OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION:	SALEM
SYSTEM:	Radioactivity Release (SF 9) - Waste Gas Disposal System
TASK:	Conduct an Authorized Waste Gas Release
TASK NUMBER:	N0715070104
JPM NUMBER:	17-01 NRC IP-k
ALTERNATE PATH:	[ ]
K/A NUMBER:	071 A4.26
IMPORTANCE FACTOR:	3.1 (RO) / 3.9 (SRO)
APPLICABILITY:	EO [ ] RO [X] STA [ ] SRO [X]
EVALUATION SETTING/METHOD:	In-Plant / Simulate
REFERENCES:	S2.OP-SO.WG-0009, Rev. 29 (checked 8-23-18)
TOOLS AND EQUIPMENT:	None
VALIDATED JPM COMPLETION TIME:	25 min
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS:	N/A
Developed By:	R. Chan Rudolph Chan, Instructor — **Date:** 12-5-18
Validated By:	Maxey / Thomas (Rev. 0), SME or Instructor — **Date:** 5-22-18
Approved By:	Training Department — **Date:** 12/11/18
Approved By:	Operations Department — **Date:** 12/7/18

ACTUAL JPM COMPLETION TIME:

ACTUAL TIME CRITICAL COMPLETION TIME:

PERFORMED BY:

GRADE: [ ] **SAT** [ ] **UNSAT**

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: **DATE:**

OPERATOR TRAINING PROGRAM
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REVISION HISTORY

JPM NUMBER: **17-01 NRC IP-k**

Rev #	Date	Description	Validation Required
00	4-25-18	Added revision history and simulator setup pages. Editorial comments from IP 71111.11 FASA.	Yes
NA	8-23-18	Previously validated for LOR Annual exam. See 2018 Annual IP-8 for validation documentation.	No
01	12-5-18	Incorporated NRC Prep week comments. Added note to step 5.2.13.A that 10 minutes needs to have elapsed before calculating the first average release rate. This is minor change and re-validation is not required.	No

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SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Conduct an Authorized Waste Gas Release

TASK NUMBER: N0715070104

SIMULATOR IC: **N/A**

MALFUNCTIONS / REMOTES: N/A

OVERRIDES: N/A

SPECIAL INSTRUCTIONS:

- **This JPM is in the RCA.**

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Conduct an Authorized Waste Gas Release

TASK NUMBER: N0715070104

INITIAL CONDITIONS:

- Both Salem Units are operating at 100% power.
- 21 Waste Gas Decay Tank is in Standby at 15 psig
- 22 Waste Gas Decay Tank is in Holdup at 90 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:

- CRS directs you to PERFORM a release of 22 Waste Gas Decay Tank IAW S2.OP-SO.WG-0009, Discharge of 22 Gas Decay Tank to Plant vent, starting at **Step 5.2.11**.
- Section 5.1 and Steps 5.2.1 through 5.2.10 are complete.
- You have the Tag Release for 22WG31.

Successful Completion Criteria:

1. All critical steps completed.
2. All sequential steps completed in order.
3. All time-critical steps completed within allotted time.
4. JPM completed within validated time. Completion time may exceed the validated time if satisfactory progress is being made (and NRC concurrence is obtained).

Task Standard for Successful Completion:

1. **Performs a Radiological Waste Gas release IAW S2.OP-SO.WG-0009.**
2. **Terminates the Waste Gas release as directed by procedure.**

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	CUE:	Evaluator provide operator with marked up copy of S2.OP-SO.WG-0009.			
	CUE:	Fill in the JPM Start Time when the student acknowledges the Initiating Cue. **START TIME:**_____			
	5.2.11	**PERFORM** the following preparations at Panel 104-2 for the GDT release:			
	5.2.11	A. **ENSURE** 22 GDT is NOT in service. B. **ENSURE** 22 GDT is NOT selected for "Standby". C. **RECORD** 22 GDT "Initial Pressure" (PIS2037) on Attachment 3. D. **LATCH** AND **SET** 2WG41, GDT VENT CONT VALVE, as follows:	Operator verifies that 22 WGDT is NOT in service. **CUE**: 22 WGDT is NOT in service Operator verifies 22 GDT is NOT selected for Standby. **CUE**: 22 GDT is NOT selected for Standby. **CUE**: PIS2037 reads **90 psig**.		
	NOTE	2WG41 Controller (2HIC-14) must be set to <0% or 2WG41 will NOT latch.			

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	5.2.11.D	1. **TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counterclockwise until indicator <0%.	**Operator turns 2WG41 flow bias fully counter-clockwise until indicator reads < 0%.** **CUE**: 2WG41 flow bias < 0%		
		2. **POSITION** Selector Switch to OPEN AND **RELEASE** to AUTO position (spring return to AUTO).	**Operator positions selector switch to OPEN and RELEASE to AUTO position.** **CUE**: Selector switch released back to the AUTO position.		
		3. **TURN** 2WG41 Waste Gas Vent Valve Flow Bias clockwise until indicator ≥100%.	**Operator turns 2WG41 flow bias clockwise until indicator reads ≥ 100%** **CUE**: 2WG41 flow bias reads 100%		
	NOTE	2WG41 will not immediately open.	**Evaluator's Note**: The 2WG41 will not go full open until the flow bias is adjusted to 100%.		

