STATION:	OPERATOR TRAINI JOB PERFORMAN SALEM	NG PROGRAM CE MEASURE	
SYSTEM:	Rod Control (001)		
TASK:	Respond to a dropped	rod with the react	tor critical <poah< th=""></poah<>
TASK NUMBER:	1140330401		
JPM NUMBER:	2002 NRC COMMON	S1	
ALTERNATE PAT		K/A NUMBER: ANCE FACTOR	APE 003 AA1.03
APPLICABILITY:	RO X STA	SRO X	RO SRO
EVALUATION SE	TTING/METHOD: Simulat	or/Perform	
REFERENCES:	S2.OP-IO.ZZ-0003, Rev. 1 S2.OP-AB.ROD-0002, Rev	6 . 5	
TOOLS AND EQU	IPMENT:		
VALIDATED JPM	COMPLETION TIME: 13	Minutes	
TIME PERIOD IDE	NTIFIED FOR TIME CRITIC	AL STEPS: N	/Α
APPROVAL:	1		AN G. A.A.A.
ED	Janeis	1. Karth _	M Maller
	GUNII FIRAININGS TATIVE or de	signee	or designee
CAUTION: N JI 1. 2. 3.) o plant equipment shall be PM without the following: Permission from the OS Direct oversight by a qua individual granting perm Verification of the "as le	operated during or Unit CRS; alified individual ission based on ft" condition by a	g the performance of a (determined by the plant conditions). a qualified individual.
ACTUAL JPM CO	MPLETION TIME:	Minutes	
ACTUAL TIME CR	ITICAL COMPLETION:	Minutes	
JPM PERFORMED) BY:	GRADE:	SAT UNSAT
REASON, IF UNSA	ATISFACTORY:		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	

DATE:	

SYSTEM: Rod Control (001)

TASK: Respond to a dropped rod with the reactor critical <POAH.

TASK NUMBER: 1140330401

INITIAL CONDITIONS:

The reactor is critical below P-6.

SIMULATOR SETUP:

- 1. IC Reactor critical, near but below P-6. (IC 182)
- 2. MALF Drop any single control bank rod shortly after the manual block of the Source Range NIS.
- 3. Mark up a copy of S2.OP-IO.ZZ-0003. Cross out all Precautions and Limitations that do NOT apply directly to the JPM task.

INITIATING CUE:

You have been assigned to complete a startup in accordance with S2.OP-IO.ZZ-0003. Assume all INITIAL CONDITIONS have been met and a proper watch relief has occurred. For the sake of expediting the JPM, only those PRECAUTIONS AND LIMITATIONS applying to the task-at-hand will be reviewed. Beginning at step 5.3.17 (CONTINUE with reactor power ascension), continue the startup and level off at 10E-8 amps at step 5.3.20.

- 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.

NC.TQ	-WB.Z	Z-0310(Z)
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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: ROD Control (001)

TASK: Respond to a dropped rod with the reactor critical <POAH

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	1	START TIME:	Provide a marked up copy of S2.OP-IO.ZZ-0003.		
			NOTE: Category I procedure use requirements apply.		
*	5.3.17	CONTINUE with reactor power ascension, with positive stable SUR not to exceed 1.0 DPM, by adjusting Control Bank D as needed.	Withdraws Bank D rods to establish a SUR < 1.0 DPM.		
	5.3.18	OBSERVE source range and intermediate range levels on NIS for one decade overlap during performance of next step.	Monitors all channels of SR/IR NIS.		
*	5.3.19	When P-6 (SR Permissive) green light is energized, as indicated on 2RP4:			
		A. SELECT one pen of NR-45 to an IR and the other pen to a PR channel.	One pen selected to IR the other to a PR.		
		B. BLOCK SR High Flux Trip by depressing both "BLOCK SOURCE RANGE A" AND "BLOCK SOURCE RANGE B" pushbuttons on console.	Depresses both trains of pushbuttons.		
		C. ENSURE SR Trains A&B TRIP BLOCKED blue light is illuminated on 2RP4 AND OHA E-5, SR DET VOLT TRBL alarms.	* Both trains blocked		
	2		Insert RT-1, Dropped rod in Control Bank "D"		

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NC.TQ-WB.ZZ-0	31	0	(Z)
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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE: _____

SYSTEM: ROD Control (001)

Respond to a dropped rod with the reactor critical <POAH TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	3	Responds to OHA alarms for dropped rod and/or RPI.	Enters S2.OP-AB.ROD-0002.		
	3.1	PLACE the Rod Bank Selector Switch to MANUAL.	Verifies switch in MANUAL.		
	3,2	STABILIZE plant conditions as follows:			
		A. Stop any turbine load change.	No turbine load change or boron change in progress.		
		B. Stop any boron change in progress.			
	3.3	Adjust TAVG to within 1.5°F	No action – reactor is < POAH.		·
	3.4	Is the Reactor subcritical as a result of the dropped rod?	Answers YES.		
*	3.5	Fully INSERT ALL Control and Shutdown Banks.	Using MANUAL on Rod Bank Selector Switch, begins inserting the Control Banks.		
			NOTE: Terminate the JPM after action to insert rods is initiated.		
		STOP TIME:			

Terminating Cue: Acknowledge operator action and then state "this JPM is complete".

INITIAL CONDITIONS:

The reactor is critical below P-6.

INITIATING CUE:

You have been assigned to complete the startup in accordance with S2.OP-IO.ZZ-0003. Assume all INITIAL CONDITIONS have been met and a proper watch relief has occurred. For the sake of expediting the JPM, only those PRECAUTIONS AND LIMITATIONS applying to the task-at-hand will be reviewed. Beginning at step 5.3.17 (CONTINUE with reactor power ascension), continue the startup and level off at 10E-8 amps at step 5.3.20.

		NC.TQ-WB.ZZ-0310(Z)
STATION:	SALEM	
SYSTEM:	ECCS	
TASK:	Align for CL recirculation with 21SJ44 A	UTO ARMED failed IAW
TASK NUMBER:	1150100501	
JPM NUMBER:	2002 GOLF NRC RO S2	
ALTERNATE PATH:		EPE 011 EA1.11
APPLICABILITY:		RO SRO
EVALUATION SETTING	G/METHOD: Simulator/Perform	
REFERENCES: 2-E0	OP-LOCA-3, Revision 22	
TOOLS AND EQUIPME	ENT: NONE	
VALIDATED JPM COM	PLETION TIME: 14 Minutes	
TIME PERIOD IDENTIF	TIED FOR TIME CRITICAL STEPS:	I/A
APPROVAL:		MALIA
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	A CONTRACT OF A CONTRACT.	
BARGAINING UNI REPRESENTATIV	TRAINING SUPERVISOR	OPERATIONS M ANAGER or designee
BARGAINING UNI REPRESENTATIV CAUTION: No pla JPM w 1. Per 2. Dire ind 3. Ver	TRAINING SUPERVISOR or designee The equipment shall be operated durin without the following: rmission from the OS or Unit CRS; ect oversight by a qualified individua lividual granting permission based or rification of the "as left" condition by	OPERATIONS MANAGER or designee ng the performance of a l (determined by the n plant conditions). a qualified individual.
CAUTION: No pla JPM w 1. Per 2. Dire ind 3. Ver	TRAINING SUPERVISOR or designee int equipment shall be operated durin without the following: rmission from the OS or Unit CRS; ect oversight by a qualified individua ividual granting permission based or rification of the "as left" condition by	OPERATIONS MANAGER or designee ng the performance of a l (determined by the n plant conditions). a qualified individual.
ACTUAL TIME CRITIC	TRAINING SUPERVISOR or designee ant equipment shall be operated durin vithout the following: rmission from the OS or Unit CRS; ect oversight by a qualified individua ividual granting permission based or rification of the "as left" condition by ETION TIME: <u>Minutes</u>	OPERATIONS MANAGER or designee ng the performance of a l (determined by the n plant conditions). a qualified individual.
ACTUAL JPM COMPLE ACTUAL TIME CRITICA	TRAINING SUPERVISOR or designee ant equipment shall be operated durin vithout the following: rmission from the OS or Unit CRS; ect oversight by a qualified individua lividual granting permission based or rification of the "as left" condition by ETION TIME: <u>Minutes</u> AL COMPLETION: <u>Minutes</u>	OPERATIONS MANAGER or designee
ACTUAL JPM COMPLE ACTUAL TIME CRITICA JPM PERFORMED BY:	TRAINING SUPERVISOR or designee ant equipment shall be operated durin without the following: rmission from the OS or Unit CRS; ect oversight by a qualified individua lividual granting permission based or rification of the "as left" condition by ETION TIME: <u>Minutes</u> AL COMPLETION: <u>Minutes</u> GRADE: [FACTORY:	OPERATIONS MANAGER or designee

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: ECCS

TASK: Align for CL Recirculation with 21SJ44 AUTO ARMED failed IAW 2-EOP-LOCA-3

TASK NUMBER: 1150100501

INITIAL CONDITIONS:

- 1. A DBA LOCA has occurred.
- 2. All vital buses are energized.
- 3. The Crew has just transitioned to LOCA-3.

SIMULATOR SETUP:

- 1. Reset to IC-191.
- 2. Perform EOP's until transition to LOCA-3.

INITIATING CUE:

Perform the steps of LOCA-3.

- 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.

NC.1Q-WB.ZZ-03100

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: ECCS

TASK: Align for CL Recirculation with 21SJ44 AUTO ARMED failed IAW 2-EOP-LOCA-3

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Provide "Tear Off Sheet" to Candidate.			
		START TIME:			
	1	Do not implement any FRP's until directed by this EOP.	Reads CAUTION		
	2	Is Containment Recirc Sump level >62%?	Checks level and answers YES.		
	3	Depress SUMP AUTO ARMED pushbuttons on 21 and 22SJ44 bezels.	Depresses correct pushbuttons.		
	4	Remove lockouts from the following:	Selects VALVE OPERABLE at RP-4:		
		2SJ67 SI Pp Miniflow	SJ67 SI Pp Miniflow		
		2SJ68 SI Pp Miniflow	SJ68 SI Pp Miniflow		
		2SJ69 Common Suction	SJ69 Common Suction		
	5	Are 21 and 22 SJ44 open?	Answers NO, 21SJ44 is closed.		
	5.1	Reset SI.	Verifies SI RESET, both trains.		
		Reset EACH SEC.	Verifies all SECs RESET.		
	5.2	ls 21SJ44 Open.	NO.		
*		Stop 21 RHR Pump.	21 RHR Pump stopped.		
*		Close 2SJ69.	2SJ69 closed.		
		Start 22 RHR Pump.	Verifies 22 RHR Pump running.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

ECCS SYSTEM:

Align for CL Recirculation with 21SJ44 AUTO ARMED failed IAW 2-EOP-LOCA-3 TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		Initiate CLOSE on 21RH4 and continue.	21RH4 CLOSE initiated.		
	13	Initiate OPEN on 21SJ44 and continue.	21SJ44 OPEN initiated.		
¥	5.4	When 21SJ44 opens then start 21 RHR pump.	21 RHR pump running with 21SJ44 OPEN indication		
		STOP TIME:			

Terminating Cue: When 21 RHR pump is running with 21SJ44 OPEN then state "This JPM is complete".

INITIAL CONDITIONS:

- 1. A DBA LOCA has occurred.
- All vital buses are energized.
 The Crew has just transitioned to LOCA-3.

INITIATING CUE:

Perform the steps of LOCA-3.

			NC.TQ-WB.ZZ-0310(Z)
	OPERATOR TRAI	NING PROGRAM	
OTATION		NUE MEASURE	
STATION:	SALEINI		
SYSTEM:	PZR Pressure		
TASK:	Re-energize Pressur	rizer Heaters in acco	rdance with 2-EOP-
TASK NUMBER:	1150360501		
JPM NUMBER:	2002 GOLF NRC RC	D S3	
ALTERNATE PATH:		K/A NUMBER: RTANCE FACTOR:	EPE 007 EA1.03
			RO SRO
EVALUATION SETTI	NG/METHOD: Simu	llator/Perform	
REFERENCES: 2-	EOP-TRIP-2, Rev. 24		
TOOLS AND EQUIP	MENT: NONE		
VALIDATED JPM CC		5 Minutes	
TIME PERIOD IDENT	IFIED FOR TIME CRI	TICAL STEPS: N/	Α
APPROVAL:			MU III
Fr.	(james)	1200	ON Maller
BARGAININGU	NIT TRAININ	IG SUPERVISOR	OPERATIONS MANAGER
REPRESENTAT	IVE or	designee	or designée
	lant equipment shall	be operated during	the performance of a
	without the following	y:)S or Unit CRS:	
1. F 2. D)irect oversight by a (qualified individual	(determined by the
 ir	ndividual granting pe	rmission based on	plant conditions).
3. V	erification of the "as	left" condition by a	qualified individual.
······			
ACTUAL JPM COMP		Minutes	
ACTUAL TIME CRITI	CAL COMPLETION:	Minutes	
JPM PERFORMED B	Y:	GRADE:	SAT UNSAT
REASON, IF UNSAT	SFACTORY:		, i
EVALUATOR'S SIGN	ATURE:		DATE:

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: PZR Pressure

TASK: Re-energize Pressurizer Heaters in accordance with 2-EOP-TRIP-2

TASK NUMBER: 1150030501

INITIAL CONDITIONS:

A manual reactor trip was initiated due to a main turbine bearing oil pump failure.

SIMULATOR SETUP:

1. Reset to IC-183

INITIATING CUE:

The control room crew has completed TRIP-2 through Step 12, directing them to Step 15 (PZR Heater Power Availability). Beginning at Step 15, perform 2-EOP-TRIP-2.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______

TAS	SK:				
# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	15	Is 2E Group Bus energized and 2E6D closed?	Checks status of 2E6D and answers NO.		
		Is 2G Group Bus energized and 2G6D closed?	Checks status of 2G6D and answers NO.		
		Send Operators to open the Rod Drive MG set motor breakers.	CUE: CRS has already dispatched a NEO.		
			Simulator Operator: Insert RT-1		
		Are Rod Drive MG set breakers open?	CUE: Simulator Operator reports back as (NEO) that Rod Drive MG Set motor breakers are open.	•	
2' 1 *	15.1	Close 2E6D and 2G6D closed.	Closes 2E6D and 2G6D.		
		Is 2E Group Bus energized and 2E6D closed?	Answers YES		
		STOP TIME:			
	A				

Terminating Cue: Acknowledge 2E Group Bus energized and 2E6D closed and state "this JPM is complete".

