PSEG Nuclear LLC

Job Performance Measure

PERFORM A RADIOACTIVE WASTE GAS RELEASE

JPM Number: 21-01 NRC IP-k

Revision Number: 0

Date: 07/26/2022

Developed By:	**R. Chan** **Instructor**	**Date:**	7/26/22
Validated By:	**Shetrone/Militti/Westlake** **SME or Instructor**	**Date:**	8/18/22
Reviewed By:	**Winkelspecht** **Operations Representative**	**Date:**	11/29/22
Approved By:	**Wadusky** **Training Department (Print/Sign)**	**Date:**	11/29/22

REVISION RECORD (Summary)

Revision Number	Date	Reason
00	7/26/22	Converted to new JPM template.

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.

RC 1. Task description and number, JPM description and number are identified.

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

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

RC 4. Initial setup conditions are identified.

RC 5. Initiating and terminating cues are properly identified.

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

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

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

Procedure(s) S2.OP-SO.WG-0008 Rev. 27 Date Checked: 1/05/23

RC 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.

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

K. Hantho	10/14/22
SME/Instructor	Date
SME/Instructor	Date
SME/Instructor	Date

SIMULATOR SETUP INSTUCTIONS

1. None, this is an In-plant JPM.

SPECIAL INSTRUCTIONS

1. Marked up copies of S2.OP-SO.WG-0008.
2. SPDS screenshot of MET DATA
3. This JPM is located at the 64 ft. Elev. Unit 2 Auxiliary Building (**RCA entry required**).

INITIAL CONDITIONS

- Both Salem Units are operating at 100% power
- 21 Waste Gas Decay Tank is in Standby at 90 psig
- 22 Waste Gas Decay Tank is in Holdup at 15 psig
- 23 Waste Gas Decay Tank is O/S at 15 psig
- 24 Waste Gas Decay Tank is O/S at 15 psig
- 2R41 Plant Vent radiation monitor is OPERABLE
- Plant vent flow rate and sample flow rate monitors are OPERABLE

INITIATING CUE

The CRS directs you to RELEASE 21 Waste Gas Decay Tank starting at Step 5.2.11 of S2.OP-SO.WG-0008, 21 Gas Decay Tank to Plant Vent.

- Sections 5.1 and Steps 5.2.1 through 5.2.10 are complete.

TASK STANDARD:

The task is satisfactorily met when the applicant has aligned the release path from 21 Waste Gas Decay Tank (WGDT) IAW step 5.2.11 of S2.OP-SO.WG-0008, released the radioactive gas from 21 WGDT IAW step 5.2.12 of S2.OP-SO.WG-0008, and upon REACHING 10 PSIG, terminates the release by locally closing the 2WG41 IAW step 5.2.14 of S2.OP-SO.WG-0008.

