

Job Performance Measure					
CONTROL ROD	EXERCISE – ROD O\	/ERTRAVEL A	BOVE 10% POWER (AP)		
	JPM Number:	S-N-a			
	Revision Number:	05			
	Date:	10/22			
Developed By:	Derek Siuda Exam A	/ .uthor: Print / Sign	Date		
Approved By:	Jonathan Chapman Facility Repr	_ / esentative: Print / Sign	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 9 and 13 below.

- 1. Task description and number, JPM description and number are identified.
- 2. Knowledge and Abilities (K/A) references are included.
- 3. Performance location specified. (in-plant, control room, simulator, or other)
- 4. Initial setup conditions are identified.
- 5. Initiating cue (and terminating cue if required) are properly identified.
- 6. Task standards identified and verified by instructor or SME review.
- 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- 8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.
- 9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure:	DOS 0300-01	Revision:	61	
Procedure:	DOA 0300-05	Revision:	32	
Procedure:	DOA 0300-12	Revision:	20	

- 10. Verify cues both verbal and visual are free of conflict.
- 11. Verify performance time is accurate.
- 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- 13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:





Revision Record (Summary)

Revision #	Summary
03	Bank JPM
04	Updated for 2019 ILT NRC Exam
05	Updated to the new version of the JPM Template and for the ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

- 1. Reset the simulator to any IC (IC 168 was used for validation) which allows establishing the following:
 - a. Reactor power greater than 10%.
 - b. Control Rod F-15 is at position 48.
- 2. Verify NO Control Rods are selected.
- 3. Place the RWM Mode switch in the BYP position.
- 4. Run CAEP **S-N-a.cae**
 - a. If the CAEP file does not load properly then insert the following expert command: imf rodf15uc (control rod F-15 uncoupled)
- 5. 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.
- 6. This completes the setup for this JPM.
- **NOTE**: The Simulator operator must be ready to delete malfunction "rodf15uc" when directed by the Evaluator.

DOCUMENT PREPARATION

Markup a copy of DOS 0300-01, CONTROL ROD EXERCISE, as follows:

- Mark ALL Prerequisites complete EXCEPT step E.2 (The Rod Exercise function of the Rod Worth Minimizer is enabled). Mark step E.2 NA.
- Mark Unit as "2" on Checklist 1.
- Mark "NO" for Stall Flows and Drive Water Pressure required on Checklist 1.
- Mark all rods Except F-15 N/A on Checklist 1.
- Print out 2 copies of a Control Rod position scan after the simulator has been setup. Designate one as the "before exercising" copy and the other as the "after exercising" copy.

Have un-marked copies of the following procedures ready to handout:

- DOA 0300-05, INOPERABLE OR FAILED CONTROL ROD DRIVE
- O DOA 0300-12, MISPOSITIONED CONTROL ROD
- o DAN 902-5 A-3, ROD DRIFT
- Dan 902-5 E-3, ROD OVERTRAVEL



CAEP File

S-N-a.cae # Written by: DSS # Date: 10/22

Setup for JPM S-N-a, Control Rod Exercise – Rod Overtravel above 10% Power

Inserts uncoupled malfunction for control rod F-15 imf rodf15uc

Event Trigger 11 setup to recouple rod trgset 11 "rdzactls(173) .lt. 143"

Event Trigger 12 works with Trigger 11 and setup to recouple rod trgset 12 "et_array(11) .and. rdzactls(173) .gt. 143"

Event Trigger 13 works with Trigger 12 and the Rod Move Switch is taken to Rod-in or the RONOR switch is taken to Emergency Rod In trgset 13 "et_array(12) .and. (hwrds302in .or. hwrds303em)" trg 13 "dmf rodf15uc"

END



- 1. The CRD System engineer has requested exercising Control Rod F-15.
- 2. The RWM is unavailable and is bypassed.
- 3. Attachment A is not required.
- 4. Prerequisites have been completed.

INITIATING CUE

- 1. The Unit Supervisor directs you to perform DOS 0300-01, CONTROL ROD EXERCISE, for Control Rod F-15 <u>ONLY</u>.
- 2. Stall flow and drive pressure are NOT required.
- 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:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



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JPM Start Time:	
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JPM Sequence #:

of 10 / 11

Task Standard:

The Examinee will exercise a control rod and identify that the rod is uncoupled. Then using DOA 0300-05, INOPERABLE OR FAILED CONTROL ROD DRIVES, recouple the rod then return it to its original position.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Cue	Provide the Examinee the included copy If the examinee decides to review DOA DOA 0300-12, MISPOSITIONED CONTRO Simulator books.	SE. OL ROD o review	DRIVE, / them i	and n the	
1.	Obtain initial Control Rod position information.	At any NSO Process Computer Display, navigate to and print the Rod Monitoring display.			
Note	 Although not a procedure step a second verifier is required. Second Verifier Duties are to: Verify proper rod selected Verify Insert and Withdraw limits understood. Check off each control rod movement on the CBD Exercise Checklist 				
2.	Request a second verifier	VERIFIES second verifier available.			
Cue	Inform examinee that you will perform You will repeat back exactly what is said	duties of second verifier. d, DO NOT lead the student.			
3.	Determine that Step I.7 is the correct step to perform.	Due to rod to be tested is at position 48, determines that step I.7 of DOS 0300-01 is the correct step.			
Note	If inserted past position 46, performs DOA 0300-12. Evaluator will have to determine if proper steps are followed based on current conditions.				steps
*4.	Select Control Rod F-15.	Depresses Select Pushbutton for Control Rod F-15.			
*5.	Inserts Control Rod one notch <u>AND</u> verify latched.	 Momentarily places Rod Movement Control switch to Rod In. Verifies Control Rod F-15 latches at position 46. 			



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment	
6.	Verify indicated control rod position changes during movement.	Monitors rod position changes to 46 on Four Rod and/or Full Core display.				
	BEGINA	ALTERNATE PATH				
*7.	While returning the control rod to position 48, perform the following: Apply continuous withdraw signal utilizing the Rod Out Notch Override switch.	 Simultaneously holds Rod Movement Control Switch to Rod Notch Out Rod Out Notch Override Switch to Notch Out Override 				
8.	Verify indicated control rod position changes during movement.	Monitors rod position changes to 48 on Four Rod and/or Full Core display.				
9.	Verify control rod does <u>NOT</u> go to the overtravel position.	 Determines control rod overtravelled: Loss of position indication. Alarm 902-5 E-3, Rod Overtravel. Alarm 902-5 A-3, Rod Drift. 				
*10.	Removes continuous withdraw signal.	Releases: • Rod Movement Control Switch • Rod Out Notch Override Switch				
11.	Notifies US that Control Rod F-15 overtravelled and DOA 0300-05 entry is required.	Notifies US that Control Rod F-15 overtravelled and DOA 0300-05 entry is required.				
Cue	Acknowledge report and direct examinee to continue with required procedure actions (perform DOA 0300-05).					
12.	Enters DOA 0300-05, Inoperable Or Failed Control Rod Drive.	With Rod Overtravel symptom, enters DOA 0300-05; OR, DAN 902-5, E-3 directs entering DOA 0300-05.				
Note	Provide the Examinee the included copy of DOA 0300-05. The procedure allows up to 4 times to attempt to re-couple the rod. The rod will re-couple on the first attempt.					
Cue	If asked as the Unit Supervisor how many times to attempt to re-couple the rod. Respond "attempt to re-couple the rod as many times as allowed by procedure".					



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
13.	Determines step D.3.b of DOA 0300- 05 is the correct step to perform.	Identifies that with RX power >10%, step D.3.b is the correct step to perform. Examinee should reset panel alarms once condition clears and alarms are referenced.			
14.	Per DOA 0300-05 step D.3.b: Verify drive water pressure is normal (250 to 280 psid).	Verifies DPI 2-340-4 indicates between 250 to 280 psid. (Adjusts MO 2-302-8 if necessary)			
Note	The first single notch insert moves the or rod may go to position 46 on first move	control rod from the overtravel position t	o positi	on 48. T	ĥe
15.	Single notch insert uncoupled CRD to return to position 48.	 Momentarily places Rod Movement Control switch to Rod In. Verifies Control Rod F-15 latches at position 48. 			
*16.	Single notch insert CRD to position 46.	 Momentarily places Rod Movement Control switch to Rod In. Verifies Control Rod F-15 latches at position 46. 			
17.	Verify indicated control rod position changes during movement.	Monitors rod position changes to 46 on Four Rod and/or Full Core display.			
Note	The Uncoupled Rod malfunction will auto-delete after the rod is notched to position 46. If the rod goes to "overtravel out" when attempting the check again, then after the rod is placed back to position 46 the second time direct the Simulator Operator to delete the Uncouple Rod malfunction.				
*18.	While returning the control rod to position 48, perform the following: Apply continuous withdraw signal utilizing the Rod Out Notch Override switch.	 Simultaneously holds Rod Movement Control Switch to Rod Notch Out Rod Out Notch Override Switch to Notch Out Override 			
19.	Verify indicated control rod position changes during movement.	Monitors rod position changes to 48 on Four Rod and/or Full Core display.			