INITIAL CONDITIONS:

A manual reactor trip was initiated due to a main turbine bearing oil pump failure.

INITIATING CUE:

The control room crew has completed 2-EOP-TRIP-2 through Step 12, directing them to Step 15 (PZR Heater Power Availability). Beginning at Step 15, perform 2-EOP-TRIP-2.

		NC.TQ-WB.ZZ-0310(Z)		
STATION:	OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE SALEM			
SYSTEM:	AFW (061)			
TASK:	Initiate AFW flow/AF21 Pressure Overric	le		
TASK NUMBER:	0610020101			
JPM NUMBER:	2002 GOLF NRC RO/SRO S4			
ALTERNATE PATH:	X K/A NUMBER:	<u>061 A2.05</u> 3.1 3.4		
APPLICABILITY:		RO SRO		
EVALUATION SETTIN	IG/METHOD: Simulator/Perform			
REFERENCES: EO	P-TRIP-2, Rev. 24			
TOOLS AND EQUIPM	ENT: NONE			
VALIDATED JPM COM	MPLETION TIME: 5 Minutes			
TIME PERIOD IDENTI	FIED FOR TIME CRITICAL STEPS:N/	A		
APPROVAL:	IIT TRAINING SUPERVISOR VE or designee	OPERATIONS MANAGER or designee		
 CAUTION: No plant equipment shall be operated during the performance of a JPM without the following: 1. Permission from the OS or Unit CRS; 2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions). 3. Verification of the "as left" condition by a qualified individual. 				
ACTUAL JPM COMPL	ETION TIME: Minutes_			
ACTUAL TIME CRITICAL COMPLETION: Minutes				
JPM PERFORMED BY	(: GRADE:	SAT UNSAT		
REASON, IF UNSATISFACTORY:				

EVALUATOR'S SIGNATURE:

DATE: ____

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: AFW

TASK: Initiate AFW flow/AF21 Pressure Override

TASK NUMBER: 0610020101 / 1150020501

INITIAL CONDITIONS:

- 1. A manual reactor trip was initiated due to the simultaneous loss of both SGFP's.
- 2. The Crew has just transitioned to 2-EOP-TRIP-2.

SIMULATOR SETUP:

Reset to IC-184

INITIATING CUE:

You are the Control Board Operator. Starting at Step 1, execute the steps of 2-EOP-TRIP-2.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: ______

SYSTEM: AFW

TASK: Initiate AFW flow/AF21 Pressure Override

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	1	Announce twice on Station PA "Unit 2 Reactor Trip".	Makes announcement.		
	2 Implement the Event Classification Guide.		CUE: Event Classification Guide.is being implemented.		
	3 Is total AFW >22E4lbm/hr?		Answers NO.		
	Start 21-23 AFW Pumps.		Determines that 21 and 22 AFW Pumps are running and 23 AFW Pump is tripped.		
	Open 21-24AF21Open 21-24AF11		Presses open on 21-24AF21 and notes that they did not open. Should note that AFW Pump discharge pressure is above the opening interlock setpoint. Verifies AF11s open.		

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE: _____

SYSTEM: AFW

Initiate AFW flow/AF21 Pressure Override TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		Depress PRESSURE OVERRIDE DEFEAT.	 PRESSURE OVERRIDE DEFEAT depressed. It is acceptable to establish valve demand before depressing PRESSURE OVERRIDE DEFEAT. Operates AF21's to establish AFW flow to greater than 22E4lbm/hr NOTE: This is not a specific procedural step in 2-EOP-TRIP-2 but is a step in other procedures. Operators are expected to take compensatory action for failures. It is acceptable to transition to FRHS-1 in order to initiate AFW flow. If Candidate implements FRHS-1 go to next page. If Candidate attempts to continue in EOP- TRIP-2 then Cue CUE: CRS has implemented 2-FRHS-1 due to Red Path for HS 		This Step is Critical if FRHS-1 is <u>NOT</u> entered.
				<u> </u>	

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AFW

TASK: Initiate AFW flow/AF21 Pressure Override

#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		Is AFW Flow >22E4lbm/hr?	Answers YES.		
			JPM complete at this point if FRHS is not implemented.		
		IF 2-EOP-FRHS-1 IS IMPLEMENTED:			
	1	IS TOTAL AFW <22E4LBM/HR DUE TO OPERATOR ACTIONS?	Answers NO		
	2	IF AT LEAST ONE INTACT OR RUPTURED SG IS AVAILABLE THEN DO NOT FEED A FAULTED SG	Acknowledges Step. Determines no FAULTED SG		
	3	IS RCS PRESSURE GREATER THAN ANY INTACT OR RUPTURED SG PRESSURE?	Answers YES		
	3.1	ARE RCS T-HOTS GREATER THAN 350°	Answers YES		
	4	IF WR LEVELS IN AT LEAST THREE SG'S ARE LESS THAN 32% (36% ADVERSE) THEN IMMEDIATELY STOP ALL RCP'S AND GO TO STEP 23 TO INTITIATE RCS FEED AND BLEED			
	5	IF RCS PRESSURE IS 2335 PSIG OR GREATER DUE TO LOSS OF SECONDARY HEAT SINK THEN IMMEDIATELY STOP ALL RCP'S AND GO TO STEP 23 TO INTITIATE RCS FEED AND BLEED	Determines RCS pressure is less than 2335 psig.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AFW

TASK: Initiate AFW flow/AF21 Pressure Override

		STEP			COMMENTS
# *	STEP NO.	(*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	(Required for UNSAT evaluation)
	6	IF 'AFWST LEVEL LO-LO' ALARM ACTUATES (10.3%) THEN SHIFT AFW PUMP SUCTION TO AN ALTERNATE SOURCE	Acknowledges Step. Determines the alarm is not actuated.		
	7	IS 21 OR 22 CHARGING PUMP AVAILABLE	Answers YES		
	8	CLOSE THE FOLLOWING VALVES:			
		21 THROUGH 24GB4 (SG OUTLET)	CLOSES 21 THROUGH 24GB4		
		 21 THROUGH 24SS94 (SG B/D SAMPLING) 	CLOSES 21 THROUGH 24SS94		
	8.1	START AT LEAST ONE AFW PUMP	Determines 21 and 22 AFW Pumps are running		
		IS AT LEAST ONE AFW PUMP RUNNING	Answers YES		
		OPEN INTACT OR RUPTURED AF11 AND AF21 (SG INLET VALVES)	Attempts to open AF21 valves		
		ARE AF21 VALVES OPEN ON INTACT OR RUPTURED SG'S	Answers NO		
	-	FOR EACH AF21 NOT OPENED			

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE: _____

SYSTEM: AFW

TASK: Initiate AFW flow/AF21 Pressure Override

#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*		SET AF21 VALVE DEMAND TO 95%	Sets all AF21 demands to 95%		
		 DEPRESS 'PRESSURE OVERRIDE DEFEAT' PUSHBUTTONS 	Depresses defeat pushbuttons		
		ARE INTACT OR RUPTURED AF11 AND AF21 VALVES OPEN?	Answers YES		
*		IS TOTAL AFW FLOW GREATER THAN 22E4 LBM/HR?	Answers YES		
	<u>, , , , , , , , , , , , , , , , , , , </u>	STOP TIME:			

Terminating Cue: Reports AFW Flow >22E4lbm/hr. State "this JPM is complete".

INITIAL CONDITIONS:

- 1. A manual reactor trip was initiated due to the simultaneous loss of both SGFP's.
- 2. The Crew has just transitioned to 2-EOP-TRIP-2.

INITIATING CUE:

You are the Control Board Operator. Starting at Step 1, execute the steps of 2-EOP-TRIP-2.

NC.TQ-	WB.Z	Z-0310(Z)
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STATION:	OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE SALEM	NC.IQ-WB.ZZ-0310(Z)
SYSTEM:	Containment Spray (026)	
TASK:	Containment Spray Failure During LBL	OCA
TASK NUMBER:	1150360501	
JPM NUMBER:	2002 GOLF NRC RO/SRO S5	
ALTERNATE PATH:	K/A NUMBER	R: E14 EA1.1 R: 3.7 3.7
APPLICABILITY: EO F		RO SRO
EVALUATION SETTIN	NG/METHOD: Simulator/Perform	
REFERENCES: 2-E	EOP-FRCE-1, Rev. 21	
TOOLS AND EQUIPM	IENT: NONE	
VALIDATED JPM CO	MPLETION TIME: 5 Minutes	
TIME PERIOD IDENTI	FIED FOR TIME CRITICAL STEPS:	N/A
APPROVAL:	VIT TRAINING SUPERVISOR VE or designee	OPERATIONS MANAGER or designee
APPROVAL: BARGAINING UI REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di int 3. Ve	VIT VE TRAINING SUPERVISOR or designee ant equipment shall be operated durin without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individua dividual granting permission based of erification of the "as left" condition by	OPERATIONS MANAGER or designee ng the performance of a al (determined by the n plant conditions). a qualified individual.
APPROVAL: BARGAINING UK REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di int 3. Ve ACTUAL JPM COMPL	IT TRAINING SUPERVISOR or designee	OPERATIONS MANAGER or designee and the performance of a al (determined by the in plant conditions). a qualified individual.
APPROVAL: BARGAINING UK REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di int 3. Ve ACTUAL JPM COMPL ACTUAL TIME CRITIC	Ant equipment shall be operated durin without the following: armission from the OS or Unit CRS; rect oversight by a qualified individua dividual granting permission based of arification of the "as left" condition by ETION TIME: <u>Minutes</u> AL COMPLETION: <u>Minutes</u>	OPERATIONS MANAGER or designee ng the performance of a al (determined by the n plant conditions). a qualified individual.
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di ind 3. Ve ACTUAL JPM COMPL ACTUAL TIME CRITIC	Ant equipment shall be operated durin without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individual dividual granting permission based or erification of the "as left" condition by .ETION TIME:	OPERATIONS MANAGER or designee Ing the performance of a al (determined by the in plant conditions). a qualified individual.
APPROVAL: BARGAINING UK REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di int 3. Ve ACTUAL JPM COMPL ACTUAL TIME CRITIC JPM PERFORMED BY REASON, IF UNSATIS	AIT Equipment shall be operated durin without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individual dividual granting permission based on erification of the "as left" condition by ETION TIME:	OPERATIONS MANAGER or designee Ing the performance of a al (determined by the in plant conditions). a qualified individual.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: Containment Spray (026)

TASK: Containment Spray failure during LBLOCA

TASK NUMBER: 1150360501

INITIAL CONDITIONS:

- 1. A rapidly progressing LOCA occurred after a reactor trip.
- 2. AUTO SI has actuated.
- 3. The CRS has transitioned to 2-EOP-FRCE-1, from 2-EOP-LOCA-1.

SIMULATOR SETUP:

- 1. Reset to IC-188
- 2. FRCE-1 Attachment 1 Phase A valve alignment filled out.

INITIATING CUE:

You are the Control Board Operator. Perform the steps of 2-EOP-FRCE-1.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: Containment Spray (026)

TAS	SK: Co	Containment Spray failure during LBLOCA						
# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation			
		START TIME:						
	1	Close Phase A Isolation Valves not needed for plant recovery.	CUE: Provide filled out copy of FRCE-1 Attachment 1					
	2	Close the following valves: • 2VC1 and 2VC2 • 2VC3 and 2VC4 • 2VC5 and 2VC6	Verifies 2VC1 – 6 closed.					
:	3	Has Containment Pressure remained less than 15 psig?	Checks and answers NO.					
	3.1	Is EOP-LOCA-5 in effect?	Answers NO or CUE: NO					
*	3.2	Start both CS Pumps.	Starts both CS Pumps.					
*	3.3	Open 21 and 22CS2 (CS Pump Discharge Valves).	Opens 21CS2 and 22CS2.					
*		Open 2CS14, 2CS16, 2CS17 (Tank Discharge Valves).	Opens 2CS14, 2CS16, 2CS17.					
*	3.4	Close Phase B Isolation Valves.	From Table B closes at least:					
			• 2CC117 or 118					
			• 2CC131 or 190					
			• 2CC136 or 187					

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: Containment Spray (026)

Containment Spray failure during LBLOCA TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
 	3.5	Stop ALL RCPs.	Verifies all RCP's stopped.		
		STOP TIME:			

Terminating Cue: Acknowledge RCP's stopped and state "this JPM is complete".

INITIAL CONDITIONS:

- 1. A rapidly progressing LOCA occurred after a reactor trip.
- 2. AUTO SI has actuated.
- 3. The CRS has transitioned to 2-EOP-FRCE-1, from 2-EOP-LOCA-1.

INITIATING CUE:

You are the Control Board Operator. Perform the steps of 2-EOP-FRCE-1.

