OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM

SYSTEM: Secondary System

TASK: Perform RCS Cooldown using MS10s IAW EOP-SGTR-1

TASK NUMBER: N1150190501

JPM NUMBER: 19-01 NRC Sim-g

ALTERNATE PATH: [ ]

K/A NUMBER: 039 A4.07

IMPORTANCE FACTOR: 2.8* (RO) 2.9 (SRO)

APPLICABILITY:
EO [ ] **RO** [X] **STA** [ ] **SRO** [X]

EVALUATION SETTING/METHOD: Simulator / Perform

REFERENCES: 2-EOP-SGTR-1, Rev. 32 (checked 1-13-20)

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 5 min

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

Developed By: **R. Chan** **Date: 1-13-20**
Instructor

Validated By: **Moore / Klein** **Date: 1-13-20**
SME or Instructor

Approved By: **N/A** **Date:**
Training Department

Approved By: **N/A** **Date:**
Operations Department

ACTUAL JPM COMPLETION TIME:

ACTUAL TIME CRITICAL COMPLETION TIME:

PERFORMED BY: _____

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

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: **DATE:**

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE
REVISION HISTORY

JPM NUMBER: 19-01 NRC Sim-g

Rev #	Date	Description	Validation Required
00	9-18-19	039 K/A A4.03: Ability to manually operate and/or monitor in the control room: Steam dump valves	Yes

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JOB PERFORMANCE MEASURE

SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Secondary System

TASK: Perform RCS Cooldown using MS10s IAW EOP-SGTR-1

TASK NUMBER: N1150190501

SIMULATOR IC: IC-206

MALFUNCTIONS:

1. Reset the simulator to the above IC #.
2. Verify the following events on the Summary/ET Trigger Lists:

MALF ID #	Description	Delay Time	Initial Value	Ramp Time	Trigger	Severity
01	SG0078D, 24 SG Tube Rupture	N/A	N/A	N/A	N/A	650
02	MS0093 Loss of S/D Vac Permissive					TRUE

3. This malfunction will simulate a steam generator tube rupture on 24 SG. The JPM will require the operator to perform RCS cooldown using MS10s on intact SGs IAW Step 10 of EOP-SGTR-1.

OVERRIDES / REMOTES:

ID #	Description	Delay Time	Initial Value	Ramp Time	Trigger	Condition/ Severity
01						

EVENT TRIGGERS:

ET#	Description	Command
1		
2		
3		
4		

SPECIAL INSTRUCTIONS:

- None.

NAME: _____

DATE: _____

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TASK NUMBER: N1150190501

INITIAL CONDITIONS:

- The Unit 2 Reactor was manually tripped and Safety Injection was actuated due to a verified Steam Generator Tube Rupture on 24 Steam Generator.
- All required actions in EOP-TRIP-1 are complete.
- The crew is currently implementing EOP-SGTR-1, Steam Generator Tube Rupture, and all steps up to Step 9 are complete.
- Steam Dump Permissive light on 2RP4 is NOT illuminated due to an instrumentation failure. Steam Dumps are NOT available.

INITIATING CUE:

- You are the Plant Operator.
- The CRS DIRECTS you to **PERFORM** an RCS Cooldown starting at Step 10 of 2-EOP-SGTR-1.

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. Correctly implements the steps of EOP-SGTR-1 to cooldown the RCS using MS10s to the required temperature of 503 F.

OPERATIONS TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Secondary System

TASK: Perform RCS Cooldown using MS10s IAW EOP-SGTR-1

* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	CUE:	Fill in the JPM Start Time when the student acknowledges the Initiating Cue. **START TIME**:_____			
		2-EOP-SGTR-1 Sheet 2, STEP 10			
*	10	DETERMINE REQUIRED RCS TEMP USING TABLE B	**Operator uses Table B and determines required RCS temperature based on current ruptured 24 SG pressure (approx. 1045 psi) is <u>503 F</u>.**		
	10.1	IS INTACT SG AVAILABLE FOR COOLDOWN	Yes, Operator determines 3 intact SGs are available for cooldown.		
	10.2	ARE CONDENSER STEAM DUMPS AVAILABLE	NO, Operator determines steam dumps are NOT available.		
*		DUMP STEAM AT MAXIMUM RATE USING INTACT SG MS10s.	**Operator LOWERs setpoint on all <u>intact</u> SGs until each MS10 is fully open.**		

NAME: _____

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* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	10.5	IS HOTTEST CET LESS THAN RCS COOLDOWN TEMP	No.		
	10.8	WHEN HOTTEST CET LESS THAN REQUIRED RCS COOLDOWN TEMP THEN DO STEPS 10.6 AND 10.7	**CUE**: **The crew will continue on with SGTR-1, CRS directs you to monitor the RCS cooldown**. Operator WAITs until required CET temperature is reached. **Examiner's Note**: It will take approx. **6-8 minutes** to reach target CET temperature. **Examiners Note**: The operator may adjust AFW flows to intact SGs prior to or during the cooldown as necessary. **Optional CUE**: At Lead Examiner's discretion, the following cue may be used: ***hottest CETs are now indicating less than your target temperature***.		

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* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	10.6	STOP COOLDOWN	**Operator adjust each intact SG MS10 setpoint to match current SG pressure.** **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 when operator completes Step 10.6.**		

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 Rev. __32___ Date ____1-13-20_____

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

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

N/A 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor: R. Chan Date: 1-13-20

SME/Instructor: R. Moore Date: 1-13-20

SME/Instructor: J. Klein Date: 1-13-20

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