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
20.	Verify control rod does not go to the overtravel position.	 Determines control rod did not overtravel by one or more of the following: Position indication displays 48. Alarm 902-5 E-3, Rod Overtravel, NOT received. Alarm 902-5 A-3, Rod Drift, NOT received. 			
*21.	Removes continuous withdraw signal.	Releases:Rod Movement Control SwitchRod Out Notch Override Switch			
22.	IF CRD satisfactorily couples, THEN GO TO step D.3.d.	Locates step D.3.d.			
23.	Log CRD F-15 per DOS 0300-06.	Refer to Cue next.			
Cue	Another NSO will log the CRD per DOS 0300-06				
24.	GO TO Step D.6.	GOES TO Step D.6.			
Cue	As the Unit Supervisor, inform the examine that "I will review DOA 0300-05 step D.6 for further action. The task is complete".				
		END			

JPM Stop Time: _____



JPM SUMMARY

Operator's Name:	Emp. ID#:
Job Title: 🗌 RO 🗌 SRO	
JPM Title: Control Rod Exercise – Rod Overtravel	above 10% Power (AP)
JPM Number: S-N-a R	evision Number: 05
Task Number and Title: 201L006, Perform daily/w	eekly CRD exercise
Task Standard: The Examinee will exercise a contrusing DOA 0300-05, INOPERABLE then return it to its original positi	ol rod and identify that the rod is uncoupled. Then OR FAILED CONTROL ROD DRIVES, recouple the rod on.
K/A Number and Importance: 201003.A2.02	4.4 / 4.1
Suggested Testing Environment: Simulator	
Alternate Path: Yes No SRO Only:]Yes ⊠No Time Critical: ☐Yes ⊠No
Reference(s):	
Procedure:DOS 0300-01Procedure:DOA 0300-05Procedure:DOA 0300-12Procedure:	Revision:61Revision:32Revision:20Revision:
Actual Testing Environment: Simulator	🗌 Control Room 🛛 In-Plant 🗌 Other
Testing Method: Simulate Perform	1
Estimated Time to Complete: 15 minu	ites Actual Time Used: minutes
EVALUATION SUMMARY: Were all the Critical Elements performed satisfact	orily? 🗌 Yes 🗌 No
The operator's performance was evaluated agains contained within this JPM and has been determined	t standards ed to be:
NOTE: Enter finalized grading, comments, and not AA-150-F03A/B. (See AR <u>4282419</u>).	es relevant to this evaluation in the associated TQ-
Evaluator's Name (Print):	

Evaluator's Signature:

Date:



- 1. The CRD System engineer has requested exercising Control Rod F-15.
- 2. The RWM is unavailable and is bypassed.
- 3. Attachment A is not required.
- 4. Prerequisites have been completed.

INITIATING CUE

- 1. The Unit Supervisor directs you to perform DOS 0300-01, CONTROL ROD EXERCISE, for Control Rod F-15 <u>ONLY</u>.
- 2. Stall flow and drive pressure are NOT required.
- 3. Inform the Unit Supervisor when the task is complete.



Job Performance Measure							
RAPIDLY SECUR	RAPIDLY SECURE THE RWCU SYSTEM WITH THE REACTOR AT PRESSURE						
	JPM Number:	S-N-b					
	Revision Number:	05					
	Date:	10/22					
Developed By:	Derek Siuda Exam /	/ Author: Print / Sign		Date			
Approved By:	Jonathan Chapman Facility Rep	/ resentative: Print / Sign		Date			



JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE				
NOTE:	All steps of this checklist should be performed upon initial valuation.			
	Prior to JPW usage, revalidate JPW using steps 9 and 13 below.			
4	The base of a the second se			
1.	Task description and number, JPM description and number are identified.			
2.	Knowledge and Abilities (K/A) references are included.			
3.	Performance location specified. (in-plant, control room, simulator, or other)			
4.	Initial setup conditions are identified.			
5.	Initiating cue (and terminating cue if required) are properly identified.			
6.	Task standards identified and verified by instructor or SME review.			
7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).			
8.	IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the			
	predetermined qualitative or quantitative outcome) against which task performance			
	will be measured.			
9.	Verify the procedure(s) referenced by this JPM reflects the current revision:			
	Procedure: DOP 1200-03 Revision: 72			
	Procedure: Revision:			
10.	Verify cues both verbal and visual are free of conflict.			
11	, Verify performance time is accurate			
12.	If the JPM cannot be performed as written with proper responses, then revise the			
	JE IVI.			
13.	When JPM is initially validated, sign and date JPM cover page. For subsequent			
	validations, sign and date below:			
	SME / Instructor (Print/Sign)	Date		
	/			
	SME / Instructor (Print/Sign)	Date		
	,			
	/	Date		
		Date		



Revision Record (Summary)

Revision #	Summary
00	Bank JPM
01	Update for the 2014 ILT NRC Exam
02	Revised for ILT 20-1 (2021-301) NRC Exam and revision (01) to TQ-AA-150-J020
03	Updated for the ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to an IC where the reactor is at or close to normal operating pressure (IC 169 was used for validation).

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

- 2. Verify the RWCU system is in normal operation with the 2A RWCU pump running.
- 3. Verify PIC 2-1290-2, PRESSURE CONTLR, in BAL with the MAN pot balanced.
- 4. Run CAEP file **S-N-b.cae**. If the CAEP file does not load properly then insert the following expert commands:
 - trgset 1 "rtdmn02 .and. (rtwmn02 .le. 0.05)" (Activates when RWCU pressure controller is in MAN and the pot is <0.05 demand)
 - ior rtwmn02 (1) 0.0 (This overrides the demand to 0.0 since the lowest the demand goes is 0.02 which causes the RWCU system to isolate before the operator can isolate it)

DOCUMENT PREPARATION

1. Provide a copy of DOP 1200-03, RWCU SYSTEM OPERATION WITH THE REACTOR AT PRESSURE Attachment A SECURING RAPIDLY FOR TRANSIENTS, Hard Card

CAEP FILE

S-N-b.cae # Written by: DSS # Date: 10/22

Setup for JPM S-N-b, Rapidly Secure the RWCU System with the Reactor at Pressure

Activates when RWCU pressure controller is in MAN and the pot is <0.05 demand trgset 1 "rtdmn02 .and. (rtwmn02 .le. 0.05)" ior rtwmn02 (1) 0.0

END



- 1. A leak is present in the U2 RWCU system.
- 2. RWCU Blowdown was not established.
- 3. PCV bypass 2-1201-43 is closed.

INITIATING CUE

- 1. The Unit Supervisor has directed you to rapidly secure the RWCU system IAW DOP 1200-03, using the Hard Card.
- 2. Another NSO will enter substitute values for computer points to ensure the heat balance is accurate.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



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JPM Start Time:	JPM Sequence #:	of	10/11

Task Standard:

The Examinee will rapidly secure the RWCU system in accordance with DOP 1200-03, RWCU SYSTEM OPERATION WITH THE REACTOR AT PRESSURE, with the Hard Card.

<u>Step</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Note	Step g.4.a directs examinee to Attachm	ent A Securing Rapidly for Transients (Ha	rd Card).	
Note	In Step 1, pump should trip when dema In Step 2, action to stop pump, the Exar pump prior to closing valves in the follo	nd is adjusted to zero. minee should verify that the pump is tripp wing steps.	oed OR	stops th	ie
*1.	Place PIC 2-1290-2 PRESSURE CONTLR, in MANUAL. <u>AND</u> Adjust demand to zero (0) to close the valve.	Step 1, Presses 'M' pushbutton. Presses < and/or << simultaneously. Annunciators 902-4 A-10, B-11, B-12 and C-12 alarm (eventually).			
2.	Stop 2A RWCU RECIRC PP.	 Step 2, Verifies 2A pump tripped <u>OR</u> Places 2A pump control switch to STOP and verifies: Blue ON light OFF Green OFF light ON 			
*3.	Verify MO 2-1201-1, RX OULT ISOL is closed.	Step 3, Momentarily places MO 2- 1201-1, RX OUTLET ISOL, control switch to CLOSE, and verifies its Red Close light ON.			
4.	Verify MO 2-1201-1A, RX OULET BYP is closed.	Step 3, Verifies MO 2-1201-1A, RX OUTLET BYP, Green light ON.			
*5.	Verify MO 2-1201-2, INLET ISOL is closed.	Step 3, Momentarily places MO 2-1201-2, INLET ISOL, control switch to CLOSE, and verifies its Red Close light ON.			
*6.	Verify 2-1201-7, RX RETURN VLV is closed.	Step 3, Momentarily places MO 2-1201-7, RX RETURN VLV, control switch to CLOSE, and verifies its Red Close light ON.			



