

# PSEG Nuclear LLC

## Job Performance Measure

**Respond to a failed high RCS T-avg channel IAW S2.OP-AB.ROD-0003**

JPM Number: 21-01 NRC Sim-g

Revision Number: 00

Date: 10/12/22

<b>Developed By:</b>	<u>K. Hantho</u> Instructor	<b>Date:</b>	<u>10/12/22</u>
<b>Validated By:</b>	<u>Gallagher/Saulsbery</u> SME or Instructor	<b>Date:</b>	<u>11/21/22</u>
<b>Reviewed By:</b>	<u>M. Winkelspecht</u> Operations Representative	<b>Date:</b>	<u>11/29/22</u>
<b>Approved By:</b>	<u>M. Wadusky</u> Training Department (Print/Sign)	<b>Date:</b>	<u>11/29/22</u>

## REVISION RECORD (Summary)

Revision Number	Date	Reason
00	10/12/22	New JPM

**JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

**NOTE**

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

- EG 1. Task description and number, JPM description and number are identified.

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

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

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- EG 4. Initial setup conditions are identified.

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- EG 5. Initiating and terminating cues are properly identified.

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- EG 6. Task standards identified and verified by SME review.

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

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- EG 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:  
Procedure(s) S2.OP-AB.ROD-0003 R23 Date Checked: 10/12/22
  
- EG 9. Pilot test the JPM:
  - a. Verify cues both verbal and visual are free of conflict, and
  - b. Ensure performance time is accurate.

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

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- NA 11. When JPM is revalidated, SME or instructor sign and date JPM cover page

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Ed Gallagher 11-21-22  
SME/Instructor Date

SME/Instructor Date

SME/Instructor Date

## SIMULATOR SETUP INSTUCTIONS

- **RESET simulator to IC-256 and VERIFY the below events on the Instructor Station.**
- Salem Unit 2 is at 100%.
- No major equipment are out of service and no Tech Specs are active.
- The following malfunctions, overrides, and remotes were required to develop this IC.

<b>MALF ID #</b>	<b>Description</b>	<b>Delay Time</b>	<b>Initial Value</b>	<b>Ramp Time</b>	<b>Trigger</b>	<b>Severity</b>
RC0014a	21 HOT LEG RTD AVG SUMMATOR FAILS	NA	NA	NA	RT-1	630

## SPECIAL INSTRUCTIONS

1. None.

### **INITIAL CONDITIONS**

- Salem unit 2 is at 100%
- No major equipment is out of service and no Tech Specs are active.

### **INITIATING CUE**

- You are the Reactor Operator.
- Respond to all alarms and indications.
- Your evaluator will respond to all alarms not related to your task.

**TASK STANDARD:**

The task is satisfactorily met when the applicant has taken the Rod control system to manual IAW step 3.1 of S2.OP-AB.ROD-0003, restored Tavg IAW step 3.5 of S2.OP-AB.ROD-0003, stabilized PZR level and defeated the failed Tavg channel IAW step 3.10 thru 3.12 of S2.OP-AB.ROD-0003.

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**Information for Evaluators Use:**

UNSAT requires written comments on the respective step.

**(\*) Denotes critical steps**

If Time Critical, estimated time is the Time Critical time.

The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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

The time clock starts when the candidate acknowledges the initiating cue.

**RECORD JPM Start Time:** \_\_\_\_\_

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
N/A		<b>RECORD</b> the JPM Start Time when the operator acknowledges READY TO START JPM.		N/A

**Cue:** Insert RT-1

Examiners Note: Operator recognizes unwarranted rod motion and takes rod control to manual

Comments:

N/A	*	Operator attempts to identify failure, and will take action to stop rod insertion if not evident immediately by verifying no runback in progress	Operator verifies no runback in progress and takes rods to manual.	
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**Cue:**

Examiners Note:

Comments:

3.1		Enter S2.OP-AB.ROD-0003 and Place the rod bank selector switch in Manual	Enters AB.ROD-3 and Places the Rod control bank selector switch in Manual.	
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**Cue:**

Examiners Note:

Comments:

3.2		Did rod motion stop	Operator states Yes and continues to step 3.4	
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**Cue:**

Examiners Note:

Comments:

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
<b>ALTERNATE PATH STARTS HERE</b>				
3.4		<b>MONITOR</b> Tav <sub>g</sub> for necessary adjustments until the cause of the transient is known and the Plant is stable.	Operator will initial and monitor T <sub>avg</sub>	
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.5	*	<b>ADJUST</b> Rods in manual to control Tav <sub>g</sub> within 1.5°F of T <sub>avg</sub> program. (Attachment 1, Tav <sub>g</sub> Program VS % Reactor Power)	Operator will verify within 1.5 and continue or adjust to with 1.5 ° F by withdrawing rods and then move on.	
<p><b>Cue:</b> If asked CRS directs you to restore Rods to ≤ 1 ° F</p> <p><b>Examiners Note:</b> Tav<sub>g</sub> may be within 1.5°F depending on how quickly rods were placed in manual.</p> <p><u>Comments:</u></p>				
3.6		Has a NIS channel Failed High?	Operator verbalizes and initials NO and goes to step 3.8	
<p><b>Cue :</b></p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.8		<b>STOP</b> any dilution of the Reactor Coolant System.	Operator verifies makeup system Out of service and states no dilution in progress	
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.9		Has a Tav <sub>g</sub> channel failed high?	Answers Yes and goes to step 3.10	