		NC.TQ-WB.ZZ-0310(Z)			
	JOB PERFORMANCE MEASURE				
STATION: SA	LEM				
SYSTEM: AC	Electrical (062)				
TASK: End	ergize a 4KV Vital Bus from a Stat	ion Power Transformer			
TASK NUMBER: 115	50140501	-A-1.			
JPM NUMBER: 200	02 GOLF NRC RO S6				
ALTERNATE PATH:	K/A NUMBI	ER:EPE 055 EA1.07			
	IMPORTANCE FACTO	DR: 4.3 4.5			
	X STA SRO X				
EVALUATION SETTING/N	IETHOD: Simulator/Perform				
REFERENCES: S2.OP-	SO.DG-0001, Rev. 26; S2.OP-SO	.4KV-0001, Rev. 23			
TOOLS AND EQUIPMENT	: NONE				
VALIDATED JPM COMPL	ETION TIME: 13 Minutes	_			
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A					
TIME PERIOD IDENTIFIED	OFOR TIME CRITICAL STEPS:	N/A			
TIME PERIOD IDENTIFIED	D FOR TIME CRITICAL STEPS:	N/A			
TIME PERIOD IDENTIFIED	D FOR TIME CRITICAL STEPS:	N/A			
TIME PERIOD IDENTIFIED	D FOR TIME CRITICAL STEPS:	N/A 			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE	D FOR TIME CRITICAL STEPS:	N/A MULLI OPERATIONS MANAGER or designee			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MAMAGER or designee ring the performance of a			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM witho 1. Permis	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MAMAGER or designee			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM witho 1. Permis 2. Direct individ	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MAMAGER or designee ring the performance of a ual (determined by the on plant conditions)			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM witho 1. Permis 2. Direct individ 3. Verific	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MANAGER or designee ring the performance of a ual (determined by the on plant conditions). by a qualified individual.			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM withe 1. Permis 2. Direct individ 3. Verific	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MANAGER or designee ring the performance of a ual (determined by the on plant conditions). by a qualified individual.			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM witho 1. Permis 2. Direct individ 3. Verific	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MANAGER or designee ring the performance of a ual (determined by the on plant conditions). by a qualified individual.			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM withe 1. Permis 2. Direct individ 3. Verific ACTUAL JPM COMPLETIC ACTUAL TIME CRITICAL (PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MANAGER or designee ring the performance of a hal (determined by the on plant conditions). by a qualified individual.			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant e JPM witho 1. Permis 2. Direct individ 3. Verific ACTUAL JPM COMPLETIC ACTUAL TIME CRITICAL O JPM PERFORMED BY:	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MANAGER or designee ring the performance of a ual (determined by the on plant conditions). by a qualified individual.			
TIME PERIOD IDENTIFIED APPROVAL: BARGAINING UNIT REPRESENTATIVE CAUTION: No plant of JPM without 1. Permis 2. Direct individ 3. Verifica ACTUAL JPM COMPLETION ACTUAL TIME CRITICAL OF JPM PERFORMED BY: REASON, IF UNSATISFAC	PFOR TIME CRITICAL STEPS:	N/A OPERATIONS MAMAGER or designee ring the performance of a al (determined by the on plant conditions). by a qualified individual.			

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: AC Electrical (062)

TASK:Energize a 4KV Vital Bus from a Station Power Transformer (SPT)IAW LOPA-1.

TASK NUMBER: 1150140501

INITIAL CONDITIONS:

- 1. Unit 2 experienced a loss of all AC Power.
- 2. 2A EDG is providing power to 2A Vital Bus and the following running equipment: 21 CCW Pump, 21 SW Pump, 21 CFCU (LOW), 21 SWGR Room Supply Fan, 21 SWGR Room Exhaust Fan.
- 3. 2B EDG was just started. 24 SW Pump is running.
- 4. 24 Station Power Transformer (SPT) has just been energized.
- The CRS has specified that S2.OP-SO.DG-0001 Section 5.8 and S2.OP-SO.4KV-0001 Section 5.3.4 will be utilized to energize 2A Vital Bus from 24 SPT.

SIMULATOR SETUP:

- Reset to IC-186
- Sign off all procedure Prerequisites and Precautions and Limitations that do NOT apply directly to the task.

INITIATING CUE:

You are the Control Board Operator. Complete Section 5.8 of S2.OP-SO.DG-0001, and then utilize Section 5.3.4 of S2.OP-SO.4KV-0001 to restore power to 2A Vital Bus from 24 SPT. For the purpose of expediting the JPM, all procedure Prerequisites and Precautions and Limitations that do NOT apply directly to the task have been signed off.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AC Electrical (062)

Energize a 4KV Vital Bus from a Station Power Transformer (SPT) IAW TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:	Provide marked up copies of S2.OP- SO.DG-0001 and S2.OP-SO.4KV-0001.		
	1	S2.OP-SO.DG-0001, Section 5.8			
	5.8.1	If 2A Diesel Generator is paralleled on 2A 4KV Vital Bus	Marks step N/A.		

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE:

SYSTEM: AC Electrical (062)

TASK: Energize a 4KV Vital Bus from a Station Power Transformer (SPT) IAW						
# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)	
	5.8.2	IF 2A Vital Bus is isolated and energized from 2A Diesel Generator, THEN:				
*		A. PLACE redundant equipment in service as necessary to support de- energizing 2A Vital Bus.	 One-by-one, provide the following CUES: Start 21 Charging Pump* Start 22 CCW Pump* Start 22 CFCU in LOW Start 22 CFCU in LOW Start 22 SWGR Room Supply Fan Start 22 SWGR Room Exhaust Fan STARTS each piece of equipment. 			
*		B. STOP all 2A Vital Bus loads using Attachment 1.	 One-by-one, provide the following CUES: Stop 21 CCW Pump* Stop 21 SW Pump* Stop 21 CFCU in LOW* Stop 21 SWGR Room Supply Fan* Stop 21 SWGR Room Exhaust Fan* STOPS each piece of equipment. 			

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AC Electrical (062)

Energize a 4KV Vital Bus from a Station Power Transformer (SPT) IAW TASK

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.8.3	OPEN 2A DIESEL GENERATOR BREAKER BY PERFORMING ONE OF THE FOLLOWING:	Should open breaker from Control Console		
*		B. Press 2A BREAKER OPEN pushbutton. (2CC3)	Opens 2A EDG Breaker from 2CC3.		
	5.8.4	ALLOW diesel to run unloaded for >3 minutes prior to stopping.	Marks the time.		
			If necessary provide:		
			CUE: Perform S2.OP-SO.4KV, Section 5.3.4 while 2A EDG continues to run.		
	2	S2.OP-SO.4KV, Section 5.3.4			
	5.3.4	IF 2A 4KV Vital Bus is to be energized from 24 SPT, THEN:			
		A. Direct NEO to rack up 2AD1AX24ASD, 24 SPT INFEED BREAKER.	Pages NEO.		
			CUE: 2AD1AX24ASD, 24 SPT INFEED BREAKER is racked up.		
	7	B. PRESS Mimic Bus 2A VITAL BUS INFEED 24ASD BREAKER pushbutton and ensure console bezel 24 ASD MIMIC BUS INTLK CLOSE selection illuminates.	Presses Mimic Bus 2A VITAL BUS INFEED 24ASD BREAKER pushbutton and verifies 24 ASD MIMIC BUS INTLK CLOSE selection illuminated.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AC Electrical (062)

TASK:	Energize a 4KV Vital Bus from a Station Power Transformer (SPT) IAW	1
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#	STEP NO.	STEP (*Denotes a Critical Step)	STANDARD	EVAL	COMMENTS (Required for UNSAT evaluation)
		(#Denotes a Sequential Step)		5/0	
		C. PERFORM the following:			
		 PRESS AND HOLD control console 24ASD CLOSE pushbutton. 			
*		 RELEASE pushbutton when 24 ASD indicates closed. 	Presses 24 ASD CLOSE pushbutton and releases when breaker indicates closed.		
		3. ENSURE the following:	Verifies:	ļ	
		a. Console bezel 24 ASD MIMIC BUS INTLK CLOSE selection extinguished.	Console bezel 24 ASD MIMIC BUS INTLK CLOSE selection extinguished.		
		b. 2A 4KV Vital Bus voltage is 4.22-4.36KV	 2A 4KV Vital Bus voltage is 4.22-4.36KV 		
		c. OHA J-17, 2A 4KV VTL BUS UNDRVOLT is clear.	 OHA J-17, 2A 4KV VTL BUS UNDRVOLT is clear. 		
		D. Complete Attachment 3.	See Terminating Cue		
	l				
		STOP TIME:			

Terminating Cue: At Step D to complete Attachment 3, state "this JPM is complete".

INITIAL CONDITIONS:

- 1. Unit 2 experienced a loss of all AC Power.
- 2A EDG is providing power to 2A Vital Bus and the following running equipment: 21 CCW Pump, 21 SW Pump, 21 CFCU (LOW), 21 SWGR Room Supply Fan, 21 SWGR Room Exhaust Fan.
- 3. 2B EDG was just started. 24 SW Pump is running.
- 4. 24 Station Power Transformer (SPT) has just been energized.
- The CRS has specified that S2.OP-SO.DG-0001 Section 5.8 and S2.OP-SO.4KV-0001 Section 5.3.4 will be utilized to energize 2A Vital Bus from 24 SPT.

INITIATING CUE:

You are the Control Board Operator. Complete Section 5.8 of S2.OP-SO.DG-0001, and then utilize Section 5.3.4 of S2.OP-SO.4KV-0001 to restore power to 2A Vital Bus from 24 SPT. All procedure Prerequisites and Precautions and Limitations that do NOT apply directly to the task have been signed off

			NC.TQ-WB.ZZ-0310(Z)
STATION:	OPERATOR TRAIN JOB PERFORMAN SALEM	NING PROGRAM NCE MEASURE	
SYSTEM:	Component Cooling Water		
TASK:	Split the Component Cooling Water Headers in accordance with 2-FOP-LOCA-3		
TASK NUMBER:	1150040501		
JPM NUMBER:	2002 GOLF NRC RO	S7	
ALTERNATE PATH:		K/A NUMBER:	008 A4.01
EO			RO SRO
EVALUATION SETTING/METHOD: Simulator/Perform			
REFERENCES: 2-	EOP-LOCA-3, Rev.22		
TOOLS AND EQUIPMENT: NONE			
VALIDATED JPM COMPLETION TIME: 8 Minutes			
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS:N/A			
APPROVAL: BARGAINING UNIT REPRESENTATIVE TRAINING SUPERVISOR or designee OPERATIONS MANAGER			
 CAUTION: No plant equipment shall be operated during the performance of a JPM without the following: 1. Permission from the OS or Unit CRS; 2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions). 3. Verification of the "as left" condition by a qualified individual. 			
ACTUAL JPM COMPLETION TIME: <u>Minutes</u> ACTUAL TIME CRITICAL COMPLETION: Minutes			
JPM PERFORMED BY: GRADE: SAT UNSAT			
REASON, IF UNSATISFACTORY:			
EVALUATOR'S SIGN	ATURE:		DATE:

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: Component Cooling Water

TASK:Split the CCW Headers

TASK NUMBER: 1150040501

INITIAL CONDITIONS:

- 1. The operating Crew is responding to a LOCA.
- 2. 2-EOP-LOCA-3 has been initiated and is complete through Step 22, 21 & 22 CCW HX SW ALIGNMENT.

SIMULATOR SETUP:

- 1. Reset to IC-187.
- 3. Complete EOP-LOCA-3 to Step 23, 21 & 22 CCW HX SW ALIGNMENT.

INITIATING CUE:

Perform 2-EOP-LOCA-3, beginning at Step 23.

- 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.
OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: Emergency Response

TASK: Perform the actions for SI Termination (Split CCW Headers)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	23	Is SW available to BOTH CCW Hxs?	Checks SW Pump/Valve alignment and answers YES.		
	24	Are at least two CCW Pumps running?	Verifies 22 and 23 CCW Pumps running.		· ·
		Is 21 CCW Pump running?	Answers NO.		
		OPEN the following valves:			
		 2CC17, CCW Pump Suction Crossover. 	Verifies 2CC17 OPEN.		· ·
		• 21CC3, Pump Outlet X-Conn	Verifies 21CC3 OPEN.		
		• 2CC30, 22 CC Hx Out to Aux HDR	Verifies 2CC30 OPEN.		
		CLOSE the following valves:			
*		 2CC18, CCW Pump suction crossover 	Presses the CLOSE pushbutton for 2CC18 and verifies indication.		
*		22CC3, Pump outlet X-Conn	Presses the CLOSE pushbutton for 22CC3 and verifies indication.		
*		• 2CC31, 22 CC Hx out to Aux HDR	Presses the CLOSE pushbutton for 2CC31 and verifies indication.		
		STOP TIME:			

Terminating Cue: Reads step "RETURN TO PROCEDURE IN EFFECT".

- 1. The operating Crew is responding to a LOCA.
- 2. 2-EOP-LOCA-3 has been initiated and is complete through Step 22, 21 & 22 CCW HX SW ALIGNMENT.

INITIATING CUE:

Perform 2-EOP-LOCA-3, beginning at Step 23.

NC.TQ-WB	.ZZ-031	0(Z)
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		GRAM
STATION:	SALEM	
SYSTEM:	Pressurizer	
TASK:	Place POPS in service	
TASK NUMBER:	0100060101	
JPM NUMBER:	2002 GOLF NRC SROI S3/SRO	DU S1
ALTERNATE PATH:	K/A N IMPORTANCE F	UMBER: 010 A4.03 ACTOR: 4.0 3.8 BO SBO
EVALUATION SETTIN	NG/METHOD: Simulator/Perfor	rm
REFERENCES: S2	.OP-SO.PZR-0004, Rev. 11	
TOOLS AND EQUIPM	IENT: NONE	
VALIDATED JPM CO	MPLETION TIME: 10 Minutes	
TIME PERIOD IDENTI	FIED FOR TIME CRITICAL STE	PS: <u>N/A</u>
APPROVAL:	1 /11	1 ANA and
BARGAINING UN REPRESENTATI	VIT TRAINING SUPERVIS VE or designee	OPERATIONS MANAGER or designee
CAUTION: No pl JPM v 1. Pe 2. Di int 3. Ve	ant equipment shall be operate without the following: ermission from the OS or Unit (rect oversight by a qualified in dividual granting permission b erification of the "as left" cond	ed during the performance of a CRS; dividual (determined by the based on plant conditions). ition by a qualified individual.
ACTUAL JPM COMPL	ETION TIME: Minu	tes_
ACTUAL TIME CRITIC		<u>/linutes</u>
JPM PERFORMED BY	/: GR	RADE: SAT UNSAT
REASON. IF UNSATIS	SEACTORY	

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: Pressurizer

TASK: Place POPS in service

TASK NUMBER: 0100060101

INITIAL CONDITIONS:

Unit 2 is in HSD.

Provide Candidate copy of marked up S2.OP-SO.PZR-0004

SIMULATOR SETUP:

Reset to IC-181

INITIATING CUE:

Place Channel I and II of POPS in service in accordance with S2.OP-SO.PZR-0004.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM:	Press	urizer
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TASK: Place POPS in service

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	1		Evaluator should provide a properly marked up copy of S2.OP-SO.PZR-0004.		
		Candidate reviews procedure.	NOTE: Category II procedure use requirements apply.		
	5.1.1	Ensure 2PC405C-D, 2 REACT POPS CHAN I PRESS PROT SIGNAL COMPARATOR, #1 OUT not energized (fuse light extinguished).	NOT SIMULATED CUE: Fuse light is extinguished.		
	5.1.2	Ensure 2PR6 STOP VALVE OPEN.	Verifies 2PR6 OPEN.		
	5.1.3	Insert key in POPS Channel I ON/OFF Key Slot.	Inserts key in Ch. I.		
*	5.1.4	Rotate Channel I Key Switch CLOCKWISE.	Rotates key CLOCKWISE and obtains red ON indicating light.		
	5.1.5	Ensure Channel I ON red indicating light illuminates.	Verifies red light is illuminated.		
	5.1.6	Rotate Channel I Key Switch COUNTERCLOCKWISE.	Returns key to original position.		
	5.1.7	REMOVE key from the POPS Channel I ON/OFF key slot.	Removes key.		