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
7.	Verify MO 2-1201-8, RWCU PP BYP is closed.	Step 3, Verifies MO 2-1201-8, RWCU PP BYP, Green light ON.			
Note	Step 4 on Hard Card is N/A as blowdow Step 5 is not an 'If / Then" so the Exami	n was not established (per initial conditio nee may verify that the actions within the	ins). e step a	re com	olete.
8.	 WHEN flow is zero [FI 2-1290-13, BLOWDN FLOW], then close the following valve(s), as applicable: MO 2-1201-11, BLOWDN TO CONDR. MO 2-1201-12, BLOWDN TO RW VLV. 	 Step 5, Verifies step N/A: MO 2-1201-11, BLOWDN TO CONDR. MO 2-1201-12, BLOWDN TO RW VLV. 			
*9.	Close MO 2-1201-9A, A RWCU PP DISCH	Step 6, Places MO 2-1201-9A, A RWCU PP DISCH, control switch to CLOSE and verifies Green Closed light ON			
Note	Step 7 on Hard Card is N/A as PCV bypa	ss is closed (per initial conditions).			
10.	Notify Chemistry that RWCU has been isolated.	Step 8, Notifies Chemistry.			
Cue	Respond that Chemistry has been notifi	ed.			
11.	Report to the Unit Supervisor that RWCU has been rapidly secured.	Reports that RWCU has been secured.			
Cue	Acknowledge the completion of the task.				
		END			

JPM Stop Time:

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JPM SUMMARY

Operator's Name:	Emp. ID#:
Job Title: 🗌 RO 🗌 SRO	
JPM Title: Rapidly Secure the RWCU System with th JPM Number: S-N-b Rev Task Number and Title: 204L005, Secure the RWCU Task Standard: The Examinee will rapidly secure the RWCU SYSTEM OPERATION WITH T K/A Number and Importance: 204000.A4.10 Suggested Testing Environment: Simulator Alternate Path: □Yes ⊠No SRO Only: □Y	e Reactor at Pressure ision Number: 03 system with the reactor at pressure. RWCU system in accordance with DOP 1200-03, HE REACTOR AT PRESSURE, with the Hard Card. 3.3 Yes No Time Critical: Yes No
Reference(s):	
Procedure:DOP 1200-03RProcedure:RProcedure:RProcedure:RRR	evision: 72 evision: evision:
Actual Testing Environment: Simulator	Control Room In-Plant Other
Testing Method: 🗌 Simulate 🛛 Perform	
Estimated Time to Complete: 10 minute	Actual Time Used: minutes
EVALUATION SUMMARY: Were all the Critical Elements performed satisfactor	ily? Yes No
The operator's performance was evaluated against s contained within this JPM and has been determined	tandards to be: Satisfactory Unsatisfactory
NOTE: Enter finalized grading, comments, and notes AA-150-F03A/B. (See AR <u>4282419</u>).	relevant to this evaluation in the associated TQ-
Evaluator's Name (Print):	

Evaluator's Signature:

Date:



- 1. A leak is present in the U2 RWCU system.
- 2. RWCU Blowdown was not established.
- 3. PCV bypass 2-1201-43 is closed.

INITIATING CUE

- 1. The Unit Supervisor has directed you to rapidly secure the RWCU system IAW DOP 1200-03, using the Hard Card.
- 2. Another NSO will enter substitute values for computer points to ensure the heat balance is accurate.



Job Performance Measure				
	ERV ACOUSTIC MONITOR CHECK			
	JPM Number: S-N-c			
	Revision Number: 00			
	Date: <u>11/22</u>			
Developed By:	Derek Siuda / Exam Author: Print / Sign	Date		
Approved By:	Jonathan Chapman / Facility Representative: Print / Sign	Date		



JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE.			
NOTE:	All steps of this checklist should be performed upon initial validation.		
	Prior to JPWI usage, revalidate JPWI using steps 9 and 13 below.		
1.	Task description and number, JPW description and number are identified.		
2.	Knowledge and Abilities (K/A) references are included.		
3.	Performance location specified. (in-plant, control room, simulator, or other)		
4.	Initial setup conditions are identified.		
5.	Initiating cue (and terminating cue if required) are properly identified.		
6.	Task standards identified and verified by instructor or SME review.		
7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).		
8.	IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the		
	predetermined qualitative or quantitative outcome) against which task performance		
	will be measured.		
9.	Verify the procedure(s) referenced by this JPM reflects the current revision:		
	Procedure: Revision:		
	Procedure: Revision:		
10.	Verify cues both verbal and visual are free of conflict.		
11.	Verify performance time is accurate.		
12.	If the JPM cannot be performed as written with proper responses, then revise the		
13.	When JPM is initially validated, sign and date JPM cover page. For subsequent		
	validations, sign and date below:		
		Data	
	SIVIE / INSTRUCTOR (Print/Sign)	Date	
	/		
	SME / Instructor (Print/Sign)	Date	
	,		
	/ SME / Instructor (Print/Sign)	Date	
		Date	



Revision Record (Summary)

Revision #	Summary
00	New JPM developed for ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC (IC 168 was used for validation).

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

DOCUMENT PREPARATION

Provide a copy of DOS 0250-06, ACOUSTIC MONITOR/TEMPERATURE DETECTOR INSTRUMENT (CHANNEL) CHECK, with Data Sheet 1 having only the 203-3B row not N/A'd and leaving the DISCH TEMP Step I.9 Column blank for each valve.



- 1. You are an Extra NSO.
- 2. Maintenance has been completed on the acoustic monitor for the 2B ERV (2-0203-3B).
- 3. The Post Maintenance Test for the 2B ERV will be successful completion of DOS 0250-06, ACOUSTIC MONITOR/ TEMPERATURE DETECTOR INSTRUMENT (CHANNEL) CHECK, for the 2B ERV.

INITIATING CUE

- 1. The Unit Supervisor has directed you perform DOS 0250-06 on the 2B ERV.
- 2. Another NSO will Independently Verify the calculations.
- 3. Inform the Unit Supervisor when you are complete.

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

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Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



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IPM Start Time:	JPN	/I Sequence #:	of	10/11	
			 -		

Task Standard:

The Examinee will perform the PMT for the 2B ERV IAW DOS 0250-06, ACOUSTIC MONITOR/ TEMPERATURE DETECTOR INSTRUMENT (CHANNEL) CHECK.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Note	If candidate needs to place the TEST/RESE then tell them 30 minutes have elapsed (ET switch back to the TEST position after re refer to Limitations and Actions step 1 for t	leasing t his note	the swite	ch,
*1.	Place the Acoustic Monitor Channel A/B switch to the position required for the valve to be tested.	Takes Acoustic Monitor Channel A/B switch to the "B" position.			
*2.	Move the I/T switch to the "T" position	Moves the I/T switch to the "T" position			
3.	Record the actual Threshold voltage displayed on the digital display on Data Sheet 1	Records the actual Threshold voltage displayed on the digital display for the "3B" valve on Data Sheet 1			
4.	Compare the threshold voltage to the target voltage listed on Data Sheet 1.	Compares the threshold voltage to the target voltage listed on Data Sheet 1. The voltage shown on the digital display is 0.08 and this is within the threshold.			
*5.	Move the I/T switch to the "I" (Input) position	Moves the I/T switch to the "I" (Input) position			
*6.	Move the TEST/RESET SWITCH to the TEST position for the valve to be tested.	Moves the TEST/RESET SWITCH to the TEST position for the valve to be tested.			
Note	IF the TEST/RESET switch is released before completing Steps I.3.c through I.3.e, THEN wait a minimum of 30 minutes before placing the switch back to the TEST position.			um of	
Cue	If the above Note occurred, time compress and let the examinee know that 30 minutes has elapsed.				
Note	There will be a short time delay between The time delay may be up to 60 seconds.	the actuation of the TEST/RESET switch and	d the OF	PEN indi	cation.
7.	Check that the red (OPEN) light is lit.	The red (OPEN) light is lit.			
8.	Check that the amber (MEMORY) light is lit.	The amber (MEMORY) light is lit.			
9.	Check that annunciator 902-4 H-19, ACOUSTIC MONITOR ACTUATED, has alarmed.	Annunciator 902-4 H-19 is in alarm.			



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Cue	If examinee moves to go to front of panel	ls inform them: "Annunciator 902-4 H-19 is	s in aları	n"	-
*10.	Release the TEST/RESET switch AND allow it to return to the neutral position.	Releases the TEST/RESET switch AND allow it to return to the neutral position.			
11.	Verify the red (OPEN) light goes out AND the amber (MEMORY) light remains lit.	The red (OPEN) light is out and the amber (MEMORY) light is lit.			
12.	Reset annunciator 902-4 H-19, ACOUSTIC MONITOR ACTUATED, alarm.	Annunciator 902-4 H-19 is reset.			
Cue	If examinee moves to go to front of panel	ls, inform them: "Annunciator 902-4 H-19 is	s clear"		
*13.	Move TEST/RESET switch to the RESET position AND release switch.	Moves TEST/RESET switch to the RESET position AND release switch.			
14.	Verify the amber (MEMORY) light goes out.	The amber (MEMORY) light is out.			
*15.	Complete Data Sheet 1 AFTER the Acoustic Monitor has been reset.	Data Sheet 1 is completed.			
16.	Record the discharge temperature for each safety valve AND each relief valve from TR 2-260-20A, VALVE LEAK- OFF/DW TEMP.	Records discharge temperatures in DISCH TEMP column on Data Sheet 1.			
17.	Verify the difference between highest and lowest recorded temperatures does NOT exceed 100°F.	Verifies the difference between highest and lowest recorded temperatures does NOT exceed 100°F.			
*18.	Check the appropriate box on DATA SHEET 1 if the above condition is met.	Checks the appropriate box on DATA SHEET 1 if the above condition is met.			
19.	Inform Unit Supervisor task is completed.	Informs Unit Supervisor task is completed.			
Cue	Acknowledge the completion of the task.				
Cue	Acknowledge the completion of the task.	FND			

