to 5, signal Sim Op to insert remote function (T02 = FALSE)</p> <p style="text-align: center;">If requested to reset local annunciators, signal Sim Op to insert remote function (T20 = ACKNOWLEDGE)</p>						
	9.	Reset annunciator D/G 2 C-1 Droop not set on 5.	Directs EO to reset local annunciator C-1 on local panel A.	_____	_____	_____
<p style="text-align: center;"><u>CUE:</u></p> <p style="text-align: center;">The droop set at 5. Received local alarm and have acknowledged it.</p>						
	10.	Reset annunciator 902-8 A-7 U2 DIESEL GEN TROUBLE alarm.	Annunciator 902-8 A-7 alarm tile extinguished.	_____	_____	_____
*	11.	Adjust D/G frequency to 60 Hz.	Adjusts frequency to 60 Hz with Governor Control switch.	_____	_____	_____
*	12.	Adjust the D/G voltage to 4160.	Adjusts voltage to 4160 volts with VOLTAGE REGULATOR control.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
13.	Informs Unit Supervisor that the D/G is running following the scram and the task is complete.	Examinee notifies the Unit Supervisor.	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border-bottom: 1px solid black; width: 100px;"></div> <div style="border-bottom: 1px solid black; width: 100px;"></div> <div style="border-bottom: 1px solid black; width: 100px;"></div> </div>			
<u>CUE:</u> Acknowledge report of task completion.						
			END			

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: EDG – PERFORM SURVEILLANCE TESTING, WITH SCRAM

Revision Number: 02

JPM Number: S-N-f

Task Number and Title: 264L009 Perform DG Surveillance Testing

K/A Number and Importance: 264000.A4.05 3.6 / 3.7

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

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

References: DOS 6600-01, rev 110

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. DOS 6600-01 is in progress on the Unit 2 Diesel Generator, which is currently paralleled and loaded to Bus 24-1.
3. The surveillance run will be completed in approximately 5 minutes.
4. The operator performing the surveillance in the control room had to leave for an urgent family emergency.
5. An EO is in the field, with the appropriate portions of DOS 6600-01 (pages 46 - 71)

INITIATING CUE

1. The Unit Supervisor has directed you to review Sections F. and G. of DOS 6600-01 and then complete the procedure, starting at step I.15. to secure the Unit 2 Diesel Generator.
2. Inform the Unit Supervisor when the task is complete.

Exelon Nuclear

Job Performance Measure

TIPS - PERFORM TIP TEST IN MANUAL MODE

JPM Number: S-N-g

Revision Number: 00

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 00 New JPM developed for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 12.

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

2. Insert following Malfunctions and/or Remotes:

- None.

3. Setup the following Triggers:

- None.

DOCUMENT PREPARATION

1. Clean copy of DOP 0700-06.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Due to post maintenance testing, TIP Channel 4 (LPRM 32-57) needs to be tested.
3. The portable X-Y plotter will NOT be used.
4. The TIP trace will NOT be run in conjunction with a DTS.
5. Transfer of data to the process computer is NOT desired.
6. The Radiation Protection Department has been notified of the pending evolution.
7. All personnel are clear of TIP room, Shield Chamber, Index Machine and CRD areas.

INITIATING CUE

1. The Unit Supervisor has directed you to perform TIP System Operation in MANUAL MODE, per DOP 0700-06, step G.2, for TIP Channel 4 (LPRM 32-57).
2. Inform the Unit Supervisor when the detector reaches the TOP CORE LIMIT.