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

COMMENTS STEP STEP # (*Denotes a Critical Step) EVAL (Required for * NO. **STANDARD** (#Denotes a Sequential Step) **UNSAT** evaluation) S/U 5.1.8 Complete Att. 1, Section 1.0. CUE: Substitute self-check for Independent Verification. Enters information on Att. 1 and corrects any operational errors. 5.1.9 If a PORV blocking device is installed... No PORV blocking device is CUE: installed. 5.1.10 If 2PR1 is open, then select 2PR1 to Verifies 2PR1 closed. MANUAL/CLOSE 5.2.1 Ensure 2PC403C-D, 2 REACT POPS NOT SIMULATED CHAN I PRESS PROT SIGNAL Fuse light is extinguished. CUE: COMPARATOR, #1 OUT not energized (fuse light extinguished). 522 ENSURE 2PR7 STOP VALVE OPEN. Verifies 2PR6 OPEN. 5.2.3 Insert key in POPS Channel II ON/OFF Inserts key in Ch. II. Key Slot. * 5.2.4 **ROTATE Channel II Key Switch** Rotates key CLOCKWISE and obtains red CLOCKWISE. ON indicating light. 5.2.5 **ENSURE Channel II ON red indicting** Verifies red light is illuminated. light illuminates. 5.2.6 **ROTATE Channel II Key Switch** Returns key to original position. COUNTERCLOCKWISÉ 5.2.7 REMOVE key from the POPS Channel II Removes key. ON/OFF key slot.

SYSTEM:

TASK:

Pressurizer

Place POPS in service

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE: _____

#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	5.2.8	Complete Att. 1, Section 2.0.	CUE: Substitute self-check for Independent Verification. Enters information on Att. 1 and corrects any operational errors.		
	5.2.9	If a PORV blocking device is installed	CUE: No PORV blocking device is installed.		
	5.2.10	If 2PR2 is open, then select 2PR2 to MANUAL/CLOSE.	Verifies 2PR2 closed.		
		STOP TIME:			

Terminating Cue: Acknowledge report and state "this JPM is complete".

SYSTEM: Pressurizer

Unit 2 is in Hot Shutdown.

INITIATING CUE:

Place Channel I and II of POPS in service in accordance with S2.OP-SO.PZR-0004.

NC.T	Q-WB	.ZZ-0	310(Z)
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			10.10-000.22-0010(2)
STATION:	OPERATOR TRA JOB PERFORMA SALEM	INING PROGRAM ANCE MEASURE	
SYSTEM:	EDG (064)		
TASK:	Start and load an El	DG from the Control F	Room IAW LOPA-1
TASK NUMBER:	1150140501		
JPM NUMBER:	2002 GOLF NRC S	RO S6	
ALTERNATE PATH:		K/A NUMBER: ORTANCE FACTOR:	EPE 055 EA1.02 4.3 4.4
APPLICABILITY: EO R	OX STA		RO SRO
EVALUATION SETTIN	IG/METHOD: Simi	ulator / Perform	
REFERENCES: 2-E	OP-LOPA-1, Rev.24		
TOOLS AND EQUIPM	ENT: NONE		
VALIDATED JPM COI		8 Minutes	
TIME PERIOD IDENTI	FIED FOR TIME CR	ITICAL STEPS: <u>N/</u>	Α
APPROVAL:	IIT TRAININ	VG SUPERVISOR	OPERATIONS MANAGER or designee
CAUTION: No pl JPM 1. Pe 2. Di in 3. Ve	ant equipment shal without the followin ermission from the rect oversight by a dividual granting pe erification of the "as	l be operated during g: OS or Unit CRS; qualified individual ermission based on s left" condition by a	y the performance of a (determined by the plant conditions). a qualified individual.
		Nieutee	
		<u></u> Minutes	
		GRADE.	
DEASON IE HINSATI			
			DATE

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
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DATE: _____

SYSTEM: EDG (064)

TASK: Start and load an EDG from the Control Room in accordance with 2-EOP-LOPA-1 (ALTERNATE PATH)

TASK NUMBER: 1150140501

INITIAL CONDITIONS:

- 1. The unit was at 100% power with 2B EDG in LOCKOUT for DUTR replacement.
- 2. A loss of off-site power occurred and 2A and 2C EDG's failed to start.
- 3. A NEO has de-energized all SEC's and Maintenance reports that 2B EDG can be started.

SIMULATOR SETUP:

- 1. Reset to IC-185
- 2. Perform the actions of 2-EOP-TRIP-1 and LOPA-1 through Step 11.

INITIATING CUE:

Beginning at Step 12, perform the actions of 2-EOP-LOPA-1.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:

S

		•		DATE.	
δΥ: Ā	SIEM: ED SK: Sta	iG art and load an EDG from the Control Room	NAW LOPA-1 (SW Pp fails to start)		
# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:	b.		
	12	Depress bezel STOP pushbuttons for all loads in Table A.	Depresses STOP pushbutton for each of the following:		
			• 21/22/23/24/25/26 SW Pumps		
			• 21/22/23 CCW Pumps		
			21/22 RHR Pumps		
			21/22 SI Pumps		
			 21/22/23/24/25 CFCUs (HI & LO Speed) 		
			• 21/22 CS Pumps		
			21/22 Charging Pumps		
	13	CAUTION step for Diesel Loading limits	Reviews Diesel Loading Limits		
	14	Restore power to de-energized 4KV vital buses:			
*		Start 2B DG	Depresses 2B EDG START		
		CLOSE 2B DG output breaker	Observes that 2B EDG comes up to operating speed and voltage then:		

•

Depresses 2BDG Mimic Bus Interlock

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: EDG

TAS	SK: Start and load an EDG from the Control Room IAW LOPA-1 (SW Pp fails to start)						
# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)		
*			Depresses 2BDG Breaker CLOSE PB, energizing the bus				
*	14.1	 When any 4KV Vital Bus is energized then: Start only one SW Pump on that bus Close the associated Turbine Area SW Stop Valve. 	 Depresses START pushbutton for 23 or 24 SW Pump and recognizes pump fails to start. Attempts to start the other SW Pp and recognizes pump failed to start. Stops 2B EDG in accordance with Continuous Action Summary, prior to applying any loads* 				
		STOP TIME:					

Terminating Cue: After 2B EDG is stopped, state "this JPM is complete".

- 1. The unit was at 100% power with 2B EDG in LOCKOUT for DUTR replacement.
- 2. A loss of off-site power occurred and 2A and 2C EDG's failed to start.
- 3. 2-EOP-LOPA-1 has been implemented up to Step 12. 2B Diesel Generator is ready to start.

INITIATING CUE:

Beginning at Step 12, perform the actions of 2-EOP-LOPA-1.

		NC.TQ-WB.ZZ-0310(Z)
STATION:	OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE SALEM	
SYSTEM:	Component Cooling Water (008)	
TASK:	Shift Operating CCW Pumps	
TASK NUMBER:	0080010101	
JPM NUMBER:	2002 GOLF NRC SRO S7	
ALTERNATE PATH:	K/A NUMBE	ER: 008000 A4.01 DR: 3.3 3.1
APPLICABILITY: EO		
EVALUATION SETTIN	NG/METHOD: Simulator/Perform	
REFERENCES: S2	.OP-SO.CC-0001, Rev. 8	
	IENT: NONE	
VALIDATED JPM CO	MPLETION TIME: 5 Minutes	-
TIME PERIOD IDENT	IFIED FOR TIME CRITICAL STEPS:	Minutes
APPROVAL:		MAIM
BARGAINING U REPRESENTAT	NIT TRAINING SUPERVISOR IVE or designee	OPERATIONS MANAGER or designee
CAUTION: No p JPM 1. P 2. D ir 3. V	ant equipment shall be operated du without the following: ermission from the OS or Unit CRS; frect oversight by a qualified individ ndividual granting permission based erification of the "as left" condition	ring the performance of a ual (determined by the on plant conditions). by a qualified individual.
ACTUAL JPM COMP	LETION TIME: Minutes	
ACTUAL TIME CRITI	CAL COMPLETION: Minute	es
JPM PERFORMED B	GRADE	:
REASON, IF UNSATI	SFACTORY:	

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: Component Cooling Water (008)

TASK: Shift Operating CCW Pumps

TASK NUMBER: 0080010101

INITIAL CONDITIONS:

Unit 2 is at full power.

SIMULATOR SETUP:

- Any Mode 1, 100% power IC.
- 21 and 22 CCW Pumps in service.
- CC Surge Tank level between 42-58%

INITIATING CUE:

Shift operating CCW pumps by placing 23 CCW Pump in operation, stopping 21 CCW Pump and placing it in AUTO control.

- 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.

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Component Cooling Water

#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	<u></u>	START TIME:			
		Operator obtains procedure.	Operator obtains current revision or is provided with a properly marked up copy of S2.OP-SO.CC-0001(Q).		
			NOTE: Category II procedure use requirements apply.		-
	5.5.1	Ensure CC Surge Tank Level is 42-58%.	Verifies Surge Tank Level indication is within specified range.		
# *	5.5.2	IF 2CC131 is selected to AUTO THEN place 2CC131 in MANUAL.	Depresses 2CC131 MANUAL button and verifies indication.		
*	5.5.3	Select MANUAL and START 23 CCW Pump.	Depresses #23 CCW pump MANUAL button		
*			Depresses #23 CCW pump START button		
			Verifies amps and flow respond as expected.		
*	5.5.4	STOP 21 CCW Pump.	Depresses #21 CCW pump STOP button		
*	5.5.5	Select one CCW Pump to AUTO.	Depresses the AUTO button for #21 CCW pump		
*	5.5.6	IF 2CC 131 was selected to MANUAL, THEN SELECT 2CC131 to AUTO.	Depresses the AUTO button for 2CC131		
		STOP TIME:			

Terminating Cue: After 2CC131 is in AUTOMATIC then state "this JPM is complete".

Unit 2 is at full power.

INITIATING CUE:

Shift operating CCW pumps by placing 23 CCW Pump in operation, stopping 21 CCW Pump and placing it in AUTO control.

STATION:	N OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE SALEM	IC.TQ-WB.ZZ-0310(Z)
SYSTEM:	Containment Cooling System (022)	
TASK:	Respond to High Containment Sump Leve	el (CFCU SW Leak)
TASK NUMBER:	1150370501	
JPM NUMBER:	GOLF NRC – SROU S3	
ALTERNATE PATH: APPLICABILITY:	X K/A NUMBER:	E15 EA1.1 2.9 3.0 RO SRO
EO 🔄 F		
EVALUATION SETTI	NG/METHOD: Simulator/Perform	
REFERENCES: 2-	EOP-FRCE-2, Rev. 20	
TOOLS AND EQUIPM	NENT: None	
VALIDATED JPM CO	MPLETION TIME: 8 Minutes	
TIME PERIOD IDENT	IFIED FOR TIME CRITICAL STEPS:	N/A
APPROVAL: BARGAININGU REPRESENTAT	NIT TRAINING SUPERVISOR IVE or designee	OPERATIONS MANAGER or designee
CAUTION: No p JPM 1. P 2. D ir 3. V	lant equipment shall be operated during without the following: ermission from the OS or Unit CRS; prect oversight by a qualified individual (ndividual granting permission based on p erification of the "as left" condition by a	the performance of a determined by the plant conditions). qualified individual.
ACTUAL JPM COMP	LETION TIME: Minutes	
ACTUAL TIME CRITI	CAL COMPLETION: Minutes	
JPM PERFORMED B	Y: GRADE:	SAT UNSAT
REASON, IF UNSATI	SFACTORY:	
EVALUATOR'S SIGN	IATURE:	DATE:

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: Containment Cooling System (022)

TASK: Respond to High Containment Sump Level (CFCU SW Leak)

TASK NUMBER: 1150370501

INITIAL CONDITIONS:

- 1. A large break LOCA has occurred.
- 2. The CRS just directed a transition to 2-EOP-FRCE-2, Response to High Containment Sump Level.

SIMULATOR SETUP:

1. Reset to IC-189

INITIATING CUE:

You are the control board operator. Implement 2-EOP-FRCE-2.

- 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.

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: Containment Cooling System (022)

Respond to High Containment Sump Level (CFCU SW Leak) TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	1	Is SW flow to 21-25 CFCUs normal?	Answers NO, after checking SW flow on all CFCU's and determining that #23 is not normal		
*		Identify and stop the AFFECTED CFCU	Stops 23 CFCU		
*		Close SW58 (Inlet Valve) on AFFECTED CFCU	Closes 23SW58		
*		Close SW72 (Outlet Valve) on AFFECTED CFCU	Closes 23SW72		
	1.1	Is 2FP147 (CIV) open?	Checks RP-5 and answers NO		
	1.2	Is CCW Surge Tk Level dropping in an uncontrolled or unexplained manner?	Checks level and answers NO		
	1.3	Is DEMIN WATER STORAGE TANK Level dropping in an uncontrolled or unexplained manner as determined by Unit 1 indication?	<i>CUE:</i> Unit 1 reports DEMIN WATER STORAGE TANK level is NOT dropping.		
	1.4	Is PRIMARY WATER STORAGE TANK Level dropping in an uncontrolled or unexplained manner?	Checks indication and answers NO		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: Containment Cooling System (022)

TASK: Respond to High Containment Sump Level (CFCU SW Leak)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	_				
		STOP TIME:			

Terminating Cue: When candidate is preparing to notify Chemistry to sample the CNMT Sump, state "this JPM is complete".

- 1. A large break LOCA has occurred.
- 2. The CRS just directed a transition to 2-EOP-FRCE-2, Response to High Containment Sump Level.