JPM Stop Time: _____



JPM SUMMARY

Operator's Name:	Emp. ID#:
Job Title: 🗌 RO 🗌 SRO	
JPM Title: ERV Acoustic Monitor Check	
JPM Number: S-N-c	Revision Number: 00
Task Number and Title: 218L004, Perform	an Acoustic Monitor Surveillance IAW DOS 0250-06
Task Standard: The Examinee will perform MONITOR/ TEMPERATUR	the PMT for the 2B ERV IAW DOS 0250-06, ACOUSTIC E DETECTOR INSTRUMENT (CHANNEL) CHECK.
K/A Number and Importance: 239002 G.	2.2.12 3.7 / 4.1
Suggested Testing Environment: Simula	itor
Alternate Path: Yes No SRO	Only: 🗌 Yes 🛛 No 🛛 Time Critical: 🗌 Yes 🖾 No
Reference(s):	
Procedure: DOS 0250-06	Revision: 16
Procedure:	Revision:
Procedure:	Revision:
Procedure:	Revision:
Actual Testing Environment: Simu	ulator 🗌 Control Room 🔲 In-Plant 🗌 Other
Testing Method: Simulate	Perform
Estimated Time to Complete: 10	minutes Actual Time Used: minutes
EVALUATION SUMMARY:	
Were all the Critical Elements performed s	atisfactorily? 🗌 Yes 🗌 No
The operator's performance was evaluated	d against standards
contained within this JPM and has been de	etermined to be: Satisfactory Unsatisfactory
NOTE: Enter finalized grading, comments,	and notes relevant to this evaluation in the associated TQ-
AA-150-F03A/B. (See AR <u>4282419</u>)	·.
Evaluator's Name (Print):	
Evaluator's Signature:	Date:



- 1. You are an extra NSO.
- 2. Maintenance has been completed on the acoustic monitor for the 2B ERV (2-0203-3B).
- 3. The Post Maintenance Test for the 2B ERV will be successful completion of DOS 0250-06, ACOUSTIC MONITOR/ TEMPERATURE DETECTOR INSTRUMENT (CHANNEL) CHECK, for the 2B ERV.

INITIATING CUE

- 1. The Unit Supervisor has directed you perform DOS 0250-06 on the 2B ERV.
- 2. Another NSO will Independently Verify the calculations.
- 3. Inform the Unit Supervisor when you are complete.



Job Performance Measure							
ALTERNATE DEPRESSURIZATION USING ISO CONDENSER VENT VALVES							
	JPM Number:	S-N-d					
	Revision Number:	00					
	Date:	11/22					
Developed By:	Derek Siuda Exam A	_ / uthor: Print / Sign		Date			
Approved By:	Jonathan Chapman Facility Repr	_ / esentative: Print / Sign	·	Date			



JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE:	All steps of this checklist should be performed upon initial validation.				
	Prior to JPWI usage, revalidate JPWI using steps 9 and 13 below.				
1.	Task description and number, JPM description and number are identified.				
2.	Knowledge and Abilities (K/A) references are included.				
3.	Performance location specified. (in-plant, control room, simulator, or other)				
4.	Initial setup conditions are identified.				
5.	Initiating cue (and terminating cue if required) are properly identified.				
6.	Task standards identified and verified by instructor or SME review.				
7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).				
8.	IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the				
	predetermined qualitative or quantitative outcome) against which task performance				
	will be measured.				
9.	Verify the procedure(s) referenced by this JPM reflects the current revision:				
	Procedure: <u>DEOP 0500-07</u> Revision: <u>01</u>				
	Procedure: Revision:				
10.	Verify cues both verbal and visual are free of conflict.				
11					
11.	verify performance time is accurate.				
12.	If the JPM cannot be performed as written with proper responses, then revise the				
	JPM.				
13.	When JPM is initially validated, sign and date JPM cover page. For subsequent				
	validations, sign and date below:				
	//				
	SME / Instructor (Print/Sign)	Date			
	/				
	SME / Instructor (Print/Sign)	Date			
	/				
	SME / Instructor (Print/Sign)	Date			



Revision Record (Summary)

Revision #	Summary
00	New JPM developed for ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC, preferably a shutdown IC (IC 172 was used for validation).

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

- 2. Ensure the following valves are closed:
 - a. MO 2-1301 1, RX OUTLET ISOL
 - b. MO 2-1301 2, RX OUTLET ISOL
 - c. AO 2-1301-17 & 20, VENT VLV
 - d. MO 2-220-90A, 2A MSL DRN VLV
 - e. MO 2-220-3, MSL DRN VLV
 - f. MO 2-220-4, MSL DRN TO COND

DOCUMENT PREPARATION

Provide a clean copy of DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.



- 1. You are the Unit 2 NSO.
- 2. An event has occurred requiring Alternate Emergency Depressurization.
- 3. Group 5 Isolations have been bypassed.

INITIATING CUE

- 1. The Unit Supervisor has ordered you to perform Alternate Emergency Depressurization using Iso Condenser Vent Valves per DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.
- 2. Inform the Unit Supervisor when the task is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



JPM Start Time:

JPM Sequence #:

of 10/11

Task Standard:

The examinee will perform Alternate Emergency Depressurization utilizing Iso Cond vent valves per DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment		
Note	Provide the Examinee a copy of DEOP 0500-07.						
1.	Selects the correct procedure step	cts the correct procedure step Determines correct procedure step is per DEOP 0500-07, page 8, step G.5, DEPRESSURIZE RPV USING ISOL CONDENSER VENT VALVES					
*2.	Place MO 2-1301-3, RX INLET ISOL in PULL TO LOCK	Places MO 2-1301-3, RX INLET ISOL in PULL TO LOCK					
*3.	Open the MO 2-1301 1, RX OUTLET ISOL	Opens the MO 2-1301 1, RX OUTLET ISOL					
*4.	Open the MO 2-1301 2, RX OUTLET ISOL	Opens the MO 2-1301 2, RX OUTLET ISOL					
*5.	Open the AO 2-1301 17 & 20, VENT VLV	Opens the AO 2-1301 17 & 20, VENT VLV					
*6.	Open the MO 2-220-90A, 2A MSL DRN VLV	Opens the MO 2-220-90A, 2A MSL DRN VLV					
*7.	Open the MO 2-220-3, MSL DRN VLV	Opens the MO 2-220-3, MSL DRN VLV					
*8.	Open the MO 2-220-4, MSL DRN TO COND	Open the MO 2-220-4, MSL DRN TO COND					
9.	Inform Unit Supervisor task is completed.	Informs Unit Supervisor task is completed.					
Cue	Acknowledge the completion of the tas	k.					
		END					

JPM Stop Time:


JPM SUMMARY

Operator's Name:	Emp. ID#:
Job Title: 🗌 RO 🗌 SRO	
JPM Title: Alternate Depressuri JPM Number: S-N-d	zation Using Iso Condenser Vent Valves Revision Number: 00
Task Number and Title: 295L01 tempe	7, Perform residual heat removal alternatives to control reactor vessel rature
Task Standard: The examinee w vent valves per SYSTEMS.	ill perform Alternate Emergency Depressurization utilizing Iso Cond DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION
K/A Number and Importance:	207000.A1.05 4.0
Alternate Path: Yes No Reference(s):	SRO Only: Yes No Time Critical: Yes No
Procedure: DEOP 0500-07 Procedure: Procedure: Procedure: Procedure: Procedure: Procedure: Procedure: Procedure: DEOP 0500-07	Revision: 01 Revision:
Actual Testing Environment:	🛛 Simulator 🛛 Control Room 🗌 In-Plant 🗌 Other
Testing Method: Simula	ate 🛛 Perform
Estimated Time to Complete:	10 minutes Actual Time Used: minutes
EVALUATION SUMMARY: Were all the Critical Elements pe	erformed satisfactorily? Yes No
The operator's performance was contained within this JPM and h	s evaluated against standards as been determined to be:
NOTE: Enter finalized grading, co AA-150-F03A/B. (See AF	omments, and notes relevant to this evaluation in the associated TQ- R <u>4282419</u>).
Evaluator's Name (Print):	
Evaluator's Signature:	Date:



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INITIAL CONDITIONS

- 1. You are the Unit 2 NSO.
- 2. An event has occurred requiring Alternate Emergency Depressurization.
- 3. Group 5 Isolations have been bypassed.

INITIATING CUE

- 1. The Unit Supervisor has ordered you to perform Alternate Emergency Depressurization using Iso Condenser Vent Valves per DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.
- 2. Inform the Unit Supervisor when the task is complete.



Job Performance Measure			
PER	RFORM DG SURVEILLANCE TESTING (AP)		
	JPM Number: <u>S-N-e</u>		
	Revision Number: <u>12</u>		
	Date: 10/22		
Developed By:	Derek Siuda / Exam Author: Print / Sign	Date	
Approved By:	Jonathan Chapman / Facility Representative: Print / Sign	Date	



JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE:	All steps of this checklist should be performed upon initial validation.			
	Phor to JPM usage, revalidate JPM using steps 9 and 13 below.			
1.	Task description and number, JPM description and number are identified.			
2.	Knowledge and Abilities (K/A) references are included.			
3.	Performance location specified. (in-plant, control room, simulator, or other)			
4.	Initial setup conditions are identified.			
5.	Initiating cue (and terminating cue if required) are properly identified.			
6.	Task standards identified and verified by instructor or SME review.			
7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).			
8.	IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.			
9. 10.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure: DOS 6600-01 Revision: 146 Procedure: Revision: 146 Verify cues both verbal and visual are free of conflict. Verify cues both verbal and visual are free of conflict.			
11.	Verify performance time is accurate.			
12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.			
13.	When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:			
	SME / Instructor (Print/Sign)	Date		
		Date		
	SME / Instructor (Print/Sign)	Date		
	/			
	SME / Instructor (Print/Sign)	Date		



Revision Record (Summary)

Revision #	Summary
10	Update for the 2018 LORT exam
11	Updated to the new version of the JPM Template and for the 2021 LORT exam
12	Updated JPM for the ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

- 1. Unit 2/3 Diesel Generator surveillance can be run from any at power IC (IC 169 was used for validation)
- 2. Diesel Generator should be started and loaded to Bus 23-1, per DOS 6600-01 up to and including step I.1.13 (inclusive) as follows:
 - a. Insert Remote for 2/3 EDG Droop at 55 (IRF T03 = True)
 - b. Acknowledge 2/3 EDG local trouble alarm (IRF T23 = Acknowledge)
 - c. Place 2/3 EDG Control switch to start at 902-8 Panel
 - d. Synch and close 2/3 EDG Output Breaker to Bus 23-1, then remove synch selector switch.
 - e. Load 2/3 EDG to 2340 to 2600 kW (with governor) and -300 to +300 kVars (with voltage adjust) and allow time to stabilize Note: Adjustments are interactive.
 - f. Acknowledge and reset all 902-8 Panel alarms.