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)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide the Examinee with the supplied copy of DOP 0700-06.				
1.	Verify all BALL VALVES closed at 902-13 panel: <ul style="list-style-type: none"> VLV CONTROL CH 1 VLV CONTROL CH 2 VLV CONTROL CH 3 VLV CONTROL CH 4 VLV CONTROL CH 5 	WHITE lights illuminated.	_____	_____
2.	Locate the DRIVE CONTROL CH A.	All operations are performed on the DRIVE CH A chassis.	_____	_____
*	3. Place MODE switch in MAN.	In-Shield WHITE light illuminated.	_____	_____
*	4. Place MAN. VALVE CONTROL in OPEN.	Switch in OPEN position.	_____	_____
<u>NOTE:</u> The next step is a channel check and will not produce any result.				
5.	At VLV CONTROL CH 1, (2,3,4,5) verify BALL VALVE OPEN light is illuminated.	RED light illuminates.	_____	_____
6.	Place MANUAL switch in REV.	Switch in REV position.	_____	_____
7.	Place MANUAL switch in OFF.	Switch in OFF position.	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
*	8.	Turn CHANNEL switch clockwise to channel 4 (LPRM 32-57) location.	Switch in CHANNEL 4 position.	_____	_____	_____
	9.	Verify READY light lit.	WHITE light illuminated.	_____	_____	_____
	10.	Place CORE LIMIT selector in TOP.	Switch in TOP position.	_____	_____	_____
	11.	Verify CORE LIMIT display produces a digit symbol in each digit window.	A digital number displayed in all four windows.	_____	_____	_____
	12.	Place CORE LIMIT selector in BOTTOM.	Switch in BOTTOM position.	_____	_____	_____
	13.	Verify CORE LIMIT display produces a digit symbol in each digit window.	A digital number displayed in all four windows.	_____	_____	_____
	14.	Verify DETECTOR POSITION display produces a digit symbol in each digit window.	A digital number displayed in all four windows.	_____	_____	_____
	15.	Verify CORE LIMIT switch in BOTTOM position.	Switch in BOTTOM position.	_____	_____	_____
*	16.	At DRIVE CONTROL CH A, place MANUAL switch in FWD to start TIP detector insertion and verify DETECTOR POSITION rises from the IN-SHIELD position toward 0001 in slow speed.	Numbers rise toward 0001.	_____	_____	_____
<p><u>NOTE:</u></p> <p>For the next step, it is acceptable for the digital numbers exceed 0001.</p>						

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST			STANDARDS	SAT	UNSAT	Comment
*	17.	WHEN DETECTOR POSITION indicates 0001, THEN place MANUAL switch in OFF.	Numbers stop rising.	_____	_____	_____
	18.	Verify READY light is lit.	WHITE light is illuminated.	_____	_____	_____
	19.	Place CORE LIMIT selector in TOP.	Switch in TOP position.	_____	_____	_____
	20.	Verify CORE LIMIT display produces a digit symbol in each window.	Digital number displayed of ~1510.	_____	_____	_____
	21.	Place CORE LIMIT selector in BOTTOM.	Switch in BOTTOM position.	_____	_____	_____
	22.	Verify CORE LIMIT display produces a digit symbol in each window.	Digital number displayed of ~1377.	_____	_____	_____
*	23.	Place MANUAL switch on the applicable DRIVE CONTROL in FWD to start detector insertion and verify DETECTOR POSITION indication rises from Position 0001 in slow speed.	Numbers rise at a slow rate.	_____	_____	_____
	24.	WHEN detector passes approximately Position 0024, THEN verify detector shifts to fast speed.	Numbers rise at a faster rate.	_____	_____	_____
	25.	WHEN detector reaches BOTTOM CORE LIMIT, THEN Verify detector shifts to slow speed.	Numbers rise at a slow rate.	_____	_____	_____
*	26.	Place CORE LIMIT switch in TOP.	Switch in TOP position.	_____	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
27.	WHEN the detector reaches the TOP CORE LIMIT, THEN Place MANUAL switch in OFF.	Switch in OFF position.	<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 30%; border-bottom: 1px solid black;"></div> <div style="width: 30%; border-bottom: 1px solid black;"></div> <div style="width: 30%; border-bottom: 1px solid black;"></div> </div>		
<u>CUE:</u> Inform the examinee that another Operator will continue this evolution.					
28.	Informs Unit Supervisor task is complete.		<div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="width: 30%; border-bottom: 1px solid black;"></div> <div style="width: 30%; border-bottom: 1px solid black;"></div> <div style="width: 30%; border-bottom: 1px solid black;"></div> </div>		
<u>CUE:</u> Acknowledge report of task completion.					
		END			