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	5.2.11.D Contd.	4. **ENSURE** with Unit 2 Control Room that 2WG41 valve has lost the CLOSED indication AND audible alarm received. 5. **TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counterclockwise until indicator <0%. 6. **ENSURE** with Unit 2 Control Room that 2WG41 has closed indication. 7. **POSITION** 2WG41 Selector Switch to CLOSE.	**CUE**: Control Room reports they have lost 2WG41 CLOSED indication and audible alarm received. Operator turns 2WG41 flow bias counter-clockwise until indicator reads < 0%. **CUE**: 2WG41 flow bias reads < 0% **CUE**: Control Room reports that 2WG41 has CLOSED indication Operator positions 2WG41 selector switch to CLOSE. **CUE**: 2WG41 selector switch is in CLOSED position.		
	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.	**CUE**: IV completed SAT		
*	5.2.11.F	**OPEN** 22WG31, GDT INLET VALVE	**Operator rotates valve counter-clockwise to open 22WG31.** **CUE**: 22WG31 is Open		
*	5.2.11.G	Slowly **OPEN** 22WG34	**Operator slowly rotates counter-clockwise to open 22WG34** **CUE**: 22WG34 is Open		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	5.2.11.H	**RECORD** Independent Verification (IV) of 22 GDT discharge valves 22WG31 and 22WG34 on Attachment 1, Section 3.0, prior to commencing 22 GDT release	**CUE:** IVs completed SAT		
*	5.2.12	**COMMENCE** 22 GDT release as follows: ___ A. **POSITION** 2WG41 Selector Switch to OPEN AND **RELEASE** to AUTO position (spring return to AUTO). ___ B. SLOWLY **SET** 2WG41 Waste Gas Vent Valve Flow Bias to ≤100% position which corresponds to a maximum release rate of 32 SCFM. ___ C. **PERFORM** an Independent Verification of the positioning of 2WG41 Waste Gas Vent Valve Flow Bias on Attachment 1, Section 4.0. ___ D. **RECORD** In Progress Release Data on Attachment 2, Section 5.1.	**Operator positions 2WG41 selector switch to OPEN and RELEASE to AUTO position (spring return to Auto).** **CUE:** Selector switch released back to the AUTO position. **Operator slowly sets 2WG41 flow bias to ≤ 100% position.** **CUE**: flow bias is set to 100% Operator requests IV on 2WG41 flow bias position. **CUE**: IV completed SAT Operator records release data on Attachment 2, Section 5.1 **CUE**: 2WG38 pressure on 2PL8678 reads **7.8 psig** and IV completed SAT.		
	5.2.13	**PERFORM** the following during 22 GDT release			

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	NOTE	An operator should be stationed at Panel 104-2 to immediately close 22WG34 upon receipt of a High Radiation Alarm or indication of 2WG41 closure.	**CUE:** An Operator is stationed at the 104 Panel ready to close 22WG34.		
	5.2.13.A	**CALCULATE** 22 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 determines no action at this time until 10 minutes has elapsed. Operator continues on. **Evaluator's Note**: No operator action at this time until 10 mins has elapsed since the release started.		
	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).	**CUE**: Provide the following MET Data when requested: Wind Speed **5.8 MPH** at EL **33 FT** Wind Direction **290 °**at EL **33 FT** ΔT (**33 FT** – 33 FT) = **0 °C**		
	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	**CUE**: IF asked, 2R41 is Operable		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	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.	Operator reads step, marks N/A and continues on. **CUE:** IF asked about conditions downstream of 2WG38, THEN state none of these conditions are present.		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Radioactivity Release (SF 9) - Waste Gas Disposal System

TASK: Place a Waste Gas Tank in Holdup

*	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	5.2.14	When 22 GDT pressure ≈10 psig OR as directed by SM/CRS, **SECURE** the GDT release: ___ A. **TURN** 2WG41 Waste Gas Vent Valve Flow Bias fully counter-clockwise until indicator is <0%. ___ B. **PLACE** 2WG41-SWT in CLOSE position, AND **ENSURE** 2WG41 is CLOSED. ___ C. **CLOSE** 22WG34. ___ D. **RECORD** Final Release Data in Attachment 2, Section 5.3	**CUE:** 22 WGDT pressure is now **10 psig**. **Operator turns 2WG41 fully counter-clockwise until indicator is ≤ 0%.** **CUE:** Indicator reads 0% **Operator places 2WG41-SWT to the closed position.** **CUE**: 2WG41 is CLOSED **Operator closes 22WG34** **CUE**: 22WG34 is CLOSED **CUE: JPM is Complete**		
	CUE:	WHEN operator informs you the task is complete, OR the JPM has been terminated for other reasons, THEN **RECORD** the STOP TIME. **STOP TIME**:_____	**Terminate JPM once 22WG34 is closed.**		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

JPM#: 17-01 NRC IP-k

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.

R 12-5-18

NA 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, or simulator)

____ 4. Initial setup conditions are identified.

____ 5. Initiating and terminating Cues are properly identified.

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

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

____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure: Procedure Rev. _____ Date _____

____ 9. Pilot test the JPM:
a. verify Cues both verbal and visual are free of conflict, and
b. ensure performance time is accurate.

____ 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.

SME/Instructor: NA R 12-5-18 Date: _____

SME/Instructor: _____ Date: _____

SME/Instructor: _____ Date: _____

INITIAL CONDITIONS:

- Both Salem Units are operating at 100% power.
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INITIATING CUE:

- CRS directs you to PERFORM a release of 22 Waste Gas Decay Tank IAW S2.OP-SO.WG-0009, Discharge of 22 Gas Decay Tank to Plant vent, starting at **Step 5.2.11**.
- Section 5.1 and Steps 5.2.1 through 5.2.10 are complete.
- You have the Tag Release for 22WG31.

SALEM

17-01 NRC EXAM

SCENARIO GUIDES