PSEG Nuclear LLC

Job Performance Measure

Depressurize RCS using Aux spray IAW EOP-LOCA-2

JPM Number: 21-01 NRC Sim-c

Revision Number: 01

Date: 01/10/23

Developed By:	**R. Chan** **Instructor**	**Date:**	1/10/23
Validated By:	**E. Gallagher** **SME or Instructor**	**Date:**	1/10/23
Reviewed By:	**M. Winkelspecht** **Operations Representative**	**Date:**	1/19/23
Approved By:	**M. Wadusky** **Training Department (Print/Sign)**	**Date:**	1/19/23

REVISION RECORD (Summary)

Revision Number	Date	Reason
00	10/12/22	New JPM
01	1/10/23	Incorporated NRC comments from Prep week. Revised step 20 RCS subcooling is now 9 F and lowering.

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.

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

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

EG 4. Initial setup conditions are identified.

EG 5. Initiating and terminating cues are properly identified.

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

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

EG 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:

Procedure(s) 2-EOP-LOCA-2 Rev. 41 Date Checked: 11/21/22

EG 9. Pilot test the JPM:

a. Verify cues both verbal and visual are free of conflict, and

b. Ensure performance time is accurate.

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

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

Ed Gallagher 11/21/22

SME/Instructor Date

SME/Instructor Date

SME/Instructor Date

SIMULATOR SETUP INSTUCTIONS

- **RESET simulator to IC-252 and VERIFY the below events on the Instructor Station**.
- Salem Unit 2 is shutdown.
- 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.

MALF ID #	Description	Delay Time	Initial Value	Ramp Time	Trigger	Severity
01	RC0002 RCS Leak in Containment					350
02	VL0016 22SJ54 Fails to Position					0
03	VL0016 21SJ54 Fails to Position					0
04	VL0016 23SJ54 Fails to Position					0
05	VL0016 24SJ54 Fails to Position					0
06	PR0019D PZR Spray valve 2PS3 Fails Closed					True
07	VL0298 2PR2 Fails to position					0.00

Place a Bezel Cover over 2PR1, to indicate isolated status

SPECIAL INSTRUCTIONS

1. Marked up copy of 2-EOP-LOCA-2 on center console, complete thru step 19

INITIAL CONDITIONS

- The reactor was tripped when a RCS leak occurred.
- All RCPs have been stopped
- 2PR1 is inoperable with 2PR6 isolated with power removed
- The operating crew has progressed through the EOP's and is now in 2-EOP-LOCA-2, POST LOCA COOLDOWN AND DEPRESSURIZATION

INITIATING CUE

- You are the Reactor Operator.
- The CRS directs you to depressurize the RCS to minimize subcooling IAW Step 20 of 2-EOP-LOCA-2, POST LOCA COOLDOWN AND DEPRESSURIZATION
- Notify the CRS when Step 20 is completed.
- Your evaluator will take care of all alarms not related to your task.

TASK STANDARD:

The task is satisfactorily met when the applicant has depressurized RCS using Auxiliary spray IAW step 20 of 2-EOP-LOCA-2

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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.

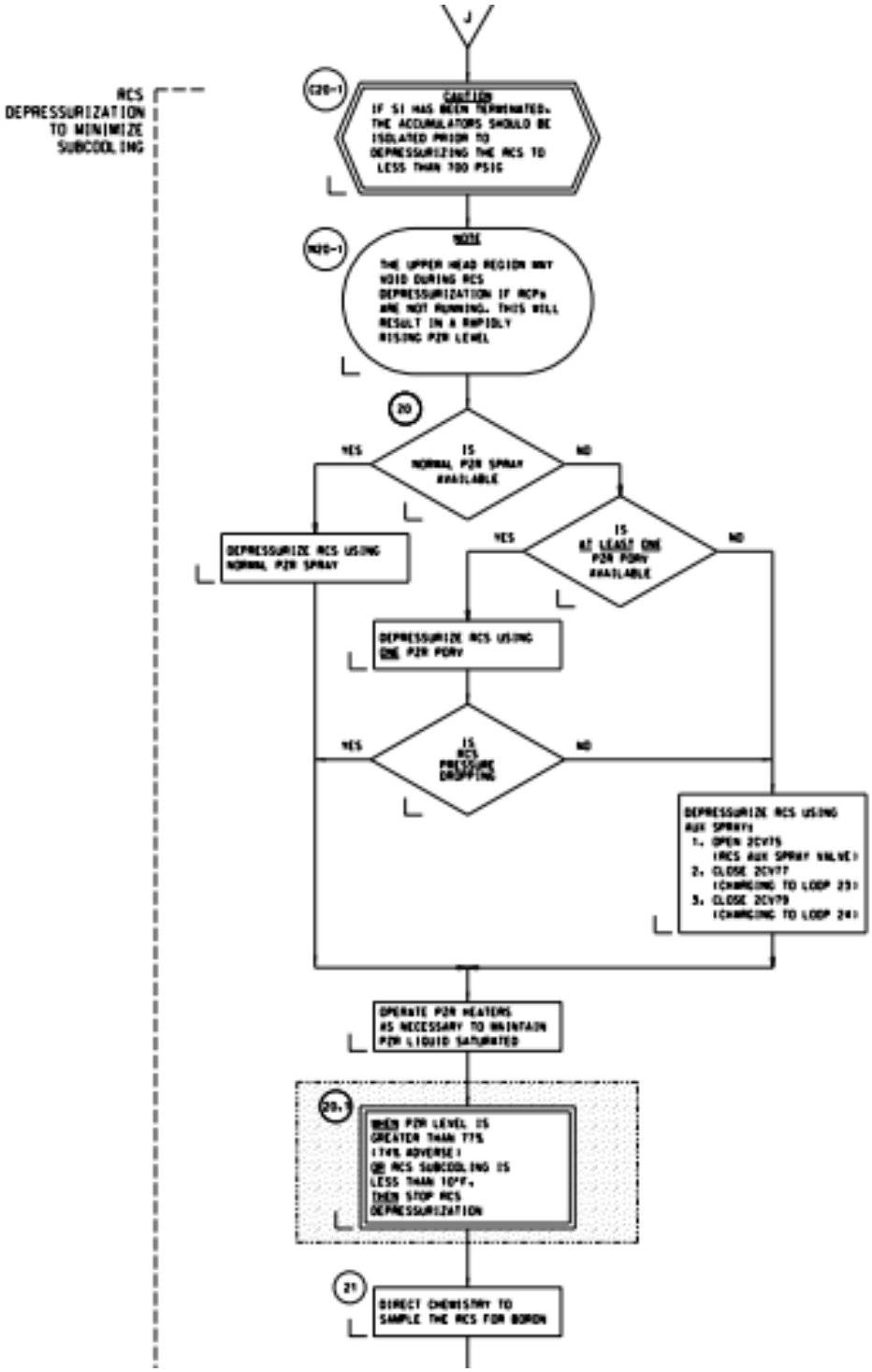
The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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.