INITIATING CUE:

You are the control board operator. Implement 2-EOP-FRCE-2.

				NC.TQ-WB.ZZ-0310(Z)
	OPERA	TOR TRAINING	PROGRAM	
	JOB P	ERFORMANCE	MEASURE	
STATION:	SALEM			
SYSTEM:	ECCS			
TASK:	Shift to the	e HL Recirculat	ion ECCS mode	e with 22 RHR Pump
TASK NUMBER:	11501105	01		
JPM NUMBER:	2002 GOL	F NRC SROI/S	ROU S2	
ALTERNATE PATH:	X	IMPORTA	K/A NUMBER: NCE FACTOR:	006 A4.07 4.4 4.4
APPLICABILITY: EO R	80 X	STA 🔄	SRO X	RO SRO
EVALUATION SETTIN	IG/METHO	D: Simulator	/Perform	
REFERENCES: 2-E	EOP-LOCA-	4, Rev. 22		
TOOLS AND EQUIPM	IENT: NO	NE		
VALIDATED JPM CO	MPLETION	TIME: 11 M	inutes	
TIME PERIOD IDENTI	FIED FOR	TIME CRITICA	L STEPS: <u>N</u> /	A
APPROVAL:				100,00
BI		En Sta	K	11 Halling
ET ADCANUUC III	<u></u> /	TRAINING SU	PERVISOR	OPERATIONS MANAGER
REPRESENTATI	VE	or desig	inee	or designee
		······································		
	ant equipn	nent shall be c	perated during	g the performance of a
JPM	without the	e following:	•	
1. Pe	ermission f	rom the OS or	Unit CRS;	() () () () () () () () () ()
2. Di	irect oversi	ight by a quali	fied individual	(determined by the
IN 3 Va	aividual gr	anting permis	condition by a	a gualified individual.
0. 10				
ACTUAL JPM COMPL	ETION TIN	AE:	Minutes	
ACTUAL TIME CRITIC	CAL COMP		Minutes	
JPM PERFORMED B	Y:		GRADE:	
REASON, IF UNSATIS	SFACTORY	′ :		
EVALUATOR'S SIGN	ATURE:			DATE:

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: ECCS

TASK: Shift to the HL Recirculation ECCS mode with 22 RHR Pump OOS.

TASK NUMBER: 1150110501

INITIAL CONDITIONS:

- 1. Unit 2 experienced a large break LOCA.
- 2. The ECCS is aligned for cold leg recirculation.

SIMULATOR SETUP:

1. Reset to IC-190

INITIATING CUE:

The CRS has directed you to implement LOCA-4, Transfer to Hot Leg Recirculation.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

.

DATE:

SYSTEM: ECCS

TASK: Shift to the HL Recirculation ECCS mode with 22 RHR Pump OOS.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	1	Are both RHR Pumps running?	Answers NO then proceeds to Step 3.		
	3	Is 22 RHR Pump running?	Answers NO then proceeds to Step 5.		
	5	Is 21 RHR Pump running?	Answers YES		
# *	6	CLOSE 21CS36 (RHR Hx Supply to CS Valve).	Depresses CLOSE for 21CS36 and verifies closed indication.		
		Is 22SJ45 (RHR Discharge to SI Pumps Valve) OPEN?	Answers YES.		
#	6.1	STOP 21 SI Pump.	Depresses STOP for 221SI Pump and verifies indication.		
# *		CLOSE 21SJ134 (Cold Leg Discharge Valve).	Depresses CLOSE for 21SJ134 and verifies indication.		
#		OPEN 21SJ40 (Hot Leg Discharge Valve).	Depresses OPEN for 21SJ40 and verifies indication.		
#		START 21 SI Pump.	Depresses START for 21 SI Pump and verifies indication.		
		STOP TIME:			

Terminating Cue: Returns to procedure in effect. State "this JPM is complete".

- 1. Unit 2 experienced a large break LOCA.
- 2. The ECCS is aligned for cold leg recirculation.

INITIATING CUE:

The CRS has directed you to implement LOCA-4, Transfer to Hot Leg Recirculation.

STATION:	OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE SALEM			
SYSTEM:	CVCS (004)			
TASK:	Control charging flow after Control Room evacuation.			
TASK NUMBER:	1130070501			
JPM NUMBER:	2002 GOLF NRC RO P1			
ALTERNATE PATH:	K/A NUMBER: 068 AA1.22 IMPORTANCE FACTOR: 4.0 4.3			
EVALUATION SETTIN	IG/METHOD: Plant/Simulate			
REFERENCES: S2.	OP-AB.CR-0001, Rev. 11			
TOOLS AND EQUIPM	ENT: JAM Key			
VALIDATED JPM CO	WPLETION TIME: 15 Minutes			
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A				
APPROVAL:	I SUL ANG			
APPROVAL: BARGAINING UN REPRESENTATIV	NIT TRAINING SUPERVISOR VE or designee or designee			
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di int 3. Ve	ATTENTING SUPERVISOR VE TRAINING SUPERVISOR or designee OPERATIONS MANAGER or designee or designee ant equipment shall be operated during the performance of a without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual.			
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di inc 3. Ve	NIT TRAINING SUPERVISOR Waturd VE TRAINING SUPERVISOR OPERATIONS MANAGER or designee or designee ant equipment shall be operated during the performance of a without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual.			
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di inv 3. Ve ACTUAL JPM COMPL	MIT TRAINING SUPERVISOR OPERATIONS MANAGER VE or designee OPERATIONS MANAGER ant equipment shall be operated during the performance of a without the following: or designee ermission from the OS or Unit CRS; rect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). erfication of the "as left" condition by a qualified individual. LETION TIME: Minutes			
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM 1 1. Pe 2. Di ind 3. Ve ACTUAL JPM COMPL ACTUAL TIME CRITIC	MIT TRAINING SUPERVISOR or designee OPERATIONS MANAGER or designee Ant equipment shall be operated during the performance of a without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual. ETION TIME: Minutes CHADE: Minutes			
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM 1 1. Pe 2. Di int 3. Ve ACTUAL JPM COMPL ACTUAL TIME CRITIC JPM PERFORMED BY	MIT TRAINING SUPERVISOR OPERATIONS MANAGER VE Or designee OPERATIONS MANAGER ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee ant equipment shall be operated during the performance of a or designee area operator of the 00 or Unit CRS; rect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). artification of the "as left" condition by a qualified individual. or designee LETION TIME: Minutes CAL COMPLETION: Minutes (:			
APPROVAL: BARGAINING UN REPRESENTATION CAUTION: No pl JPM v 1. Pe 2. Di ind 3. Ve ACTUAL JPM COMPL ACTUAL TIME CRITIC JPM PERFORMED BY REASON, IF UNSATIS	MIT TRAINING SUPERVISOR Watcher or designee NIT TRAINING SUPERVISOR OPERATIONS MANAGER or designee or designee OPERATIONS MANAGER ant equipment shall be operated during the performance of a without the following: ermission from the OS or Unit CRS; rect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). ermiscation of the "as left" condition by a qualified individual. ETION TIME:			

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: CVCS (004)

TASK: Control charging flow after Control Room evacuation.

TASK NUMBER: 1130070501

INITIAL CONDITIONS:

- 1. The Control Room has been evacuated in accordance with AB.CR-0001, Control Room Evacuation.
- 2. A reactor trip from 100% was initiated prior to evacuating the Control Room.

SIMULATOR SETUP:

N/A

INITIATING CUE:

You have been directed to take local control of charging flow per AB.CR-1. Att. 5, Step 8.0. Steps 1.0-7.0 have been completed.

- 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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: CVCS (004)

TASK: Control charging flow after Control Room evacuation.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
		Operator reviews a copy of S2.OP-AB.CR-0001, Att. 5, and proceeds to Charging Pump Alley, El. 84.	Evaluator provides copy of Attachment 5.		
			NOTE: Category I procedure use requirements apply.		
*	8.0	Take local control of 2CV55, Cent. Chg Pump Flow Control Valve, by performing the following:	Locates the local control panel in the Charging Pump alley		
	8.1	 Record the charging flow as indicated on 2FI-128A. 	Records charging flow.		
	8.2	 Place local E/P Bypass Line Selector Valve in MAN. 	 * Places local E/P Bypass Line Selector in MANUAL. 		
	8.3	 Using MANUAL hand air operator, ensure that the flow rate as noted is being maintained by CV55. 	CUE: Charging flow rate is acceptable as indicated and is stable.		
	8.4	Observe air pressure indicator at the MANUAL/AUTO Station to verify local control.	CUE: Air pressure is approximately 9 psi		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE: _____

SYSTEM: CVCS (004)

Control charging flow after Control Room evacuation. TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	9.0	Notify the STA and HSD Panel Operator that Steps 1.0-8.0 of Att. 5 are completed.	Locates page or phone. CUE: Acknowledge report. Adjust charging flow to 75 gpm (or a value not currently read on FI-128A).		
*		Adjusts flow using MANUAL hand air operator.	Raises air pressure to raise flow or vice-versa. CUE: Provide feedback as to whether flow has increased or decreased		
		STOP TIME:			

Terminating Cue: Adjusts air pressure to match increase or decrease flow cue. State "this JPM is terminated".

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- 1. The Control Room has been evacuated in accordance with AB.CR-0001, Control Room Evacuation.
- 2. A reactor trip from 100% was initiated prior to evacuating the Control Room.

INITIATING CUE:

You have been directed to take local control of charging flow per AB.CR-1, Att. 5, Step 8.0. Steps 1.0-7.0 have been completed.

IL ACTIVE ON-THE-SPOT CHANGES MUST BE ATTACHED FOR FIELD USE 2021015

s2.0p-AB.CR-0001(Q)

ATTACHMENT 5 (Page 1 of 4)

REACTOR OPERATOR

FE 1.0 OBTAIN the following:

- One copy of this procedure.
- One radio (located in Appendix "R" Cabinet)
- ♦ Key ring set and tools (Security Master, JA Master, Breaker Keyswitch, screwdriver and adjustable wrench). [C0363]

NOTE

Steps 2.0 through 4.0 will be performed in the 460V Vital Bus Room-El 84'.

-2.0 PROCEED to Rod Drive MG Set Control Panel, AND **OPEN** the following breakers:

2.1

- Reactor Trip Breaker A
- 2.2 Reactor Trip Breaker B
- 2.3 Reactor Trip Bypass Breaker A
- 2.4 Reactor Trip Bypass Breaker B.
- 3.0 **CONFIRM** with the Operator at the Hot Shutdown Panel that 21 or 22 Charging Pump is operating.
 - 4.0 **PROCEED** to 2AX1AX7X, #23 Charging Pump, breaker AND TRIP the breaker.
- 5.0 PROCEED to 2C West Valve & Misc 230V Control Center-El 84', <u>AND</u> OPEN Breaker 2CY2AX4I, 2CV175-Rapid Borate Stop Valve.
 6.0 NOTIFY the CRS that the Reactor Trip and Bypass breakers, and #22
 - 0 NOTIFY the CRS that the Reactor Trip and Bypass breakers, and #23 Charging Pump Breaker are OPEN.
 - 7.0 **CONFIRM** with NEO #1 that 2CV71, Chr Hdr PCV, is isolated (2CV70) and bypassed (2CV73) and that flow is being maintained to RCP seals at flowrate of 6 to 10 gpm to each seal.

L'ACTIVE ON-THE-SPOT CHANGES MUST BE ATTACHED FOR FIELD USE 021015

s2.0P-AB.CR-0001(Q)

ATTACHMENT 5 (Page 2 of 4)

REACTOR OPERATOR

NOTE

The following indications and controls are available for local operation at Unit 2 CVC Chg Pmps FL & PR Inst PnI, Panel 216-2:

- 2CV55 AUTO/MANUAL Selector Switch (2HC-128G No. 21 & 22 Charging Pumps Flow to Regen HX)
- ♦ 2CV55 Manual HAND/AIR Regulator Control
- Charging Pump Flow Indication, 2FI-128A
- ♦ 21 and 22 Charging Pump Pressure Indication, 2PI-142B
- ♦ VCT Level Indication 2LT-114.
- 8.0 TAKE control of 2CV55, Cent Chg Pmp Flow Cont Valve, by performing the following:
 - 8.1 **RECORD** the charging flow as indicated on 2FI-128A.

gpm indicated on 2FI-128A

- 8.2 PLACE local E/P Bypass Line Selector Valve in Manual.
- 8.3 Using the MANUAL hand air operator, ENSURE that the flow rate as noted in Step 8.1 is being maintained with 2CV55.
- 8.4 **OBSERVE** local air pressure indicator to verify local control.
- 9.0 NOTIFY the CRS and STA that steps 1 through 8 of Attachment 5 are completed.

._ ACTIVE ON-THE-SPOT CHANGES MUST BE ATTACHED FOR FIELD USE

s2.0p-AB.CR-0001(Q)

ATTACHMENT 5 (Page 3 of 4)

REACTOR OPERATOR

<u>NOTE</u>

Step 10.0 through Step 15.0 will only be performed if an Emergency Boration is required for stuck rod.

- _____ 10.0 <u>WHEN</u> directed by the CRS, <u>THEN</u>:
 - 10.1 **PROCEED** to Unit 2 Cont Air Redundant Air Supply Wall Mntd Pnl 701-2A, El 122', near the Boric Acid Storage Tanks.
 - 10.2 CLOSE the Air Supply Isolation Valve, 21CV160 A/S, 21CV160 LOCAL AIR SUPPLY.
 - 10.3 **OPEN** draincock for control air regulator for 21CV160.
 - 10.4 **PROCEED** to Unit 2 Cont Air Redundant Air Supply Wall Mntd Pnl 701-2B, El 122", near the Boric Acid Storage Tanks.
 - 10.5 CLOSE the Air Supply Isolation Valve, 22CV160 A/S, 22CV160 LOCAL AIR SUPPLY.
 - 10.6 **OPEN** draincock for control air regulator for 22CV160.
 - 10.7 OPEN 2CV175, Rapid Borate Stop Valve.
 - _____ 10.8 **PROCEED** to 2CV55 and ADJUST the flow for 75 gpm above existing total flow for all RCP seal flows.
- _____ 11.0 **REQUEST** NEO #1 to adjust 2CV73 to maintain flow to RCP seals between 6 and 10 gpm.
- _____ 12.0 NOTIFY the operator at the CRS that Rapid Boration has commenced.
- 13.0 **REMAIN** in the area of the Charging Pumps.