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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		**RECORD** the JPM Start Time when the operator acknowledges READY TO START JPM.		N/A
Cue #1: Provide candidate MARKED UP copy of S2.OP-SO.WG-0008. **Cue #2**: **READ TO APPLICANT:** No plant controls or equipment are to be operated during the performance of this JPM. All actions taken by the examinee should be clearly demonstrated and verbalized to the evaluator. **Examiners Note**: The candidate may wish to review all P&Ls prior to start. Comments: N/A				
5.2.11		**PERFORM** the following preparations at Panel 104-2 for the GDT release:		
Cue: None. **Examiners Note**: 104-2 Panel is located at the 64 ft. Elev. inside the Auxiliary Building (RCA entry required). Comments:				
5.2.11.A		**ENSURE** 21 GDT is NOT in service		
Cue: 21 GDT is NOT in service. Examiners Note: None Comments:				
5.2.11.B		**ENSURE** 21 GDT is NOT selected for "Standby".		
Cue: 21 GDT is NOT selected for STANDBY. Examiners Note: None Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.11.C		**RECORD** 21 GDT "Initial Pressure" (PIS1036) on Attachment 3.		
Cue: 21 GDT pressure **(**PIS1036) indicates **<u>90 psig</u>**. Examiners Note: None <u>Comments:</u>				
5.2.11.D		**LATCH** <u>AND</u> **SET** 2WG41, GDT VENT CONT VALVE, as follows:		
Cue: None Examiners Note: None <u>Comments:</u>				
5.2.11.D.1	*	**TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counterclockwise until indicator <0%.	Operator simulates turning the Waste Gas Vent Valve Flow Bias knob fully COUNTER-CLOCKWISE until indicator is less than 0%.	
Cue: 2WG41 flow bias is less than 0% Examiners Note: None <u>Comments:</u>				
5.2.11.D.2	*	**POSITION** Selector Switch to OPEN <u>AND</u> **RELEASE** to AUTO position (spring return to AUTO).	Operator simulates positioning the selector switch to the OPEN position and then RELEASE to AUTO position.	
Cue: Selector switch move to the OPEN position <u>and</u> now is released back to the AUTO position. Examiners Note: 2WG41-SWT is the selector switch "2WG41 local control switch" at 104-2 panel <u>Comments:</u>				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.11.D.3	*	**TURN** 2WG41 Waste Gas Vent Valve Flow Bias clockwise until indicator ≥100%.	Operator simulates turning 2WG41 flow bias CLOCKWISE until indicator reads ≥ 100%	
Cue: 2WG41 flow bias indicates 100%. Examiners Note: None. Comments:				
N/A		**NOTE** 2WG41 will not immediately open.		N/A
Cue: None **Examiners Note**: The 2WG41 will NOT go full open until the flow bias is adjusted to 100%. Comments:				
5.2.11.D.4		**ENSURE** with Unit 2 Control Room that 2WG41 valve has lost the CLOSED indication AND audible alarm received	Operator calls Control Room to verify 2WG41 has lost the closed indication and audible alarm received.	
Cue: Control Room reports they've lost 2WG41 CLOSED indication and audible alarm was received. Examiners Note: None Comments:				
5.2.11.D.5	*	**TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counterclockwise until indicator <0%.	Operator simulates turning 2WG41 flow bias COUNTER-CLOCKWISE until indicator reads < 0%.	
Cue: 2WG41 flow bias reads less than 0%. Examiners Note: None Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.11.D.6		**ENSURE** with Unit 2 Control Room that 2WG41 has closed indication	Operator calls Control Room to verify 2WG41 has closed indication.	
Cue: Control Room reports that 2WG41 has CLOSED indication Examiners Note: None. Comments:				
5.2.11.D.7	*	**POSITION** 2WG41 Selector Switch to CLOSE.	Operator simulates positioning 2WG41 selector switch to CLOSE.	
Cue: 2WG41 selector switch is in the CLOSED position. Examiners Note: None. Comments:				
5.2.11.E		**PERFORM** an Independent Verification of the 2WG41 Waste Gas Vent Valve Flow Bias position, AND **RECORD** the Independent Verification on Attachment 1, Section 2.0.	Operator request another operator perform IV of the 2WG41 Waste Gas Vent Valve Flow Bias position.	
Cue: IV completed SAT. Examiners Note: None. Comments:				
5.2.11.F	*	**OPEN** 21WG31, GDT INLET VALVE	Operator simulates rotating valve COUNTER-CLOCKWISE to open 21WG31.	
Cue: 21WG31 is Open and Tag is released. Examiners Note: None. Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
		NOTE While 2WG41 is opening, pressure downstream of 2WG38 will fluctuate between "0" psig and "10" psig until 2WG41 is fully open (100%). Once 2WG41 is fully open, 2WG38 will throttle to maintain <8 psig during the release.		