REMOTES/ALARMS REQUIRED

- 1. Set 2/3 EDG Droop to 55 (IRF T03 = True).
- 2. A few seconds after the droop has been set to 55 (IRF T23 = Acknowledge) acknowledges U2/3 D/G Local Panel Trouble Alarms.
- 3. When the examinee directs the EO to set 2/3 EDG Droop to 5, then IRF TO3 = False.

MALFUNCTIONS REQUIRED

1. None

DOCUMENT PREPARATION

Mark up DOS 6600-01, DIESEL GENERATOR SURVEILLANCE TESTS:

- Prerequisites signed off / data filled in
- Limitations and Actions signed off
- Steps I.1 through I.19.d signed off / data filled in
- Data Sheet 1-C signed off / data filled in (four pages).

CAEP File

2023-301 S-N-e.cae # Written by: DSS # 11/22

Setup for S-N-e, Perform DG Surveillance Testing (AP)

Event Trigger 3 will set the 2/3 EDG Droop to 5
trgset 3 "0"
irf t03 = false



INITIAL CONDITIONS

- 1. You are an Extra NSO.
- 2. DOS 6600-01 is in progress on the Unit 2/3 Diesel Generator.
- 3. Unit 2/3 Diesel Generator is currently paralleled to Bus 23-1.
- 4. Unit 2/3 Diesel Generator was NOT paralleled to Bus 33-1 and will NOT be, due to maintenance activities.
- 5. The surveillance run has been completed.
- 6. Chemistry has completed all required samples.
- 7. The operator performing the surveillance in the control room had to leave for an urgent family emergency.

INITIATING CUE

- 1. The Unit Supervisor has directed you to review Sections F. and G. of DOS 6600-01 and then complete the DOS, starting at step I.19.e to secure the Unit 2/3 Diesel Generator.
- 2. Your Pre-Job Brief has been completed.
- 3. Notify the Unit supervisor upon completion of the task.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



JPM Start Time:

JPM Sequence #:

of 10/11

Task Standard:

The Examinee will perform actions of DOS 6600-01, DIESEL GENERATOR SURVEILLANCE TESTS, to start securing the 2/3 Emergency Diesel Generator (EDG) when it is announced the plant has scrammed and then the Examinee will then have to execute Attachment A of DOS 6600-01 to place the 2/3 EDG is the proper lineup.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
1.	Reduce 2/3 DG load to less than 100 kW using governor control switch.	Places the 2/3 DG Governor C/S to DECR to reduce load.			
Cue	As soon as load is being reduced – give " "Unit 2 has scrammed."	the following cue:			
	BEGIN	ALTERNATE PATH			
2.	Recognize need to perform Attachment A per G.4.	Recognizes need to perform Attachment A and proceeds to Attachment A.			
*3.	Open circuit breaker 2/3 D/G TO BUS 23-1 ACB.	2/3 D/G to Bus 23-1 Circuit breaker C/S to Open (Green Open light illuminated)			
4.	Records time of Circuit Breaker opening.	Records time of Circuit Breaker opening on Attachment A.			
5.	Set droop setting to 5.	Requests 2/3 DG Droop to be set to 5.			
Cue	 When requested to set 2/3 EDG Droop to 5, insert TRIGGER 3 (if the trigger does not function properly, then manually insert IRF T03 = False), then report: "Unit 2/3 EDG Droop is set at 5" Examinee may direct the EO in the field to perform DOS 6600-01, Attachment A Step 2 and 3. Respond as EO in field to given directions. 				
6.	Reset annunciator D/G 2/3 C-1 DROOP NOT SET ON 5 (local).	Directs EO to reset local annunciator C-1 on local panel A.			
Cue	"2/3 EDG DROOP NOT SET ON 5 alarm i	s reset."			



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment	
7.	Reset annunciator 902-8 A-4 U2/3 DIESEL GEN TROUBLE alarm.	Depresses 902-8 panel annunciator reset button. Verifies 902-8 A-4 alarm tile extinguished.				
*8.	Adjust Unit 2/3 D/G frequency to 60 Hz.	Adjusts Governor C/S with INCR or DECR until frequency is 60 Hz.				
*9.	Adjust the Unit 2/3 D/G voltage to 4160.	Adjusts Voltage Regulator C/S to LOWER or RAISE until voltage is at 4160 Volts.				
Cue	If asked, DOS 6600 14, DIESEL OIL TRANSFER PUMP OPERATION AND FUEL CONSUMPTION TEST, is NOT being performed.					
10.	Verifies breaker F-1 at MCC 28-1 for 2/3-5203 Unit 2/3 Diesel Oil Transfer Pump is closed.	Directs EO to verify breaker closed.				
Cue	As EO report that breaker F-1 at MCC 28	8-1 is closed.				
11.	Verifies breaker C-2 at MCC 38-1 for 2/3-5203 Unit 2/3 Diesel Oil Transfer Pump is closed.	Directs EO to verify breaker closed.				
Cue	As EO report that breaker C-2 at MCC 3	8-1 is closed.				
12.	Notifies Unit Supervisor of 2/3 EDG Status.	Unit Supervisor notified of 2/3 EDG status.				
Cue	Acknowledge report of 2/3 EDG status	AND inform examinee that JPM is comple	ete.			
		END				

JPM Stop Time: _____

.....



	JPM S	UMMARY		
Operator's Name:		E	mp. ID#:	
Job Title: 🗌 RO 🗌 SI	RO			
JPM Title: Perform DG Sur	veillance Testing (AP)			
JPM Number: S-N-e	F	Revision Number:	12	
Task Number and Title: 264	IL009, Perform an EDG	operability surve	illance IAW DOS 6	5600-01.
Task Standard: The Examin TESTS, to s announced Attachmer	iee will perform action start securing the 2/3 E d the plant has scramm nt A of DOS 6600-01 to	s of DOS 6600-01, mergency Diesel (ied and then the E place the 2/3 EDC	DIESEL GENERAT Generator (EDG) Examinee will the G is the proper lir	FOR SURVEILLANCE when it is n have to execute neup.
K/A Number and Important	ce: 264000.A4.04	4.1		
Suggested Testing Environr	nent: Simulator			
Alternate Path: 🛛 Yes	No SRO Only: [_Yes ⊠No	Time Critical:	□Yes ⊠No
Reference(s):				
Procedure: Procedure: Procedure: Procedure:		Revision: Revision: Revision:	<u> </u>	
Actual Testing Environmen	I t: Simulator	Control Roc	om 🗌 In-Plar	nt 🗌 Other
Testing Method: S	imulate 🛛 Perforr	n		
Estimated Time to Compl	ete: <u>16</u> min	utes A	ctual Time Used:	minutes
EVALUATION SUMMARY: Were all the Critical Element	nts performed satisfact	orily?	Yes	No
The operator's performanc contained within this JPM a	e was evaluated agains and has been determin	st standards ed to be:	Satisfactory	Unsatisfactory
NOTE: Enter finalized gradi AA-150-F03A/B. (S	ng, comments, and not ee AR <u>4282419</u>).	tes relevant to thi	s evaluation in th	e associated TQ-
Evaluator's Name (Print):				
Evaluator's Signature:			Date:	



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INITIAL CONDITIONS

- 1. You are an Extra NSO.
- 2. DOS 6600-01 is in progress on the Unit 2/3 Diesel Generator.
- 3. Unit 2/3 Diesel Generator is currently paralleled to Bus 23-1.
- 4. Unit 2/3 Diesel Generator was NOT paralleled to Bus 33-1 and will NOT be, due to maintenance activities.
- 5. The surveillance run has been completed.
- 6. Chemistry has completed all required samples.
- 7. The operator performing the surveillance in the control room had to leave for an urgent family emergency.

INITIATING CUE

- 1. The Unit Supervisor has directed you to review Sections F. and G. of DOS 6600-01 and then complete the DOS, starting at step I.19.e to secure the Unit 2/3 Diesel Generator.
- 2. Your Pre-Job Brief has been completed.
- 3. Notify the Unit supervisor upon completion of the task.