_ ACTIVE ON-THE-SPOT CHANGES MUST BE ATTACHED FOR FIELD USE D21015

s2.0p-AB.CR-0001(Q)

ATTACHMENT 5 (Page 4 of 4)

REACTOR OPERATOR

- 14.0 <u>WHEN</u> directed by CRS to terminate Rapid Boration, <u>THEN</u>:
- <u>14.1 IF necessary,</u> <u>THEN ADJUST 2CV55 to reduce flow to maintain Pressurizer level.</u>
- 14.2 **REQUEST** the operator in the Inner Pen Area to adjust 2CV73 to maintain RCP Seal flow between 6 and 10 gpm for each RCP seal.
- 14.3 **PROCEED** to Unit 2 Cont Air Redundant Air Supply Wall Mntd Pnl 701-2A, El 122', near the Boric Acid Storage Tanks.
- 14.4 CLOSE draincock for control air regulator for 21CV160, BA Xfr Recirc Cont Valve.
- _____ 14.5 OPEN the Air Supply Isolation Valve, 21CV160 A/S, 21CV160 LOCAL AIR SUPPLY.
- _____ 14.6 **PROCEED** to Unit 2 Cont Air Redundant Air Supply Wall Mntd Pnl 701-2B, El 122", near the Boric Acid Storage Tanks.
- _____ 14.7 CLOSE draincock for control air regulator for 22CV160, BAT Recirc Cont Valve.
- ____ 14.8 OPEN the Air Supply Isolation Valve, 22CV160 A/S, 22CV160 LOCAL AIR SUPPLY.
- 14.9 CLOSE 2CV175, Rapid Borate Stop Valve.
- 15.0 NOTIFY CRS that Rapid Boration is terminated.
- 16.0 **PROCEED** to the Hot Shutdown Panel and assist where necessary.

	NC.TQ-WB.ZZ-0310(Z)
	JOB PERFORMANCE MEASURE
STATION:	SALEM 1 & 2
SYSTEM:	MRSS (035)
TASK:	Locally close a Main Steamline Isolation Valve (MS167) and operate the associated Atmospheric Steam Relief Valve (MS10).
TASK NUMBER:	1140130401
JPM NUMBER:	2002 GOLF NRC RO P2
ALTERNATE PATH:	K/A NUMBER: 068 AA1.01 IMPORTANCE FACTOR: 4.3 4.5
	RO X STA SRO X
EVALUATION SETTI	NG/METHOD: Plant/Simulate
REFERENCES: S2	2.OP-AB.CR-0001, Rev. 11
TOOLS AND EQUIPM	MENT: Adjustable Wrench, Flashlight
VALIDATED JPM CO	MPLETION TIME: 15 Minutes
TIME PERIOD IDENT	TIFIED FOR TIME CRITICAL STEPS: N/A
APPROVAL:	Vianis i. Kon' Myallal
BARGAINING U REPRESENTAT	INIT TRAINING SUPERVISOR OPERATIONS MANAGER IVE or designee or designee
CAUTION: No p JPM 1. P 2. D in 3. V	plant equipment shall be operated during the performance of a without the following: Permission from the OS or Unit CRS; Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions). Verification of the "as left" condition by a qualified individual.
ACTUAL JPM COMP	PLETION TIME: Minutes
	CAL COMPLETION: Minutes
JPM PERFORMED B	GRADE: SAT UNSAT
REASON, IF UNSATI	SFACTORY:

EVALUATOR'S SIGNATURE:	

 DATE:
OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:		 	 	
DATE:				

SYSTEM: MRSS (035)

TASK: Locally close a Main Steamline Isolation Valve (MS167) and operate the associated Atmospheric Steam Relief Valve (MS10).

TASK NUMBER: 1140130401

INITIAL CONDITIONS:

- 1. A Control Room Evacuation has taken place due to a noxious fumes problem.
- 2. A manual trip was initiated from 100% power.
- 3. S2-OP-AB.CR-0001 is being utilized to control the plant.

SIMULATOR SETUP:

N/A

INITIATING CUE:

The CRS has directed you to locally close 21MS167, place 21MS10 in LOCAL and then standby to operate 21MS10. The operations are to be accomplished IAW S2.OP-AB.CR-0001, Attachment 7, Step 7, 9 and Step 14. The other steps of the attachment have been completed or are being performed by another operator.

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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: MRSS (035)

TASK: Locally close 21MS167 and operate 21MS10					
#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
		Evaluator should provide a marked up copy of S2.OP-AB-CR-0001, Attachment 7.	Obtains a copy of the procedure.		
			NOTE: Category 1 procedure use standards apply.		
	1 (9.0)	Proceed to 21 Mn Stm & Trb Bypass Stm Gen Press Cont Pnl 684-2A, and perform the following for 21MS10:			
*	(9.1)	 PLACE the selector value in the E/P bypass line to the LOCAL position 	21MS10 selector valve to LOCAL.		
	(9.2)	 Operate hand sender in E/P line to ensure that PL-8907 indicates zero. 	PL-8907 should indicate zero.		
	2 (14.0)	PERFORM <u>either</u> of the following to Main Steam Isolate 21MS167, MSIV:			
	(14.1)	Perform the following to fail open 21MS171, MS ISOL VLV STM ASSIST, at No. 2 Unit Main Steam Vent VLV Control Panel 688-2A:	NOTE: If Candidate chose Panel 689-2A these steps will NOT be performed.		
*	(14.1.A)	• Close 2CA1318, SUP TO PNL 688-2A.	Closes 2CA1318, SUP TO PNL 688-2A.		
*	(14.1.B)	• Close 2CA1319, SUP TO PNL 688-2A	Closes 2CA1319, SUP TO PNL 688-2A		
*	(14.1.C)	 Open drain-cock of pressure regulator for SV275 (inside Panel 688-2A) 	Opens drain-cock for pressure regulator. CUE: 21MS167 closed.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: MRSS (035)

TASK:Locally close 21MS167 and operate 21MS10

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	(14.2)	Perform the following to fail open 21MS169, MS ISOL VLV STM ASSIST, at No. 2 Unit Main Steam Vent VLV Control Panel 689-2A:	NOTE: If Candidate chose Panel 688-2A these steps will NOT be performed.		
	(14.2.A)	• Close 2CA1320, SUP TO PNL 689-2A.	Closes 2CA1320, SUP TO PNL 689-2A.		
	(14.2.B)	Close 2CA1321, SUP TO PNL 689-2A	Closes 2CA1321, SUP TO PNL 689-2A		
	(14.2.C)	 Open drain-cock of pressure regulator for SV274 (inside Papel 689-2A) 	Opens drain-cock for pressure regulator.		
			CUE: 21MS167 closed.		
	3	Makes report to HSD Panel Operator.	CUE: Acknowledge report. Open 21MS10 approximately 50%		
*	4	OPERATE hand sender in E/P line to increase pressure indicated on PL-8907.	Candidate returns to 21 Mn Stm & Trb Bypass Stm Gen Press Cont PnI 684-2A and operates hand sender to raise air pressure* to approx. 8-12 psig on PL-8907. CUE: Provide feedback consistent with		
			action (21MS10 is opening)		
		STOP TIME:			

Terminating Cue: Acknowledge report/action and state "this JPM is complete".

INITIAL CONDITIONS:

- 1. A Control Room Evacuation has taken place due to a noxious fumes problem.
- 2. A manual trip was initiated from 100% power.
- 3. S2-OP-AB.CR-0001 is being utilized to control the plant.

INITIATING CUE:

The CRS has directed you to locally close 21MS167, place 21MS10 in LOCAL and then standby to operate 21MS10. The operations are to be accomplished IAW S2.OP-AB.CR-0001, Attachment 7, Step 7, 9 and Step 14. The other steps of the attachment have been completed or are being performed by another operator.

s2.op-ab.cr-0001(Q)

ATTACHMENT 7 (Page 1 of 7)

#1 NEO Operator

FF 1.0 OBTAIN the following:

- One copy of this procedure.
- One radio (located in Appendix "R" Cabinet)
- Key ring set and tools (Security Master, JA Master, Breaker Keyswitch, screwdriver and adjustable wrench). [C0363]

2.0 **DEFEAT** Safety Injection by opening the following breakers:

- Breaker 2AVIB5, Reactor Protection Output Cabinet Train A #103 in 2A 115VAC Vital Instrument Bus for Train "A" in Relay Room Elev 100'.
- FL 2.2

-2.1

- Breaker 2AVIB24, 2A Safeguard Emergency Cabinet.
- 2.3 Breaker 2BVIB8, Reactor Protection Output Cabinet Train B #37 in 2B 115 VAC Vital Instrument Bus for Train "B" in Relay Room Elev 100'.
 - Breaker 2BVIB27, 2B Safeguard Emergency Cabinet.
- -2.5 Breaker 2CVIB9, 2C Safeguard Emergency Cabinet.

NOTE

- The following steps will be performed in Mech Pen, Elev 78'.
- The following steps assume the charging system was in a normal operating condition prior to Control Room evacuation.
- FA 3.
- 0 **REQUEST** Charging flow rate from the RO who is performing Attachment 5.
- 4.0 **PROCEED** to 2CV70, Chg Hdr PCV Inlet Viv, and 2CV73, Chg Hd PCV Byp Valve, <u>AND</u> SIMULTANEOUSLY CLOSE 2CV70 while OPENING 2CV73.
 - 5.0 After 2CV70 is CLOSED, **REQUEST** the charging flowrate from RO, AND ADJUST 2CV73 to the flowrate identified in Step 3.0.

s2.0p-Ab.CR-0001(Q)

ATTACHMENT 7 (Page 2 of 7)

#1 NEO Operator

6.0 VERIFY that a 6-10 gpm flow is maintained for each RCP pump seal as indicated on the following:

6.1 2FI144A, 21 CVC React Cool Pmp Seal Water Flow Ind

6.2 2FI143A, 22 CVC React Cool Pmp Seal Water Flow Ind

6.3 2FI116A, 23 CVC React Cool Pmp Seal Water Flow Ind

6.4 2FI115A, 24 CVC React Cool Pmp Seal Water Flow Ind

7.0 **PROCEED** to the Inner Pen Area.

CAUTION

The following steps, MSIV Isolation, should be coordinated with the CRS.

- NA 8.0 **PROCEED** to No. 21 Steam Gen Press Cont Pnl, 683-2A, CLOSE 21MS18A/S, A/S to SV587 in Pnl 683-2A.
 - 9.0 **PROCEED** to No. 21 Mn Stm & Trb Bypass Stm Gen Press Cont Pnl, 684-2A, AND **PERFORM** the following for 21MS10 Atmospheric Relief Valve:
 - 9.1 PLACE the selector valve in E/P bypass line to LOCAL position.
 - 9.2 OPERATE hand sender in E/P line to ensure that PL-8907 indicates zero.
- \mathcal{N} 10.0 **PROCEED** to No. 23 Steam Gen Press Cont Pnl, 683-2C, CLOSE 23MS18A/S, A/S to SV585 in Pnl 683-2C.
- \mathcal{N} 11.0 **PROCEED** to 23 Mn Stm & Trb Bypass Stm Gen Press Cont Pnl, 684-2C, <u>AND</u> **PERFORM** the following for 23MS10 Atmospheric Relief Valve:
 - \mathcal{N}/\mathcal{F} 11.1 PLACE the selector value in E/P bypass line to LOCAL position.
 - $\underline{\Psi}$ 11.2 **OPERATE** hand sender in E/P line to ensure that PL-8909 indicates zero.

s2.0p-ab.cr-0001(Q)

ATTACHMENT 7 (Page 3 of 7)

#1 NEO Operator

- $\frac{\mathcal{M}}{\mathcal{M}}$ 12.0 At 23MS18, **OPEN** the drain cock on the pressure regulator.
 - $\frac{7}{12}$ 13.0 At 21MS18, OPEN the drain cock on the pressure regulator.
 - 14.0 **PERFORM** either of the following to Main Steam Isolate 21MS167, MS ISOL VLV:

NOTE

It is only necessary to fail either 21MS171 or 21MS169 to CLOSE 21MS167.

CAUTION

Steam hazard when opening 21MS169 or 21MS171 because of telltale leakoff drain pinholes downstream of valves.

- 14.1 **PERFORM** the following to fail open 21MS171, MS ISO V STEAM ASSIST, at No. 2 Unit Main Stm Vent Vlv Control Panel 688-2A:
 - ____ A CLOSE 2CA1318, SUP TO PNL 688-2A.
 - ____ B CLOSE 2CA1319, SUP TO PNL 688-2A.
 - C OPEN drain cock of pressure regulator for SV-275 (located inside No. 2 Unit Main Stm Vent Vlv Control Panel 688-2A).

<u>OR</u>

- _ 14.2 **PERFORM** the following to fail open 21MS169, MS ISOL V STEAM ASSIST, at No. 2 Unit Main Stm Vent Vlv Control Panel 689-2A:
 - A CLOSE 2CA1320, SUP TO PNL 689-2A.
 - B CLOSE 2CA1321, SUP TO PNL 689-2A.
 - C OPEN drain cock of pressure regulator for SV-274 (located inside No. 2 Unit Main Stm Vent Vlv Control Panel 689-2A).

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ATTACHMENT 7 (Page 6 of 7)

#1 NEO Operator

N[A

23.0 PERFORM either of the following to Main Steam Isolate 22MS167, MS ISOL VLV:

<u>NOTE</u>

It is only necessary to fail either 22MS171 or 22MS169 to CLOSE 22MS167.

CAUTION

Steam hazard when opening 22MS169 or 22MS171 because of telltale leakoff drain pinholes downstream of valves.

23.1 **PERFORM** the following to fail open 22MS171, MS ISO V STEAM ASSIST, inside No. 2 Unit Main Stm Vent Vlv Control Panel 688-2B:

A. CLOSE 22MS171-A/S, 22MS171 AIR SUPPLY.

B. OPEN draincock of pressure regulator for SV-281.

<u>OR</u>



23.2 **PERFORM** the following to fail open 22MS169, MS ISO V STEAM ASSIST, inside No. 2 Unit Main Stm Vent Vlv Control Panel 689-2B:

A. CLOSE 22MS169-A/S, 22MS169 AIR SUPPLY.

B. OPEN draincock of pressure regulator for SV-280.

s2.op-ab.cr-0001(Q)

ATTACHMENT 7 (Page 7 of 7)

#1 NEO Operator



24.0 PERFORM either of the following to Main Steam Isolate 24MS167, MS ISOL VLV:

<u>NOTE</u>

It is only necessary to fail either 24MS171 or 24MS169 to CLOSE 24MS167.