5.2.11.G	*	Slowly **OPEN** 21WG34	Operator simulates slowly rotating COUNTER-CLOCKWISE to open 21WG34	
Cue: 21WG34 is Open. Examiners Note: None. <u>Comments:</u>				
5.2.11.H		**RECORD** Independent Verification (IV) of 21 GDT discharge valves 21WG31 and 21WG34 on Attachment 1, Section 3.0, prior to commencing 21 GDT release	Operator request IV of 21 GDT discharge valve 21WG31 and 21WG34.	
Cue: IVs completed SAT. Examiners Note: None. <u>Comments:</u>				
5.2.12		**COMMENCE** 21 GDT release as follows:		
Cue: None Examiners Note: None. <u>Comments:</u>				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.12.A	*	**POSITION** 2WG41 Selector Switch to OPEN AND **RELEASE** to AUTO position (spring return to AUTO).	Operator simulates rotating the selector switch to the Open position and then release to the Auto position.	
Cue: Selector switch moved to the OPEN position and now is released back to the AUTO position. Examiners Note: None. Comments:				
5.2.12.B	*	SLOWLY **SET** 2WG41 Waste Gas Vent Valve Flow Bias to ≤100% position which corresponds to a maximum release rate of 32 SCFM	Operator simulates adjusting the 2WG41 Waste Gas Vent Valve Flow Bias to ≤100%.	
Cue: 2WG41 flow bias is 100%. Examiners Note: None. Comments:				
5.2.12.C		**PERFORM** an Independent Verification of the positioning of 2WG41 Waste Gas Vent Valve Flow Bias on Attachment 1, Section 4.0.	Operator request IV on 2WG41 flow bias position.	
Cue: IV completed SAT. Examiners Note: None. Comments:				
5.2.12.D		**RECORD** In Progress Release Data on Attachment 2, Section 5.1	Operator records Data on Attachment 2	
Cue: None. Examiners Note: None. Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.13		**PERFORM** the following during 21 GDT release		
Cue: None. Examiners Note: None. Comments:				
5.2.13.A		**CALCULATE** 21 GDT Average Release Rate every 10 minutes on Attachment 3, AND **ADJUST** 2WG41 Waste Gas Vent Valve Flow Bias position as required based on results.	Operator reads step and action required every 10 minutes. No action is required at this time.	
Cue: None. **Examiners Note**: No action is required at this time, every 10 minutes. Comments:				
5.2.13.B		**RECORD** Meteorological Data in Attachment 2, Section 5.2. IF Meteorological Monitor is NOT OPERABLE, THEN **NOTIFY** the SM/CRS (UFSAR 7.7.2.12).	Applicant records the MET Data from the SPDS screenshot	
Cue: **PROVIDE** the following MET DATA screenshot to applicant Examiners Note: None. Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.13.C		IF Plant Vent Flow Rate Monitor is inoperable, THEN **RECORD** Plant Vent Flow Rate Discharge Estimation on Attachment 4 at least once every four hours during GDT release	Applicant records step as N/A since Plant Vent Flow Rate Monitor is Operable.	
Cue: Plant Vent Flow Rate Monitor is OPERABLE. Examiners Note: None. Comments:				
5.2.13.D		IF at any time during the release pressure downstream of 2WG38 is >8.0 psig (2PL8678), OR 2WG41 CLOSES, THEN **TERMINATE** the GDT release as follows: 1. **TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counter-clockwise until indicator is <0%. 2. **PLACE** 2WG41-SWT in CLOSE position, AND **ENSURE** 2WG41 is CLOSED. 3. **CLOSE** 22WG34. 4. **RECORD** Final Release Data in Attachment 2, Section 5.3. 5. **INITIATE** an NOTF to correct the malfunction.	Applicant reads step and continues.	
Cue: None. Examiners Note: None. Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.14		When 21 GDT pressure ≈10 psig OR as directed by SM/CRS, **SECURE** the GDT release:		
Cue: 21 GDT pressure is now **10 psig**. Examiners Note: None. Comments:				
5.2.14.A	*	**TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counter-clockwise until indicator is <0%.	Operator simulates adjusting the Flow Bias fully COUNTER-CLOCKWISE until indicator is <0%.	
Cue: 2WG41 flow bias is now 0%. Examiners Note: None. Comments:				
5.2.14.B	*	**PLACE** 2WG41-SWT in CLOSE position, AND **ENSURE** 2WG41 is CLOSED	Operator simulates placing switch 2WG41-SWT in the CLOSED position and verifies that 2WG41 is CLOSED.	
Cue: Switch 2WG41-SWT is in the CLOSED position and the 2WG41 is now CLOSED. Examiners Note: None. Comments:				
5.2.14.C	*	**CLOSE** 21WG34	Operator simulates closing the 21WG34 by turning the valve in the CLOCKWISE direction.	
Cue: 21WG34 is now CLOSED. Examiners Note: None. Comments:				