Job Performance Measure				
WITHDRAW	SRM DETECTORS WIT	H A STUCK SRM DETEC	TOR (AP)	
	JPM Number:	S-N-f		
	Revision Number:	05		
	Date:	11/22		
Developed By:	Derek Siuda			
	Exam Autho	pr: Print / Sign	Date	
Approved By:	Jonathan Chapman /	the Driet (C		
	Facility Represe	ntative: Print / Sign	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 9 and 13 below.		
1.	Task description and number, JPM description and number are identified.		
2.	Knowledge and Abilities (K/A) references are included.		
3.	Performance location specified. (in-plant, control room, simulator, or other)		
4.	Initial setup conditions are identified.		
5.	Initiating cue (and terminating cue if required) are properly identified.		
6.	Task standards identified and verified by instructor or SME review.		
7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).		
8.	IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.		
9.	Verify the procedure(s) referenced by this JPM reflects the current revision:Procedure:DOP 0700-01Revision:17Procedure:DOA 0700-02Revision:13Procedure:Revision:13		
10.	Verify cues both verbal and visual are free of conflict.		
11.	Verify performance time is accurate.		
12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.		
13.	When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:		
	/		
	SME / Instructor (Print/Sign)	Date	
	/		
	SME / Instructor (Print/Sign)	Date	
	/		
	SME / Instructor (Print/Sign)	Date	



Revision Record (Summary)

Revision #	Summary
03	Bank JPM
04	Updated for 2019 ILT NRC Exam
05	Updated to the new version of the JPM Template and for the ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to 2-3% power IC (IC 170 was used for validation).

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. Position SRM detectors for a 10^4 to 10^5 count rate. (Should not be in the fully withdrawn position).
- Run CAEP 2023-301 S-N-f.cae, if the CAEP file does not load properly enter the following expert commands:
 - trgset 1 "nilsdet(2) .and. nil104do"
 - trgset 2 "et_array(1) .and. nilsdet(2) .and. nil101di"
 - trg 2 "dmf nis22det"

DOCUMENT PREPARATION

A marked up copy of DOP 0700-01, Source Range Monitor Operation (SRM) complete through Step G.1.e, Step G.1.f is the next to be performed

A clean copy of DOA 0700-02, SRM or IRM Detector Stuck.

CAEP FILE

2023-301 S-N-f.cae # Revised by: DSS # 11/22

Initial Setup

Inserts SRM 22 stuck malfunction.
imf nis22det

Trigger 1 activates when SRM 22 is selected and SRM DRIVE OUT light goes ON.
This is to make sure the examinee has tried to withdraw SRM 22 before deleting the SRM 22 stuck malfunction.
trgset 1 "nilsdet(2) .and. nil104do"

Trigger 2 activates when Trigger 1 is activated, SRM 22 is selected, and the DRIVE IN pushbutton is depressed.
Deletes SRM 22 stuck malfunction.
trgset 2 "et_array(1) .and. nilsdet(2) .and. nil101di"
trg 2 "dmf nis22det"

END



Provide the Examinee a copy of DOP 0700-01. *** DO NOT GIVE THE EXAMINEE THE COPY OF DOA 0700-02 *** UNTIL THEY NEED IT DURING THE JPM AND FIND IT IN THE DOA BOOK *

INITIAL CONDITIONS

- 1. Unit 2 startup is in progress.
- 2. You are an extra NSO assisting the startup.

INITIATING CUE

- 1. The Unit 2 Supervisor directs you to fully withdraw SRM detectors per DOP 0700-01, Source Range Monitor Operation (SRM), IAW Step G.1.f.
- 2. Your Pre-Job Brief has been completed.
- 3. The Prerequisites have been completed.
- 4. Notify the Unit supervisor upon completion of the task.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



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JPM Start Time:	JPM Sequer	nce #: of	10/11

Task Standard:

The examinee will attempt to withdraw SRM detectors IAW DOP 0700-01, SOURCE RANGE MONITOR OPERATION (SRM), one of the SRMs will be stuck. Then utilizing DOA 0700-02, SRM OR IRM DETECTOR STUCK, the examinee will free the stuck SRM and it can be fully withdrawn.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Cue	Provide the Examinee a copy of DOP 0700			OV **	
Noto	If Examinate requests a poor check, recrea	nd "a poor check is not available "	JUA BU		
	DOP 0700-01 Step G 1 f bullet refers to St	ran = a peer check is not available.	he ref	arrod to	n is
Cue	Step G.1.g. The error has been one-lined exam to get the procedure corrected.	and corrected in the procedure. An IR will be wri	itten fol	lowing	the
1.	<u>WHEN</u> at least one IRM down scale alarm has cleared, <u>THEN</u> start SRM withdrawal and maintain SRM count rate 290 cps to 8.85x10 ⁴ cps.	IRM down scales are cleared by initial conditions. Monitors count rate when withdrawing SRMs.			
*2.	Depress the applicable SELECT switch (LIT when selected).	Depresses each SRM's SELECT switch.Verifies SELECT light lit.			
*3.	Depress and hold the DRIVE OUT switch to withdraw SRMs to maintain SRM count rate of 290 cps to 8.85x10 ⁴ cps.	Depress and hold the DRIVE OUT switch to withdraw SRMs			
	BEGIN	N ALTERNATE PATH			
4.	Verify that SRMs indication is changing as expected.	 For SRMs 21, 23 & 24: Count rate drops. Period indicates negative. OUT light is lit when detector reaches full out position. For SRM 22 indications remain unchanged. 			
5.	Report SRM 22 detector did not move and/or appears to be stuck.	Reports SRM 22 detector did not move and/or appears to be stuck.			



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Note	The Examinee may continue to fully with The Examinee should determine that DOA the procedure. When the Examinee locates DOA 0700-02	draw SRMs 21, 23, and 24 before taking actions to A 0700-02, SRM or IRM Detector Stuck, should be 2, give them the provided copy of DOA 0700-02.	o addres entere	d and e	22. nters
*6.	Depress SRM SELECT switches to establish ONLY SRM 22 selected	Depresses SRM SELECT switches to establish ONLY SRM 22 SELECT light lit.			
Note	An automatic Trigger is setup to delete th per the DOA. If the automatic Trigger doo Malfunction.	e SRM stuck detector malfunction when the properties of the properation of the sim Operator c	oer actio lelete th	ons are ne Stuck	taken SRM
Note	The following actions are from DOA 0700	-02			
*7.	Use DRIVE IN <u>AND</u> DRIVE OUT switches to move stuck SRM detector in both directions to free it.	Depresses DRIVE IN switch to move SRM 22.			
8.	Verify indication that SRM 22 is moving.	Observes SRM 22:Count rate rises.Period indicates positive.			
*9.	Depress DRIVE IN switch to stop SRM 22.	Depresses DRIVE IN switch to stop SRM 22.			
*10.	Use DRIVE IN <u>AND</u> DRIVE OUT switches to move stuck SRM detector in both directions to free it.	Depresses and holds DRIVE OUT switch to move SRM 22. Drives SRM 22 fully out.			
11.	Verify that SRM 22 indication is changing as expected.	 Observes SRMs 22: Count rate drops. Period indicates negative. OUT light is lit when detector reaches full out position. 			
12.	Report SRM 22 detector is fully withdrawn.	Reports SRM 22 detector is fully withdrawn.			
Cue	Acknowledge report.				
		END			

JPM Stop Time: _____



JPM SUMMARY

Operator's Name:	Emp. ID#:
Job Title: 🗌 RO 🗌 SRO	
JPM Title: Withdraw SRM Dete	ctors with a Stuck SRM Detector (AP)
JPM Number: S-N-f	Revision Number: 05
Task Number and Title: 215L02	2, Respond to an SRM or IRM stuck detector
Task Standard: The examinee w RANGE MONIT DOA 0700-02, S and it can be fu	vill attempt to withdraw SRM detectors IAW DOP 0700-01, SOURCE OR OPERATION (SRM), one of the SRMs will be stuck. Then utilizing SRM OR IRM DETECTOR STUCK, the examinee will free the stuck SRM Illy withdrawn.
K/A Number and Importance:	215004.A2.03 3.1 / 3.2
Suggested Testing Environment	: Simulator
Alternate Path: 🛛 Yes 🗌 No	o SRO Only: □Yes ⊠No Time Critical: □Yes ⊠No
Reference(s):	
Procedure:DOP 0700-01Procedure:DOA 0700-02Procedure:Procedure:	Revision:17Revision:13Revision:Revision:Revision:14
Actual Testing Environment:	🖾 Simulator 🛛 Control Room 🗌 In-Plant 🗌 Other
Testing Method: Simula	ate 🖂 Perform
Estimated Time to Complete:	18 minutes Actual Time Used: minutes
EVALUATION SUMMARY: Were all the Critical Elements pe	erformed satisfactorily?
The operator's performance wa contained within this JPM and h	s evaluated against standards as been determined to be:
NOTE: Enter finalized grading, c AA-150-F03A/B. (See AI	omments, and notes relevant to this evaluation in the associated TQ- R <u>4282419</u>).
Evaluator's Name (Print):	
Evaluator's Signature:	Date:



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INITIAL CONDITIONS

- 1. Unit 2 startup is in progress.
- 2. You are an extra NSO assisting the startup.

INITIATING CUE

- 1. The Unit 2 Supervisor directs you to fully withdraw SRM detectors per DOP 0700-01, Source Range Monitor Operation (SRM), IAW Step G.1.f.
- 2. Your Pre-Job Brief has been completed.
- 3. The Prerequisites have been completed.
- 4. Notify the Unit supervisor upon completion of the task.