CAUTION

Steam hazard when opening 24MS169 or 24MS171 because of telltale leakoff drain pinholes downstream of valves.

PERFORM the following to fail open 24MS171, MS ISO V STEAM ASSIST, inside No. 2 Unit Main Stm Vent Vlv Control Panel 688-2D:

A. CLOSE 24MS171-A/S, 24MS171 AIR SUPPLY.



- B. OPEN draincock of pressure regulator for SV-285.
- <u>or</u>

4.2 **PERFORM** the following to fail open 24MS169, MS ISO V STEAM ASSIST, inside No. 2 Unit Main Stm Vent Vlv Control Panel 689-2D:

- A. CLOSE 24MS169-A/S, 24MS169 AIR SUPPLY.
- H B. OPEN draincock of pressure regulator for SV-284.
- 25.0 NOTIFY the CRS and STA that steps 1 through 24 of Attachment 7 are completed.
 - 26.0 **REMAIN** in the Outer Pen Area.

CAUTION

When operating hand sender in E/P bypass line, DO NOT exceed a maximum of 20 psig indicated pressure on PL-8909 & PL-8910

- 27.0 When directed by the CRS, SLOWLY THROTTLE OPEN 22 & 24 MS10s and MAINTAIN Steam Generator Pressures @ 1005 psig (Tave = 547°F), by operating the hand sender in E/P bypass line at No. 2 Unit 22 & 24 Steam Generator Press Control Panels 684-2B and 684-2D respectively.
- 28.0 VERIFY opening of the MS10s by observing pressure indication on PL-8908 and PL-8910, respectively.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE
STATION: SALEM
SYSTEM: RPS (012)
TASK: Locally open the Reactor Trip Breakers and the Rod Drive MG Set Breakers Set Breakers
TASK NUMBER: 1130110501
JPM NUMBER: 2002 GOLF NRC RO P3
ALTERNATE PATH: K/A NUMBER: 2.1.30
APPLICABILITY: RO SRO EO X RO X
EVALUATION SETTING/METHOD: Plant/Simulate
REFERENCES: EOP-FRSM-1
TOOLS AND EQUIPMENT: NONE
VALIDATED JPM COMPLETION TIME: 5 Minutes
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A
APPROVAL: BARGAINING UNIT REPRESENTATIVE TRAINING SUPERVISOR or designee or designee
 CAUTION: No plant equipment shall be operated during the performance of a JPM without the following: 1. Permission from the OS or Unit CRS; 2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions). 3. Verification of the "as left" condition by a qualified individual.
ACTUAL JPM COMPLETION TIME: Minutes
ACTUAL TIME CRITICAL COMPLETION: Minutes
JPM PERFORMED BY: GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: DATE:
Nuclear Common Page 1 of 4 Rev. 0

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: RPS (012)

TASK: Locally open the Reactor Trip breakers and the Rod Drive MG Set breakers.

TASK NUMBER: 1130110501

INITIAL CONDITIONS:

- 1. The Unit 2 reactor was at 100% when a reactor trip was demanded.
- 2. All efforts to trip the reactor from the Control Room have been unsuccessful.

SIMULATOR SETUP:

N/A

INITIATING CUE:

In accordance with 2-EOP-FRSM-1, the CRS has directed you to open the Unit 2 reactor trip breakers and rod drive MG set breakers using their local controls.

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.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: RPS (012)

TASK:	Locally open the Reactor Trip breakers and the Rod Drive MG Set breakers.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:	This is a "skill of the operator" task		
	1	Proceed to the Electrical Switchgear Room (El 84).	Operator enters the correct Unit Electrical Switchgear Room.		
*	2	Trips the Reactor Trip Breakers.	Operator identifies the correct breakers, describes how to remove the trip guard and depresses the trip pushbutton on at least one breaker.		
			CUE: For each breaker "the breaker is OPEN".		
*	3	Trips Rod Drive MG Sets.	Operator identifies the correct breakers and trips BOTH Rod Drive MG Sets by opening at least a motor or generator breaker on each MG set		
			CUE: For each breaker operated "the breaker is OPEN".		
	4	Notifies control room	Locates nearest page or phone		
		STOP TIME:			

Terminating Cue: Acknowledge report and then state "this JPM is complete".

INITIAL CONDITIONS:

- 1. The Unit 2 reactor was at 100% when a reactor trip was demanded.
- 2. All efforts to trip the reactor from the Control Room have been unsuccessful.

INITIATING CUE:

In accordance with 2-EOP-FRSM-1, the CRS has directed you to open the Unit 2 reactor trip breakers and rod drive MG set breakers using their local controls.

N	1	С.	Т	Q-	W	/B	.ZZ	-0	3	1(0((Z))
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	OPERATOR TRAINING PROGRAM
STATION:	JOB PERFORMANCE MEASURE SALEM
SYSTEM:	AFW
TASK:	Align AFW to an Alternate Source – DM Water
TASK NUMBER:	1130050501
JPM NUMBER:	2002 GOLF NRC SROI/SROU P1
ALTERNATE PATH:	K/A NUMBER: 2.1.30 IMPORTANCE FACTOR: 3.9 3.4
APPLICABILITY: EO	
EVALUATION SETT	NG/METHOD: Plant/Simulate
REFERENCES: S	.OP-SO.AF-0001, Rev. 21
TOOLS AND EQUIP	IENT: NONE
VALIDATED JPM CO	MPLETION TIME: 15 Minutes
	IFIED FOR TIME CRITICAL STEPS: NA
R	Kanstrika I. DHalla
BARGAINING REPRESENT	NIT TRAINING SUPERVISOR OPERATIONS MANAGER OVE or designee or designee
BARGAINING BARGAINING REPRESENTAT CAUTION: No F JPN 1. F 2. E ii 3. V	NIT IVETRAINING SUPERVISOR or designeeOPERATIONS MANAGER or designeeIant equipment shall be operated during the performance of a without the following: ermission from the OS or Unit CRS; irect oversight by a qualified individual (determined by the adividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual.
CAUTION: No p JPN 1. F 2. E ii 3. V	NIT TRAINING SUPERVISOR OPERATIONS MANAGER INE or designee OPERATIONS MANAGER INT or designee or designee Iant equipment shall be operated during the performance of a without the following: or designee ermission from the OS or Unit CRS; irect oversight by a qualified individual (determined by the dividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual.
CAUTION: No P JPN 1. F 2. E 3. V ACTUAL JPM COMF	NIT TRAINING SUPERVISOR OPERATIONS MANAGER NVE or designee OPERATIONS MANAGER INT or designee OPERATIONS MANAGER INT or designee OPERATIONS MANAGER Int equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated during the performance of a or designee Iant equipment shall be operated by a qualified individual (determined by the or designee Iant equipment shall be operated by a qualified individual (determined by the or designee
ACTUAL JPM COMP	NIT TRAINING SUPERVISOR OPERATIONS MANAGER NVE or designee OPERATIONS MANAGER Int equipment shall be operated during the performance of a without the following: or designee ermission from the OS or Unit CRS; irect oversight by a qualified individual (determined by the adividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual. LETION TIME: Minutes CAL COMPLETION: Minutes
ACTUAL JPM COMF ACTUAL TIME CRIT	NIT TRAINING SUPERVISOR OPERATIONS MANAGER NVE or designee OPERATIONS MANAGER Int equipment shall be operated during the performance of a without the following: or designee ermission from the OS or Unit CRS; irect oversight by a qualified individual (determined by the adividual granting permission based on plant conditions). erification of the "as left" condition by a qualified individual. LETION TIME: Minutes Y: GRADE: SAT V: UNSAT
ACTUAL JPM COMP ACTUAL JPM COMP ACTUAL TIME CRIT JPM PERFORMED E REASON, IF UNSAT	NIT TRAINING SUPERVISOR OPERATIONS MANAGER NVE Or designee OPERATIONS MANAGER IANT equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a without the following: or designee Iant equipment shall be operated during the performance of a qualified individual (determined by the dividual granting permission based on plant conditions). or designee LETION TIME: Minutes Minutes Y: GRADE: SAT UNSAT SFACTORY: DATE DATE

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OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:

DATE		

SYSTEM: AFW

TASK: Align AFW to an Alternate Source – DM Water.

TASK NUMBER:

INITIAL CONDITIONS:

1. The unit is in HSB with AFW supplying the SG's. An accident involving a large truck has caused a hole in the AFWST.

SIMULATOR SETUP:

N/A

INITIATING CUE:

Align the Demineralized Water Tanks to the AFW pump suction IAW S2.OP-SO.AF-0001. Another Operator is standing by to operate valves located outside the RCA. Inform the Evaluator when a valve located outside of the Control Point must be operated. The AF52 valves will be operated from the Control Room in accordance with Step 5.8.2.D of the procedure.

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.

NO. 1 Q-VVD.22-0310(A

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AFW

Align AFW Pump Suction header to DMST TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
		Operator reviews applicable sections of S2.OP-SO.AF-0001(Q).	Evaluator provides copy of properly marked up procedure and Attachment 4.		
			NOTE: Category II procedure use requirements apply.		
			CUE: Step 5.8.2.A has been completed. Beginning at Step 5.8.2.B, perform the NEO steps. The AFW PUMP BACKUP SUCTION VALVES (21, 22, 23AF52) valves will be operated from the control room.		
		5.8.2.B: Direct NEO to align DM Water to AFW IAW Attachment 4.			
* #	Att. 4, 1.0	CLOSE the following ALTERNATE SUCTION PIPING DRAIN VALVEs:	NOTE: sequence Critical to close drains in 1.0 prior to performing 2.0		
*		 2AF94 (Elev. 64 Switchgear Room) 1AF94 (Elev. 64 Switchgear Room) 	Candidate should indicate AF94 valves are located outside the Control Point CUE: The Operator outside the control point has closed the AF94's		
*		 1AF142 (Elev. 64 Aux Bldg., near 1 Waste Monitor Hold-up Tank Pump) 1AF95 (Elev. 64 Aux Bldg. corridor) 2AF95 (Elev. 64 Aux Bldg. corridor) 	Locates 1AF142, 1AF95 and 2AF95 (directly below AFW pumps on 64' El.) and simulates closing.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: AFW

TA	TASK: Align AFW Pump Suction header to DMST				
# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	UNIT 2 Only 2.0	OPEN 1AF51, AF BU TIE TO ALT WTR SUP VALVE (Elev. 84' outside Swgr. Rms.)	Candidate should indicate 1AF51 valve is located outside the Control Point		
			CUE: The Operator outside the control point has opened 1AF51.		
*	3.0	SLOWLY OPEN 1DM254, AFW PUMP DM WTR SUP LINE FILL VALVE, to fill	Candidate should indicate 1DM254 valve is located outside the Control Point		
	AFW Pumps alterna (Elev. 88' TGA, abo Pump).	AFW Pumps alternate suction piping (Elev. 88' TGA, above 15 TGA Sump Pump).	CUE: Operator outside the control point has slowly opened 1DM254.		
	4.0	IF any AUTO VENT valve fails to close after all air is expelled from alternate suction piping, THEN CLOSE associated AUTO VENT ISOL VALVE:			
		Unit 1: 1DM256, 1AF137, 1AF139, 11AF141, 12AF141, 13AF141	CUE: The NEO located outside the Control Point reports that 1DM256 and 1AF137 are closed. A Unit 1 NEO reports all Unit 1 AUTO VENT valves are closed. Check only the Unit 2 AUTO VENT valves.		
		Unit 2: 2AF139, 21AF141, 22AF141,	Locates:		
		23AF141	• AF141's-directly above each respective AF52.		
			 2AF139-next to the AFW/SW spoolpiece 		
			CUE: As each valve is located: the AUTO VENT valve is closed.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AFW

Align AFW Pump Suction header to DMST TASK:

#	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	5.0	When suction piping is filled, OPEN 1DM216, AF PUMP DM WTR SUP VALVE (Elev. 84' TGA)	Candidate should indicate 1DM216 valve is located outside the Control Point CUE: Alternate Suction piping is full.		
			1DM216 is open.		
*	6.0	CLOSE 1DM254.	CUE: Operator outside the control point has closed 1DM254.		
	7.0	NOTIFY NCO that DM Water is aligned to alternate suction piping.	Notifies Control Room by page.		
			CUE: Continue with the steps of SO.AF-0001 for Control Room operation of AFW Pp Backup Suction Valves.		
	5.8.2.C	If AUXILIARY FEED PUMP BACKUP SUCTION VALVES are to be operated locally	N/A's steps for local operation.		
	5.8.2.D.	If AUXILIARY FEED PUMP BACKUP SUCTION VALVES are to be operated from the Control Room, THEN:	Proceeds with Step 5.8.2.D		
*	1	Open air supplies to: 21, 22, 23AF52 valves.	Locates the air supply valve for at least one AF52 inside the respective AF Panel (205, 206, 207). The Evaluator may elect to just have the Candidate point out the other two panels.		

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: AFW

Align AFW Pump Suction header to DMST TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
*	2	Locally UNJACK: 21, 22, 23AF52 valves.	Locates all AF52 valves and demonstrates how to UNJACK one of them. (Removes locking collar and jacking wheel)		
			CUE: 21, 22, 23AF52's are UNJACKED.		
			Reports AF52 status to Control Room.		
	3	Open the following valves from the Control Room: • 21-23AF52	CUE: 21, 22, and 23AF52 are open.		
*	5.8.2.E	CLOSE AFW Pp SUCTION VALVES: 21, 22, and 23AF3.	Locates each valve and demonstrates how to close at least one.		
		STOP TIME:			

Terminating Cue: Acknowledge 21, 22, 23AF3 closed and state "this JPM is complete."

INITIAL CONDITIONS:

.