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: TIPS - PERFORM TIP TEST IN MANUAL MODE

Revision Number: 00

JPM Number: S-N-g

Task Number and Title: 21501LP002, Given plant conditions which require a TIP trace, run a TIP trace in the manual mode of operation.

K/A Number and Importance: 215001.A4.03 3.0 / 3.1

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

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

References: DOP 0700-06, rev 26

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Due to post maintenance testing, TIP Channel 4 (LPRM 32-57) needs to be tested.
3. The portable X-Y plotter will NOT be used.
4. The TIP trace will NOT be run in conjunction with a DTS.
5. Transfer of data to the process computer is NOT desired.
6. The Radiation Protection Department has been notified of the pending evolution.
7. All personnel are clear of TIP room, Shield Chamber, Index Machine and CRD areas.

INITIATING CUE

1. The Unit Supervisor has directed you to perform TIP System Operation in MANUAL MODE, per DOP 0700-06, step G.2, for TIP Channel 4 (LPRM 32-57).
2. Inform the Unit Supervisor when the detector reaches the TOP CORE LIMIT.

Exelon Nuclear

Job Performance Measure

SBGT - POST MAINTENANCE TESTING, WITH AUTO INITIATION

JPM Number: S-N-h

Revision Number: 08

Date: 10/09

Developed By: _____

Instructor

Date

Approved By: _____

Facility Representative

Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 07 Bank JPM.

Revision 08 Revised for 2009 NRC Exam.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any low power IC with Reactor Building ventilation operating in a NORMAL lineup.

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

2. Ensure the 2/3A SBTG train is in STBY and the 2/3B SBTG train is in PRI.
3. Place control switches for Unit 2 and 3 DW and Torus Purge fans in **PTL** on 923-5 panel.
4. Insert following Malfunctions and/or Remotes:
 - Trg 1 "vgdstrta"
(Causes Trigger 1 to activate when 2/3 SBTG control switch is place to START)
 - Imf radrbdah (1 45)
(fails 'A' channel reactor building vent monitor high, to cause a Group II isolation 45 sec. after 2/3A SBTG switch is placed to START).
5. Setup the following Triggers:
 - None.

DOCUMENT PREPARATION

1. Marked up copy of DOS 7500-02, up to and including step E.7.

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Maintenance has been completed on 2/3 A SBGT train and the train is back in service.
3. The prerequisites of DOS 7500-02 have been completed.
4. IST testing is NOT required
5. Valve timing is NOT required.
6. No painting OR propane equipment operation has happened in the last 24 hours.
7. The Initial Cumulative Run Time has been recorded.

INITIATING CUE

1. The Unit 2 Supervisor has directed you to perform DOS 7500-02 for the 2/3A SBGT train for post maintenance testing.
2. Notify the Unit 2 Supervisor when the task is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.
- 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)

