OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM

SYSTEM: Main Turbine Generator System

TASK: Perform immediate actions for a loss of a SGFP IAW S2.OP-AB.CN-0001

TASK NUMBER: N1140100401

JPM NUMBER: 20-01 NRC Sim-e

ALTERNATE PATH: [X] **K/A NUMBER:** 059 A4.01

IMPORTANCE FACTOR: 3.1 (RO) 3.1 (SRO)

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

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-AB.CN-0001, Rev. 31, S2.OP-SO.TRB-0001 (checked 1-3-22)

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 5 min

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

Developed By:	**R. Chan** **Instructor**	**Date: 1-3-22**
Validated By:	**Pompper / Protesto** **SME or Instructor**	**Date: 1-10-22**
Approved By:	**M. Wadusky (signature on file)** **Training Department**	**Date: 2-10-22**
Approved By:	**W. Hargrave** **Operations Department**	**Date: 1-10-22**

ACTUAL JPM COMPLETION TIME:

ACTUAL TIME CRITICAL COMPLETION TIME:

PERFORMED BY: _____

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

REASON, IF UNSATISFACTORY:

DATE:

EVALUATOR'S SIGNATURE:

REVISION HISTORY

JPM NUMBER: 20-01 NRC Sim-e

Rev #	Date	Description	Validation Required
00	5-30-17	Added revision history and simulator setup pages. Editorial comments from IP 71111.11 FASA.	No
01	5-18-21	Revised to update IC Change SGFP that trips and validate Procedure revision	Yes
02	1-3-22	Revised JPM to have the operator perform actions at the DEHC panel to manually setup for a 15%/min runback to 66%.	Yes

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Rod Control System

TASK: Perform immediate actions for a loss of a SGFP IAW S2.OP-AB.CN-0001

TASK NUMBER: N1140100401

SIMULATOR IC: IC-259

MALFUNCTIONS:

1. Reset the simulator to IC above.
2. Verify the following on the summary/ET trigger lists:

MALF ID #	Description	Delay Time	Initial Value	Ramp Time	Trigger	Severity
01	BF0105A, 21 SGFP Trip	N/A	N/A	N/A	N/A	TRUE
02	EH0327, Turbine fails to run back on SGFP trip	N/A	N/A	N/A	N/A	TRUE
03	RD0057, All rods fail to move(Auto/Man)	N/A	N/A	N/A	N/A	TRUE

OVERRIDES/ REMOTES: None

ID #	Description	Delay Time	Initial Value	Ramp Time	Trigger	Condition/ Severity
01	REMF ANCGA555 CGAOVRD Rod-Urgent Failure alarm	N/A	N/A	N/A	N/A	OFF
02	OVRD OHA-E-40 ZLOANN_E40 E40 Rod Bank Urgent Failure	N/A	N/A	N/A	ET-1	OFF
03	OVRD B434CDI KB434HSD Rod Bank-Alarm Reset	N/A	N/A	N/A	N/A	ON

EVENT TRIGGERS: None

ET#	Description	Command
1	KB433WAD//Rod Bank Selector SW Manual	DMF RD0057

SPECIAL INSTRUCTIONS:

1. **Marked up S2.OP-SO.TRB-0001 Attachment 5 (HARCARD) up to step 4 (just circle).**
2. **Turn off ALL P-250 monitors in the horseshoe**. **Not required to perform JPM successfully**.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Rod Control System

TASK: Perform immediate actions for a loss of a SGFP IAW S2.OP-AB.CN-0001

TASK NUMBER: N1140100401

INITIAL CONDITIONS:

- Unit 2 power ascension is in progress to 90% at 10% per hour.
- S2.OP-SO.TRB-0001 Attachment 5 is in progress up to step 4.

INITIATING CUE:

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

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. Initiates a manual Main Turbine load reduction at 15%/min to 66% and inserts control rods in MANUAL due to failure of the rods to insert in AUTO.

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Rod Control System

TASK: Perform immediate actions for a loss of a SGFP IAW S2.OP-AB.CN-0001

* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential 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**:_____			
		Simulator Operator: Insert **RT-1** on direction from Lead Evaluator. - SGFP Trip - Main Turbine Fails to runback when demanded. - Rods fail to move in Auto			
	2.3	2.2 **IF** Turbine Power is ≥ 70% (P_{TIP} ≥526 psia) **AND** loss of a single SGFP has occurred, **THEN:** 2.3.1 **PERFORM** one of the following at the TURBINE E-H CONTROL & STATUS "touch screen" monitor – OPERATIONS screen:	Acknowledges alarms and indications of SGFP trip. Performs the Immediate Actions of S2.OP-AB.CN-0001, Main Feedwater / Condensate System Abnormality as below:		

OPERATOR TRAINING PROGRAM

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DATE: _____

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* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	2.3.1.A	A. **VERIFY** Automatic Turbine Runback has or is occurring as indicated: • SGFP RUNBACK OPERATE (red) • GENERATOR LOAD trending to ~775 MW • TURBINE INLET PRESSURE trending to $\leq$ 491 psia OR	Identifies that an AUTO MT runback has NOT occurred.		

OPERATOR TRAINING PROGRAM

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* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	2.3.1.B	B. **INITIATE** Main Turbine load reduction until <u>≤</u>66% Turbine Power (P_{TIP} ~491 psia) <u>OR</u> SGFP suction pressure >320 psig is achieved. 1. <u>IF RAMP RATES</u> ARE NOT PRESET…. 2. **SELECT** <u>SETTER</u> - GO	**Identifies ramp rates are NOT pre-set for a SGFP runback. As found is 90% at 10%/HR.** **Operator depresses the MIN/HR TOGGLE to select ramp rate from %/HR to <u>%/MIN</u> and then adjusts ramp rate to <u>15</u>.** **Operator then adjusts the SETTER to <u>66</u> and THEN selects GO.**		

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DATE: _____

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TASK: Perform immediate actions for a loss of a SGFP IAW S2.OP-AB.CN-0001

* #	STEP No.	STEP (Shaded area denotes Critical Step) (* Critical Step) (# Sequential Critical Step)	STANDARD (Bolded area identifies Task Standard)	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	2.3.2	**CONTROL** T_{AVG} by one of the following: A. **ENSURE** ROD BANK SELECTOR SWITCH in AUTO, OR B. **INSERT** control rods to restore T_{AVG} to T_{REF} (Refer to Attachment 2, Section 3.0)	**Initially ensures Rod Control is in AUTO.** As the RCS heats up during the downpower identifies rods not inserting when demanded due to Terr. **Places Rod Bank Selector Switch to MANUAL and inserts rods** **CUE:** CRS has assigned another operator to commence Boration.		
	CUE:	WHEN operator informs you the task is complete, OR the JPM has been terminated for other reasons, THEN **RECORD** the STOP TIME. **REPEAT BACK** any message from the operator on the status of the JPM, and then state "**This JPM is complete**". **STOP TIME**:_____	**Terminate JPM once Main Turbine load reduction has been initiated and control rod insertion initiated,**		

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

JPM#:__20-01 NRC Sim-e

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. _31_ Date __1-3-22___

____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.

___RC__ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor:	R. Chan	Date:	1-10-22
SME/Instructor:	M. Protesto	Date:	1-10-22
SME/Instructor:		Date:	

INITIAL CONDITIONS:

- Unit 2 power ascension is in progress to 90% at 10% per hour.
- S2.OP-SO.TRB-0001 Attachment 5 is in progress up to step 4.

INITIATING CUE:

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