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.10		<p><b>RETURN</b> Pressurizer level to program as follows: (Attachment 2, Pressurizer Level Program)</p> <p>___ A. <b>PLACE</b> the Charging System Master Flow Controller in MANUAL.</p> <p>___ B. <b>ADJUST</b> Charging System Master Flow Controller to restore Pressurizer level to program.</p>	Places Master flow controller or CV55 in manual and adjusts to restore level to program band	
<p>Cue:</p> <p>Examiners Note: The PZR level will remain at 59% as the control signal is capped at the 100% value</p> <p><u>Comments:</u></p>				
3.11	*	<p><b>SELECT</b> DEVIATION DEFEAT for the affected LOOP at the following 2CC2 bezel section:</p> <ul style="list-style-type: none"> <li>◆ REACTOR COOLANT DIFFERENTIAL TEMPERATURES</li> </ul>	Selects deviation defeat on 2CC2 for channel 1 Differential temperature. and average temperature.	
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.11 cont.	*	<p><b>SELECT</b> DEVIATION DEFEAT for the affected LOOP at the following 2CC2 bezel section:</p>	Selects deviation defeat on 2CC2 for channel 1 average temperature.	

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
		♦ REACTOR COOLANT AVERAGE TEMPERATURES		
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.12	*	<b>SELECT</b> a valid Channel on the Recorder Select at the Control Console for the following: ♦ REACTOR COOLANT DIFFERENTIAL TEMPERATURES	Selects recorder to Channel 2, 3 or 4 for Differential temperature.	
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.12 cont.	*	<b>SELECT</b> a valid Channel on the Recorder Select at the Control Console for the following: ♦ REACTOR COOLANT AVERAGE TEMPERATURES	Selects recorder to Channel 2, 3 or 4 for average temperature.	
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.13		When pressurizer level has been restored to program, <b>RETURN</b> the Charging System Master Flow Controller in AUTO.	Verifies level is at program and returns charging master flow controller to Auto	

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
<p>Cue: If desired, may walkthrough remaining steps or provide cue that level has been returned to program</p> <p>Examiners Note: depending on level error this step may take a while to restore</p> <p><u>Comments:</u></p>				
3.14		Are control rods above Rod Insertion Limits?	Verifies Rods are above insertion limits	
<p>Cue:</p> <p>Examiners Note:</p> <p><u>Comments:</u></p>				
3.16		IF manual rod control is NOT required, THEN <b>PLACE</b> the Rod Control System in automatic control.	Places rod control in Auto	
<p>Cue: CRS directs rods restored to auto control</p> <p>Examiners Note: May restore the rods to the all rods out position before returning to AUTO</p> <p><u>Comments:</u></p>				
<b>Terminating Cue</b>	<b>JPM COMPLETE</b>			

**RECORD JPM Stop Time:** \_\_\_\_\_

**Operator's Name:** \_\_\_\_\_ **Job Title:** RO \_\_\_\_\_ SRO \_\_\_\_\_

**Facility:** Salem **JPM No.:** 21-01 NRC Sim-g **Revision No.:** 00

Respond to a failed high RCS T-avg channel and defeat the failed channel IAW

**Task Title:** S2.OP-AB.ROD-0003

**Task No.:** N1150090501 **Source:** Bank \_\_\_\_\_ New X Mod \_\_\_\_\_

**System:** 012 RPS Reactor Protection System

**K/A Number / Description:** A4.05 Ability to manually operate and/or monitor in the control room:  
Channel defeat controls

**K/A Rating** RO 3.8 SRO N/A

**Task Applicability:** SRO Only \_\_\_\_\_ RO/SRO X AO/RO/SRO \_\_\_\_\_ Other \_\_\_\_\_

**Time-Critical:** Yes \_\_\_\_\_ No X **Alternate Path:** Yes \_\_\_\_\_ No X

**Estimated Time to Complete:** 6 Minutes

**Actual Time Used:** \_\_\_\_\_ Minutes

**Method of Testing:** Simulated Performance \_\_\_\_\_ Actual Performance X

**Location:** Classroom \_\_\_\_\_ Simulator X In-Plant \_\_\_\_\_ RCA \_\_\_\_\_

**Required Materials:** S2.OP-AB.ROD-0003

**Reference(s):** S2.OP-AB.ROD-0003

**EVALUATION SUMMARY:**

Were all the Critical Elements (steps) 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:** \_\_\_\_\_

**Evaluator's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **STUDENT HANDOUT**

### **INITIAL CONDITIONS**

- Salem unit 2 is at 100%
- No major equipment is out of service and no Tech Specs are active.

### **INITIATING CUE**

- You are the Reactor Operator.
- Respond to all alarms and indications.
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