JPM Start Time: _____

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	Comment
<u>NOTE:</u> Provide the examinee with the provided copy of DOS 7500-02.				
1.	Ensure the following: <ul style="list-style-type: none"> 2/3 A and B AIR HEATERS are OFF. 2/3 A and B Fans are OFF. 	Correctly verifies: <ul style="list-style-type: none"> GREEN lights illuminated. GREEN lights illuminated. 	_____	_____
2.	Verifies the following annunciators are NOT in alarm: <ul style="list-style-type: none"> 923-5 A-6, STBY GAS TRT SYS A TROUBLE 923-5 B-6, STBY GAS TRT SYS B TROUBLE 	Correctly verifies: <ul style="list-style-type: none"> NOT illuminated. NOT illuminated. 	_____	_____
*	3. Verify "B" SGBT SELECT SWITCH in B STBY position.	Places 2/3 B SGBT SELECT switch in B STBY.	_____	_____
*	4. Place 2/3 "A" SGBT SELECT SWITCH to START A position.	Places the 2/3 "A" SGBT SELECT SWITCH to START A.	_____	_____
<u>NOTE:</u> The Initial Run Time data has already been recorded. (in the initial cues).				
5.	Records the Initial Run Time data for SGBT Train "A" on Checklist 1.	Verifies the Initial Run Time data for SGBT Train "A" on Checklist 1.	_____	_____
<u>NOTE:</u> 45 sec. after the 2/3A SGBT control switch is placed to START, a malfunction is automatically inserted to cause a Reactor Building Hi-Hi Rad condition (auto start signal for SGBT). Depending on speed of candidate, the following step may or may NOT be completed prior to the malfunction being inserted.				

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
6.	Verifies the 2/3A SBTG train initiated properly.	Verifies the 2/3A SBTG train is initiated properly.	_____	_____	_____
<u>NOTE:</u> When Reactor Building Hi-Hi rad signal is received, the examinee should recognize the need to perform the required Limitation and Action steps (which may be performed in any order).					
<u>CUE:</u> When Reactor Building Isolates (alarm 902-3 F-14), provide the following cue: "Attention for an update, Reactor Building Vent Channel 'A' Rad Hi-Hi alarm received"					
BEGIN ALTERNATE PATH					
*	7.	Place the SELECT SWITCH for the non-running train to PRI.	Places the SELECT SWITCH for "B" SBTG train to PRI.	_____	_____
*	8.	Place the control switch for the train under test to OFF.	Places the control switch for "A" SBTG train to OFF.	_____	_____
	9.	Verify train in PRI has sufficient flow and the heater is operating.	Nominally ~4000 scfm.	_____	_____
	10.	Place the Train previously under test to STBY.	Places the control switch for "A" SBTG train to STBY.	_____	_____

Job Performance Measure (JPM)

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment
11.	Verifies a Reactor Building Isolation has occurred on Panel 923-4, verifying the following: <ul style="list-style-type: none"> • Trip of both units Reactor Building Vent Fans (Panel 923-5) • Trip of both units' Reactor Building Exhaust Fans (Panel 923-5) • Trip of both units Drywell and Torus Purge Fans (Panel 923-5) • Closure of both units Reactor Building Ventilation Isolation Dampers (Panel 923-4) 	Verifies: <ul style="list-style-type: none"> • RED lights illuminated. • RED lights illuminated. • RED lights illuminated. • RED lights illuminated. 	_____	_____	_____
12.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	_____	_____	_____
<u>CUE:</u> Acknowledge report of task completion.					
END					

JPM Stop Time:_____

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO ☐ SRO ☐

JPM Title: SGBT - POST MAINTENANCE TESTING, WITH AUTO INITIATION

Revision Number: 08

JPM Number: S-N-h

Task Number and Title: 261L002, Start the SGBT system.

K/A Number and Importance: 261000.A2.13 3.4 / 3.7

Suggested Testing Environment: Simulator

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

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

Time Critical: ☐ Yes ☒ No

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

References: DOS 7500-02, rev 46

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Maintenance has been completed on 2/3 A SBGT train and the train is back in service.
3. The prerequisites of DOS 7500-02 have been completed.
4. IST testing is NOT required
5. Valve timing is NOT required.
6. No painting OR propane equipment operation has happened in the last 24 hours.
7. The Initial Cumulative Run Time has been recorded.

INITIATING CUE

1. The Unit 2 Supervisor has directed you to perform DOS 7500-02 for the 2/3A SBGT train for post maintenance testing.
2. Notify the Unit 2 Supervisor when the task is complete.