Job Performance Measure			
SWA	P CIRC WATER PUMPS WITH PUMP TRIP (AP)		
	JPM Number: S-N-g		
	Revision Number: 00		
	Date: <u>11/22</u>		
Developed By:	/ Exam Author: Print / Sign	Date	
Approved By:	Jonathan Chapman /		
	Facility Representative: Print / Sign	Date	



JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

<u>NOTE:</u>	All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 9 and 13 below.	
1.	Task description and number, JPM description and number are identified.	
2.	Knowledge and Abilities (K/A) references are included.	
3.	Performance location specified. (in-plant, control room, simulator, or other)	
4.	Initial setup conditions are identified.	
5.	Initiating cue (and terminating cue if required) are properly identified.	
6.	Task standards identified and verified by instructor or SME review.	
7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).	
8.	IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.	
9. 10.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure: DOP 4400-02 Revision: 62 Procedure: DOA 4400-01 Revision: 26 Procedure: Revision: 26 Verify cues both verbal and visual are free of conflict. Verify cues both verbal and visual are free of conflict.	
11.	Verify performance time is accurate.	
12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.	
13.	When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:	
	/	
	SME / Instructor (Print/Sign)	Date
	/	
	SME / Instructor (Print/Sign)	Date
	/	
	SME / Instructor (Print/Sign)	Date



Revision Record (Summary)

Revision #	Summary
00	Developed new JPM for the ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any IC that will support 2 Circ Water Pumps running (IC 169 was used for validation).

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 2B Circ Water Pump is secured and the 2A & 2C are running.

DOCUMENT PREPARATION

- A marked up copy of DOP 4400-02, CIRCULATING WATER SYSTEM STARTUP AND SHUTDOWN, with prerequisites marked off
- A clean copy of DOA 4400-01, CIRCULATING WATER SYSTEM FAILURE

CAEP File

2023-301 S-N-g.cae # Written by: DSS # 11/22

Setup for S-N-g, Swap Circ Water Pumps with Pump Trip (AP)

Event Trigger 1 will automatically actuate when the 2A Circ Water Pump OFF light is lit trgset 1 "hwcwlpumpo(1)" imf hp7 (1 10)

END



Provide the Examinee a copy of DOP 4400-02. *** DO NOT GIVE THE EXAMINEE THE COPY OF DOA 4400-01 *** UNTIL THEY NEED IT DURING THE JPM AND FIND IT IN THE DOA BOOK **

INITIAL CONDITIONS

- 1. You are the 2 Aux NSO.
- 2. Engineering has requested that the 2B Circ Water Pump be started and the 2A Circ Water Pump be secured to even out run times.
- 3. U2 Unit Supervisor has determined DOP 4450-02 does not need to be performed.
- 4. EO in-field actions are complete.

INITIATING CUE

- 1. The U2 Unit Supervisor directs you start the 2B Circ Water Pump IAW DOP 4400-02, Step G.3 and secure the 2A Circ Water Pump IAW DOP 4400-02, Step G.4.
- 2. Your Pre-Job Brief has been completed.
- 3. The Prerequisites have been completed.
- 4. Notify the Unit Supervisor upon completion of the task.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



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JPM	Start	Time:
•••••		

JPM Sequence #:

10/11

of

Task Standard:

The Examinee will start the 2B Circ Water Pump and secure the 2A Circ Water Pump IAW DOP 4400-02, CIRCULATING WATER SYSTEM STARTUP AND SHUTDOWN. After the 2A Circ Water Pump is secured the 2B Circ Water Pump will trip and the Examinee will take the Immediate Operator Actions of DOA 4400-01, CIRCULATING WATER SYSTEM FAILURE, and start the 2A Circ Water Pump.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Cue	Provide the Examinee a copy of DOP 4400)-02.			1
	** DO NOT GIVE THE EXAMINEE THE CO	PY OF DOA 4400-01 UNTIL THEY FIND IT IN THE [DOA BO	OK **	
Note	If Examinee requests a peer check, respor	nd – "a peer check is not available."			
*1.	Take 2B Circ Water Pump control switch to CLOSE	 Takes 2B Circ Water Pump control switch to CLOSE Red Target Blue ON light is lit Green OFF light is out 			
2.	Verifies MO 2-4401B, 2B CIRC WTR PP DISCH, opens	MO 2-4401B opensGreen OPEN light is litGreen CLOSED light is out			
3.	Verifies motor running current is 240 to 298 amps	Motor running current is between 240 and 298 amps			
4.	Verifies proper running lower bearing oil levels	Contacts EO to verify proper oil levels in lower bearing			
Cue	When directs EO to check lower bearing "The oil level in the lower bearing is nor	g oil levels respond: mal."			
5.	Notifies Chemistry to verify proper chemical injection line-up for operation of the third Circ Water pump	Notifies Chemistry to verify proper chemical injection line-up for operation of the third Circ Water pump			
Cue	As Chemistry, acknowledge the order to	overify proper chemical injection line-up.			
6.	Direct EO to 2A Circ Water Pump discharge valve, MO 2-4401A, CIRC WTR PP DISCH	Directs EO to 2A Circ Water Pump discharge valve, MO 2-4401A			
Cue	When EO is directed to 2A Circ Water Pump discharge valve respond: "I am standing by the 2A Circ Water Pump discharge valve."				



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
*7.	Take 2A Circ Water Pump control switch to TRIP	Takes 2A Circ Water Pump control switch to TRIP			
		Green TargetBlue ON light is offGreen OFF light is lit			
8.	Verify discharge valve MO 2-4401A, 2A CIRC WTR PP DISCH, closes	 Verify discharge valve MO 2-4401A closes Green CLOSED light is lit Green OPEN light is out 			
Note	The 2B Circ Water Pump will trip 10 sec	onds after the 2A Circ Water Pump is secured.			
	BEGIN	N ALTERNATE PATH			
9.	Informs Unit Supervisor on 2B Circ Water Pump trip	Informs Unit Supervisor on 2B Circ Water Pump trip			
10.	Verify discharge valve MO 2-4401B, 2B CIRC WTR PP DISCH, closes	 Verify discharge valve MO 2-4401B closes Green CLOSED light is lit Green OPEN light is out 			
Cue	If Examinee informs Unit Supervisor regarding the 2B Circ Water Pump trip, acknowledge the report.				
Note	The following are Immediate Operator FAILURE, and the DOA is not required to	Actions out of DOA 4400-01, CIRCULATING WA o be referenced prior to the actions.	TER SYS	TEM	
*11.	Take 2A Circ Water Pump control switch to CLOSE	 Takes 2A Circ Water Pump control switch to CLOSE Red Target Blue ON light is lit Green OFF light is out 			
12.	Verifies MO 2-4401A, 2A CIRC WTR PP DISCH, opens	MO 2-4401A opensGreen OPEN light is litGreen CLOSED light is out			
Cue	If Examinee enters DOA 6500-10, 4KV CIR	CUIT BREAKER TRIP, inform them another NSO w	ill perfo	rm that	t DOA.
13.	Informs Unit Supervisor of the conditions	Informs Unit Supervisor of the conditions			
Cue	Acknowledge report and inform Examined	e the JPM is complete.			
		END			



JPM Stop Time:

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JPN	i su	MN	1ARY
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Operator's Name:	Emp. ID#:
Job Title: 🗌 RO 🗌 SRO	
JPM Title: Swap Circ Water Pun	nps with Pump Trip (AP)
JPM Number: S-N-g	Revision Number: 00
Task Number and Title: 275L01	Respond to circulating water system failure
Task Standard: The Examinee v IAW DOP 4400- the 2A Circ Wat will take the Im SYSTEM FAILUF	vill start the 2B Circ Water Pump and secure the 2A Circ Water Pump 02, CIRCULATING WATER SYSTEM STARTUP AND SHUTDOWN. After ter Pump is secured the 2B Circ Water Pump will trip and the Examinee mediate Operator Actions of DOA 4400-01, CIRCULATING WATER RE, and start the 2A Circ Water Pump.
K/A Number and Importance:	510001.A2.01 3.5 / 3.3
Suggested Testing Environment	Simulator
Alternate Path: ⊠Yes □No	SRO Only: 🗌 Yes 🛛 No 🛛 Time Critical: 🗌 Yes 🖾 No
Reference(s):	
Procedure: DOP 4400-02 Procedure: DOA 4400-01 Procedure: Procedure:	Revision: 62 Revision: 26 Revision: 62 Revision: 62
Actual Testing Environment:	🖾 Simulator 🛛 Control Room 🗌 In-Plant 🗌 Other
Testing Method: Simula	ate 🛛 Perform
Estimated Time to Complete:	10 minutes Actual Time Used: minutes
EVALUATION SUMMARY: Were all the Critical Elements pe	erformed satisfactorily?
The operator's performance wa contained within this JPM and h	s evaluated against standards as been determined to be:
NOTE: Enter finalized grading, c AA-150-F03A/B. (See AI	omments, and notes relevant to this evaluation in the associated TQ- R <u>4282419</u>).
Evaluator's Name (Print):	
Evaluator's Signature:	Date:



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INITIAL CONDITIONS

- 1. You are the 2 Aux NSO.
- 2. Engineering has requested that the 2B Circ Water Pump be started and the 2A Circ Water Pump be secured to even out run times.
- 3. U2 Unit Supervisor has determined DOP 4450-02 does not need to be performed.
- 4. EO in-field actions are complete.