ANSWER KEY (if required):

Flowchart portion below



RECORD JPM Start Time:_____

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
N/A		**RECORD** the JPM Start Time when the operator acknowledges READY TO START JPM.		N/A
Cue: Provide candidate MARKED UP sheet of 2-EOP-LOCA-2. Examiners Note: Comments:				
C20-1		CAUTION IF SI HAS BEEN TERMINATED, THE ACCUMULATORS SHOULD BE ISOLATED PRIOR TO DEPRESSURIZING THE RCS TO LESS THAN 700 PSIG	Verifies 21-24SJ54s closed	
Cue: Examiners Note: The 21-24 SJ54s are closed Comments:				
N20-1		NOTE THE UPPER HEAD REGION MAY VOID DURING RCS DEPRESSURIZATION IF RCPs ARE NOT RUNNING THIS WILL RESULT IN A RAPIDLY RISING PZR LEVEL.	Acknowledge the Note	
Cue: Examiners Note: The 21-24 SJ54s are closed Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
20		IS NORMAL PZR SPRAY AVAILABLE	NO.	
Cue: Examiners Note: With no RCPs running, normal spray is not available <u>Comments:</u>				
20 CONT'D	*	IS AT LEAST ONE PZR PORV AVAILABLE	YES.	
Cue: Examiners Note: <u>Comments:</u>				
20 CONT'D	*	DEPRESSURIZE RCS USING <u>ONE</u> PZR PORV	Operator Opens the 2PR2 to attempt to depressurize the RCS but it will not open. 2PR1 remains isolated and unavailable.	
Cue: Examiners Note: <u>Comments:</u>				
ALTERNATE PATH STARTS HERE				
20 CONT'D	*	IS RCS PRESSURE DROPPING	NO.	
Cue: Examiners Note: Operator observes valve not repositioning. May attempt to depress the OPEN PB again. <u>Comments:</u>				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
20 CONT'D	*	DEPRESSURIZE RCS USING AUX SPRAY: 1. OPEN 2CV75 (RCS AUX SPRAY VALVE) 2. CLOSE 2CV77 (CHARGING TO LOOP 23) 3. CLOSE 2CV79 (CHARGING TO LOOP 24)	Operator opens 2CV75 and closes 2CV77 and 79. Operator monitors RCS pressure and verifies pressure is lowering.	
Cue : Examiners Note: Comments:				
20 CONT'D		OPERATE PZR HEATERS AS NECESSARY TO MAINTAIN PZR LIQUID SATURATED	Operator will check PZR temperature and determine if pressurizer heaters are required to be energized	
Cue : When the operator checks that RCS pressure is lowering, and determines whether or not heaters need to be energized then, provide the following cue: • RCS subcooling is now 9°F and lowering. Examiners Note: Comments:				
20.1	*	WHEN PZR LEVEL IS GREATER THAN 77% (74% ADVERSE) OR RCS SUBCOOLING LESS THAN 10°F THEN STOP RCS DEPRESSURIZATION	Operator should realign aux spray to normal as follows: Operator closes 2CV75 and opens 2CV77 or 79.	
Cue: Examiners Note: Comments:				
Terminating Cue		**JPM COMPLETE**		

RECORD JPM Stop Time: _____

Operator's Name: _____ **Job Title:** RO _____ SRO _____

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

Task Title: Depressurize RCS using Aux spray IAW EOP-LOCA-2

Task No.: N1150090501 **Source:**

System: 010 PZR PCS Pressurizer Pressure Control System Bank _____ New X Mod _____

K/A Number / Description: A4.05 Ability to manually operate and/or monitor in the control room: PZR Auxiliary Spray Valves

K/A Rating RO 3.2 SRO N/A

Task Applicability: SRO Only _____ RO/SRO X AO/RO/SRO _____ Other _____

Time-Critical: Yes _____ No X **Alternate Path:** Yes X No _____

Estimated Time to Complete: **5** Minutes **Actual Time Used:** Minutes

Method of Testing: Simulated Performance _____ Actual Performance X

Location: Classroom _____ Simulator X In-Plant _____ RCA _____

Required Materials: 2-EOP-LOCA-2

Reference(s): 2-EOP-LOCA-2

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

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