STEP	CRITICAL	ELEMENT	STANDARD	GRADE (S/U)
5.2.14.D		**RECORD** Final Release Data in Attachment 2, Section 5.3		
Cue: None. Examiners Note: None. <u>Comments:</u>				
Terminating Cue		**JPM COMPLETE**		

RECORD JPM Stop Time: _____

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

Facility: Salem **JPM No.:** 21-01 NRC IP-k **Revision No.:** 0

Task Title: Perform a Radioactive Waste Gas Release

Task No.: N0715070104 **Source:**

System: 071 Waste Gas Disposal System (SF9) Bank X New ____ Mod ____

K/A Number / Description: A1.03 Ability to predict and/or monitor changes in parameters associated with operation of the Waste Gas Disposal System, including: Holdup tank pressure and level

K/A Rating RO 2.6 SRO N/A

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

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

Estimated Time to Complete: **20** Minutes **Actual Time Used:** Minutes

Method of Testing: Simulated Performance X Actual Performance ____

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

Required Materials: S2.OP-SO.WG-0008

Reference(s): S2.OP-SO.WG-0008

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

- Both Salem Units are operating at 100% power
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- 23 Waste Gas Decay Tank is O/S at 15 psig
- 24 Waste Gas Decay Tank is O/S at 15 psig
- 2R41 Plant Vent radiation monitor is OPERABLE
- Plant vent flow rate and sample flow rate monitors are OPERABLE

INITIATING CUE

The CRS directs you to RELEASE 21 Waste Gas Decay Tank starting at Step 5.2.11 of S2.OP-SO.WG-0008, 21 Gas Decay Tank to Plant Vent.

- Sections 5.1 and Steps 5.2.1 through 5.2.10 are complete.

SIMULATOR
EXAMINATION SCENARIO GUIDE

SCENARIO TITLE: NRC-1 [AB.COND-1, AB.NIS-1, AB.RC-1, TRIP-1, LOCA-1, LOCA-3]

SCENARIO NUMBER: 21-01 NRC ESG-1

EFFECTIVE DATE: See Approval Dates

EXPECTED DURATION: 80 minutes

REVISION NUMBER: 06

PROGRAM:

[ ] **L.O. REQUAL**

[X] **INITIAL LICENSE**

[ ] **STA**

[ ] **OTHER** _____

Revision Summary:

- Rev 05 Incorporated NRC comments following phone call on 10-2-21 to delete SG pressure channel failure and modify RCS leak to 20 gpm to allow observing actions in AB.RC-1 and exercise Tech Specs.
- Rev 6 Modified scenario guide for use in Next ILOT exam 21-01

PREPARED BY:	K. Hantho	9-15-22
	Lead Regulatory Exam Author	**Date**
APPROVED BY:	M. Wadusky	
	Operations Training Manager or designee	**Date**
APPROVED BY:	M. Winkelspecht	
	Facility Representative	**Date**

SCAN OF SIGNED SCENARIO COVER SHEET