INITIATING CUE

- 1. The U2 Unit Supervisor directs you start the 2B Circ Water Pump IAW DOP 4400-02, Step G.3 and secure the 2A Circ Water Pump IAW DOP 4400-02, Step G.4.
- 2. Your Pre-Job Brief has been completed.
- 3. The Prerequisites have been completed.
- 4. Notify the Unit Supervisor upon completion of the task.



Job Performance Measure				
ALIGN CHAR	COAL ADSORBER FILTERS IN PARALLEL MODE (A	AP)		
	JPM Number: S-N-h			
	Revision Number: 02			
	Date: <u>11/22</u>			
Developed By:	Derek Siuda /			
	Exam Author: Print / Sign Date	e		
Approved By:	Jonathan Chapman / Facility Representative: Print / Sign Date	e		
		-		



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 9 and 13 below.

- 1. Task description and number, JPM description and number are identified.
- 2. Knowledge and Abilities (K/A) references are included.
- 3. Performance location specified. (in-plant, control room, simulator, or other)
- 4. Initial setup conditions are identified.
- 5. Initiating cue (and terminating cue if required) are properly identified.
- 6. Task standards identified and verified by instructor or SME review.
- 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- 8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured.
- 9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure:	DOP 5400-05	Revision:	37	
Procedure:	DAN 902-54 C-6	Revision:	10	
Procedure:	DAN 902-54 D-6	Revision:	08	

- 10. Verify cues both verbal and visual are free of conflict.
- 11. Verify performance time is accurate.
- 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- 13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:




Revision Record (Summary)

Revision #	Summary
03	Bank JPM
04	Updated for 2019 ILT NRC Exam
05	Updated to the new version of the JPM Template and for the ILT 22-1 (2023-301) NRC Exam



SIMULATOR SETUP INSTRUCTIONS

- 1. Reset to any at power IC (IC 168 was used for validation)
- **NOTE:** It is acceptable to use a similar IC to the IC listed above, provided the specific IC used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.
 - 2. Verify the charcoal adsorbers are in SERIES mode of operation.
 - Load 2023-301 S-N-h.cae.

DOCUMENT PREPARATION

Provide examinee with a marked up copy of DOP 5400-05, STARTUP OF THE CHARCOAL ADSORBER SYSTEM.

CAEP FILE

2023-301 S-N-h.cae # For ILT 22-1 (2023-301) NRC Exam # Written by DSS # Date 11/22

Setup for S-5400-02, Align Charcoal Adsorber Filters in Parallel Mode (AP)

EVENT TRIGGERS

Event Trigger 1 Ramps Charcoal Adsorber Temps to 150F over 2 min. trgset 3 ".not. hwogDA045o" | 2 ior ogtchar1 (1) 150 2:00 | 2 ior ogtchar2 (1) 150 2:00 | 2 ior ogtchar3 (1) 150 2:00 | 3 ior ogtchar4 (1) 150 2:00 | 3 ior ogtchar7 (1) 150 2:00 | 4 ior ogtchar10 (1) 150 2:00 | 4 ior ogtchar12 (1) 150 2:00 | 5 ior ogtchar11 (1) 150 2:00 | 5 ior ogtvault (1) 100 2:00 | 7

Event Trigger 2 brings in Off Gas alarms trgset 4 ".not. HWOGDA054O"|7 imf C-06M (2 5) ON|7 imf D-06M (2 5) ON|8

End



INITIAL CONDITIONS

- 1. You are the Unit 2 Aux NSO.
- 2. The system engineer has completed data collection for the Off Gas system and requests returning the charcoal adsorbers to the PARALLEL mode of operation from the SERIES mode of operation.
- 3. RP has been notified of the charcoal adsorber mode shift.

INITIATING CUE

- 1. Unit Supervisor has directed you to align the charcoal adsorbers to the PARALLEL mode of operation in accordance with DOP 5400-05, 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.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.



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of

10/11

Task Standard:

JPM Start Time:

The Examinee will align the charcoal adsorbers in PARALLEL mode of operation in accordance with DOP 5400-05, STARTUP OF THE CHARCOAL ADSORBER SYSTEM and bypass the adsorbers when high temperature exists.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
Cue	Provide examinee with copy of DOP 5400-05.				
	**** DO NOT PROVIDE THE COPIES OF DANs 902-54 C-6 OR D-6 UNTIL EXAMINEE LOCATES THEM IN THE CORRECT BINDER ****				
1.	Proceeds to step G.4 of DOP 5400-05.	Locates step G.4 of the procedure (which then directs next step).			
2.	Determines the correct step to utilize is step G.22 of DOP 5400-05.	Proceeds to step G.22 of the procedure and relocates to Panel 902-54.			
*3.	Open AO 2-5417, ADSORBER TRN 2 BYPASS VLV.	Step 22.b, RED light illuminated. Green light off.			
*4.	Open AO 2-5423, ADSORBER TRN 3 BYPASS VLV.	Step 22.c, RED light illuminated. Green light off.			
*5.	Close AO 2-5415, ADSORBER TRN 1 DISCH VLV.	Step 22.d, RED light illuminated. Green light off.			
*6.	Close AO 2-5421, ADSORBER TRN 2 DISCH VLV.	Step 22.e, RED light illuminated. Green light off.			
Note	The following alarms will come in: DAN 902-54 C-6, ADSORBER VESSELS TEMP HI DAN 902-54 D-6, ADSORBER VAULT TEMP HI/LO				
BEGIN ALTERNATE PATH					
7.	Informs Unit Supervisor of alarms.	Unit Supervisor notified.			
Cue	Acknowledge report of alarms.				
Note	Provide Examinee a copy of the DANs when they are referenced.				



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<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment
8.	Verifies rising temperature of charcoal adsorber vessels and vault on TR 2-5440-3 and TR 2-5440-16.	Checks TR 2-5440-3 and TR-2-5440-16 for rising vessel and vault temperatures.			
Cue	If the candidate starts looking for DOP 5750-12 inform them another NSO will perform DOP 5750-12 and temperature controllers inside 2223-46a(b) have been set properly.				
Cue	Acknowledge contacting IMD, if asked.				
9.	Determines the need to bypass the charcoal adsorbers and notifies Unit Supervisor.	Informs Unit Supervisor and proceeds to step B.7 in DAN 902-54 C-6 <u>OR</u> step B.4.c in DAN 902-54 D-6 <u>OR</u> step G.3.c in DOP 5400- 05.			
Cue	Acknowledge bypassing charcoal adsorbers. If the Examinee enters DOA 5400-04, OFF GAS EXPLOSION RECHAR SYSTEM IN OPERATION, then respond that another NSO will perform DOA 5400-04.				
*10.	Place AO 2-5414, INLET TO ADSR VLV in BYPASS.	Places AO 2-5414 control switch to BYPASS.			
11.	Verify AO 2-5414 is closed.	For AO 2-5414, verifies red closed light is lit and green light is off.			
12.	Verify AO 2-5418, ADSORBER BYPASS VLV is open.	For AO 2-5418, verifies red open light is lit and green light is off.			
13.	Notify Unit Supervisor of task completion.	Unit Supervisor notified of task completion.			
Cue	Acknowledge report of task completion				
END					

JPM Stop Time: _____

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JPM SUMMARY

Operator's Name:	Emp. ID#:		
Job Title: 🗌 RO 🗌 SRO			
JPM Title: Align Charcoal Adsorber Filters in Parallel Mo	de (AP)		
JPM Number: S-N-h Revisio	n Number: 02		
Task Number and Title: 271L005, Startup the Off Gas Ch	narcoal Adsorber system		
Task Standard: The Examinee will align the charcoal ad accordance with DOP 5400-05, STARTU bypass the adsorbers when high tempe	sorbers in PARALLEL mode of operation in POF THE CHARCOAL ADSORBER SYSTEM and rature exists.		
K/A Number and Importance: 271000.A4.09	3.0		
Suggested Testing Environment: Simulator			
Alternate Path: Yes No SRO Only: Yes	🖾No Time Critical: 🗌Yes 🖾No		
Reference(s):			
Procedure:DOP 5400-05RevisProcedure:DAN 902-54 C-6RevisProcedure:DAN 902-54 D-6RevisProcedure:RevisRevis	sion: <u>37</u> sion: <u>10</u> sion: <u>08</u> sion:		
Actual Testing Environment: Simulator	Control Room 🗌 In-Plant 🗌 Other		
Testing Method: 🗌 Simulate 🛛 Perform			
Estimated Time to Complete: 15 minutes	Actual Time Used: minutes		
EVALUATION SUMMARY: Were all the Critical Elements performed satisfactorily?	Yes No		
The operator's performance was evaluated against stand contained within this JPM and has been determined to b	dards be: Satisfactory Unsatisfactory		
NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ- AA-150-F03A/B. (See AR <u>4282419</u>).			
Evaluator's Name (Print):			

Evaluator's Signature: _____ Date: _____



INITIAL CONDITIONS

- 1. You are the Unit 2 Aux NSO.
- 2. The system engineer has completed data collection for the Off Gas system and requests returning the charcoal adsorbers to the PARALLEL mode of operation from the SERIES mode of operation.
- 3. RP has been notified of the charcoal adsorber mode shift.

INITIATING CUE

- 1. Unit Supervisor has directed you to align the charcoal adsorbers to the PARALLEL mode of operation in accordance with DOP 5400-05, step G.4.
- 2. Inform the Unit Supervisor when the task is complete.