1. The unit is in HSB with AFW supplying the SG's. An accident involving a large truck has caused a hole in the AFWST.

INITIATING CUE:

Align the Demineralized Water Tanks to the AFW pump suction IAW S2.OP-SO.AF-0001. Another Operator is standing by to operate valves located outside the RCA. Inform the Evaluator when a valve located outside of the Control Point must be operated. The AF52 valves will be operated from the Control Room in accordance with Step 5.8.2.D of the procedure.

PSEG Internal Use Only

PSEG NUCLEAR L.L.C. SALEM/OPERATIONS

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S2.OP-SO.AF-0001(Q) - REV. 21

AUXILIARY FEEDWATER SYSTEM OPERATION

USE CATEGORY : II

FIELD COPY EXISTS

- Biennial Review Performed: Yes No $\sqrt{N/A}$
- Change Package(s) and Affected Document Number(s) incorporated into this revision: None
- OTSC(s) incorporated into this Revision: None

REVISION SUMMARY

1.1.3 and Sections 5.5 and 5.6 - added to provide direction in the swapping of Auxiliary Feedwater to the Steam Generators from the Motor Driven Pumps to the Steam Driven Pump and back again. (80043192)

Updated to incorporate current administrative standards for format and personnel titles. Due to the number of editorial changes, no revision bars were used.

EMPLEMENTATION REQUIREMENTS

Effective Date april 4, 2002

None

APPROVED:

MD Junit Gr Operations Manager - Salem

<u>4-4-02</u> Date

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AUXILIARY FEEDWATER SYSTEM OPERATION

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AUXILIARY FEEDWATER SYSTEM OPERATION

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PURPOSE 1.0

- To provide instructions necessary to: 1.1
 - Fill and Vent Aux Feedwater (AFW) System. 1.1.1
 - Feed Steam Generators with AFW Pumps. 1.1.2
 - Transfer between Motor Driven and Steam Driven AFW Pumps to feed 1.1.3 Steam Generators.
 - Align AFW System for operation in Modes 1, 2, and 3 IAW Technical 1.1.4 Specification 3.7.1.2.
 - Remove AFW System from AFW Storage Tank (AFWST) and align to 1.1.5 alternate water sources.
 - Remove AFW System from alternate water sources and align to AFWST. 1.1.6
 - Prepare to drain AFW Storage Tank (AFWST). 1.1.7
 - Slow start Turbine-Driven AFW Pump after maintenance for adjustments. 1.1.8
- This procedure is applicable in any Mode. 1.2

PREREOUISITES 2.0

suction.

- Fft 2.1 IDENTIFY sections of this procedure that are <u>NOT</u> to be performed with "N/A".
 - REVIEW Components "Off Normal and Off-Normal Tagged" List(s) for system and support system(s) associated with evolution to be performed in this procedure.
- IF aligning Service Water to supply AFW System, THEN OBTAIN EDO/OS permission for aligning Service Water to supply AFW System.
- $F_{1} = 2.1$ $F_{2.2}$ $F_{1} = 2.3$ $F_{1} = 2.4$ $F_{1} = 2.5$ $F_{1} = 2.5$ IF aligning Service Water to supply AFW System per EOP-FRHS-1, AND AFW pumps are NOT available, THEN ENSURE Steam Generator pressure is less than Service Water Header pressure.
 - IF restoring AFW suction to normal alignment (Section 5.9) following Demin Water to AFW alignment. THEN ENSURE that Demin Water to AFW alignment is not required for Unit 1 AFW

IF performing slow start of the Turbine-Driven AFW Pump, THEN ENSURE personnel from Mechanical Maintenance/I&C are available to observe slow start for proper governor operation.



- FTL 2.7 IF supplying the AFW System via the AFWST, THEN
 - FK 2.7.1 Chemistry Department is operating the AFWST nitrogen blanket IAW SC.CH-TI.ZZ-0123(Q), Chemistry Shift Turnover.

- Chemistry Department is controlling the nitrogen blanket for the AFWST IAW SC.CH-TI.NT-0861(Q), AFST Nitrogen Purge Rig Operation.
- Ell
 2.7.2
 Chemistry Department is IAW SC.CH-TI.NT-0861

 Ell
 2.8
 IF preparing to drain the AFWST,

 THEN:
 - 2.8.1 **REVIEW** Technical Specification 3.7.1.3 for applicability.

2.8.2 ENSURE Chemistry Department available to support draining.

PRECAUTIONS AND LIMITATIONS 3.0

- Procedure Use and adherence policy as found in NC.NA-AP.ZZ-0001(Q). Nuclear 3.1 Procedure System, is applicable to this procedure.
- Multiple starts of Motor-Driven AFW Pumps may result in deterioration of pump 3.2 motor windings. SC.OP-DD.ZZ-0003(Z), Large Motor Starting Criteria, contains starting restrictions for operation of Motor-Driven AFW Pumps.
- Maximum permissible winding temperature is 266°F for 21 and 22 AFW Pumps. The 3.3 normal operating winding temperature (fully loaded) is 230°F for 21 AFW Pump, and 209°F for 22 AFW Pump.
- AFW Pumps must be run for a minimum of 5 minutes following the completion of 3.4 (PR990526150) chemical addition to flush the lines clear of residual chemicals.
- Operation of AFW Pumps low suction pressure trip circuit is dictated by high wind and 3.5 flooding conditions IAW S2.OP-AB.ZZ-0001(Q), Adverse Environmental Conditions. [C0323]
- Coordination between Unit 2 and Unit 1 is required for placing AFW alternate suction 3.6 piping in service and restoring to normal alignment.
- DO NOT Trip Turbine-Driven AFW Pump with local trip switch unless the 3.7 Local/Remote switch is in the Local position. This will prevent damage to the SSPS test curcuit.
 - Leaving local CMC switch in TRIP will damage trip solenoid control coil that would 3.8 render all trip capability inoperable except Hand Trip Lever and Emergency Trip Lever.
- Minimum allowable AFWST level during Modes 1, 2, and 3 is 200,000 gallons 3.9 (91.09%) (TS 3.7.1.3).



- 3.10 Aligning Fresh Water and Fire Protection Water to AFW System renders one Fire Protection System inoperable.
- 3.11 Continuously monitor AFWST level during fills to prevent overflow.
- _____ 3.12 Both steam supplies to 23 AFW Pump must be OPERABLE to consider 23 AFW Pump OPERABLE IAW Technical Specification 3.7.1.2.
- 3.13 An unavailable motor-driven AFW Pump must have its 125VDC control power energized <u>prior to</u> selecting PRESSURE OVERRIDE DEFEAT in Step 5.2.3, 5.6.3. This allows the associated AF21 valve to be controlled from the Control Room console bezel.
- 3.14 When operating the Turbine-Driven AFW Pump knurled knob, <u>DO NOT</u> apply excessive force so as to move the knob past the minimum and maximum stops. Applying excessive force may loosen knob, causing a loss of local control and damage to governor internals. Should the knurled knob loosen, contact maintenance to tighten knob. Should the internals of the governor move, as determined by maintenance, the governor must be removed and sent out for repair.
 - $\frac{3.15}{1.00}$ 22 Blowdown tank will spill over into 23 Aux Feed Pump Turbine Steam Header Drain Line at $\approx 91.6\%$ (66") level. Line will fill with water and present backpressure problems for drains.
 - _____ 3.16 The following are applicable when performing section 5.11, Slow Start Turbine-Driven AFW Pump:
 - 3.16.1 When Main Steam Isolation Valves are closed, varying the steam flow rate to No. 23 AF Turbine has the potential to cause a Safety Injection actuation due to Steam Line Differential Pressure.
 - 3.16.2 <u>IF</u> Unit 2 is in Mode 1 or 2, <u>THEN</u> the time that 23 AF Pump watertight door is open should be minimized <u>AND</u> the NEO is to inform the NCO of door opening and closing times for recording IAW SC.OP-AP.ZZ-0004(Q), Cyclic Data Monitoring Program.
 - <u>3.16.3</u> The Governor Oil Reservoir level is to remain observable in the sightglass during 23 AF Pump operation.
 - 3.16.4 Turbine speed is not to exceed 4000 rpm under any circumstances. If a control problem arises, abnormal noises are heard, or excessive vibration occurs, the operator is to trip the turbine with the 2MS52 Hand Trip Lever.
 - _____ 3.16.5 Technical Specification 3.7.1.2 is applicable when 2MS52, 23 AF PMP TURB TRIP V is tripped.
 - <u>3.16.6</u> <u>IF</u> any turbine bearing temperature exceeds 165°F, <u>THEN</u> 23 AF Turbine should be immediately tripped.
 - 3.16.7 <u>DO NOT</u> operate the Turbine-Driven AFW Pump if suction pressure is ≤ 8.0 psig.

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4.0 EOUIPMENT/MATERIAL REOUIRED

- 4.1 Additional Tools and Equipment:
 - Pipe wrench for removal and installation of pipe caps (Section 5.1)
 - Wrenches for Fire Water to AFW Spool Piece installation and removal (Sections 5.8, 5.9)
 - ♦ JA Master Key for locked valves and access to 2MS52 (Sections 5.3, 5.4, 5.7, 5.8, 5.9)
 - Ladder for access to AFW alternate suction line drain valves on Elev. 64' Aux Bldg (Sections 5.8, 5.9)
 - Ladder for access to AFW alternate suction line drain valves in Elev. 64' Switchgear Rooms (Sections 5.8, 5.9)
 - Aux Feedwater Spool Piece installation toolbox for installation and removal of Service Water to AFW Spool Piece (Sections 5.8, 5.9)
 - Hose or sleeving for draining AFW alternate suction line (Section 5.9)
 - Locking tab cutting device for locked valves not secured with JA locks.



5.8 Alternate Water Source Alignments

NOTE

Preferred sequence of alternate water sources in event AFWST is <u>NOT</u> available is as follows:

- 1. Demin Water Storage Tanks
- 2. Fresh Water and Fire Protection Water Storage Tanks
- 3. Service Water

When either Demin Water Storage Tanks or Fresh Water and Fire Protection Water Storage Tanks are relied upon as operable AFW supply, performance of S2.OP-ST.AF-0011(Q), Auxiliary Feed Water Alternate Suction Source Verification Modes 1-3, is required at least once every 12 hours.



ENSURE all AFW Pumps are out-of-service.

 \underline{IF} Demin Water Storage Tank is to be aligned to AFW, \underline{THEN} :

- A. <u>IF</u> the in-service Demin Storage Tank level is <38% (200,000 gallons), <u>THEN</u> ENTER TSAS 3.7.1.3.b.
 - B. Direct NEO to ALIGN Demin Water to AFW IAW Attachment 4.

NA

C. IF AUXILIARY FEED PUMP BACKUP SUCTION VALVES are to be operated locally, THEN:

UNJACK the following values from closed position, <u>AND</u> **REMOVE** jacking wheel:

$$\mathcal{N}$$
 a. 21AF52
 \mathcal{N} **b**. 22AF52
 \mathcal{N} **c**. 23AF52

N/I 2. **INSERT** jacking wheel on other side of jacking mechanism, AND JACK OPEN the following values:

$$\mathcal{M} \stackrel{\text{a.}}{\xrightarrow{}} 21\text{AF52}$$

$$\mathcal{N} \stackrel{\text{f}}{\xrightarrow{}} \mathbf{b}. \qquad 22\text{AF52}$$

$$\mathcal{N} \stackrel{\text{f}}{\xrightarrow{}} \mathbf{c}. \qquad 23\text{AF52}$$

(step continued on next page)

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- 5.8.2 (continued)
 - D. IF AUXILIARY FEED PUMP BACKUP SUCTION VALVES are to be operated from the Control Room, THEN:

,

- 1. **OPEN** air supplies to the following:
 - a. 21AF52 (Inside 21 Aux Feedwater Panel 205)
 - b. 22AF52 (Inside 22 Aux Feedwater Panel 206)
 - c. 23AF52 (Inside 23 Aux Feedwater Panel 207)
- 2. UNJACK the following valves locally:
 - _____a. 21AF52
 - b. 22AF52
 - c. 23AF52
- 3. **OPEN** the following valves from the Control Room:
 - _____a. 21AF52
 - b. 22AF52
 - c. 23AF52
- E. Direct NEO to CLOSE the following AUX FEED PUMP SUCTION VALVEs:
 - ____1. 21AF3
 - _____2. 22AF3
 - _____ 3. 23AF3
- _____ F. <u>IF required to feed Steam Generators from Demin Water Storage Tank,</u> <u>THEN</u>:
 - 1. **NOTIFY** Chemistry that Steam Generators are to be fed from Demin Water Storage Tank.
 - 2. START AFW Pump(s) IAW section(s) of this procedure.
- G. UPDATE WCM to reflect off-normal valve positions.
- H. INITIATE performance of S2.OP-ST.AF-0011(Q) <u>AND</u> RECORD time and date of initiation IAW SH.OP-AP.ZZ-0108(Q), Operability Assessment and Equipment Control Program.



CAUTION

,

Aligning Fresh Water and Fire Protection Water to Auxiliary Feedwater System renders one Fire Protection System inoperable.

- 5.8.3 <u>IF</u> Fresh Water and Fire Protection Water Storage Tank is to be aligned to AFW, THEN:
 - A. <u>IF</u> #1 Fresh Water and Fire Protection Water Storage Tank level is <54% (200,000 gallons), <u>THEN</u> ENTER TSAS 3.7.1.3.b.
 - B. C/T 1NA16847, #1 FIRE PUMP CONTROLLER MODE SELECTOR SWITCH, in the OFF position for OS/CRS to prevent a pump start with the suction valve closed.
 - C. Direct NEO to ALIGN #1 Fresh Water and Fire Protection Water Storage Tank to AFW IAW Attachment 5.
 - D. IF AUXILIARY FEED PUMP BACKUP SUCTION VALVES are to be operated locally, THEN:
 - 1. UNJACK the following valves from closed position, AND REMOVE jacking wheel:
 - _____a. 21AF52
 - b. 22AF52
 - c. 23AF52
 - 2. **INSERT** jacking wheel on other side of jacking mechanism, <u>AND</u> JACK OPEN the following valves:
 - a. 21AF52
 - b. 22AF52
 - c. 23AF52

(step continued on next page)

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- 5.8.3 (continued)
 - E. <u>IF</u> AUXILIARY FEED PUMP BACKUP SUCTION VALVES are to be operated from the Control Room, <u>THEN</u>:
 - 1. **OPEN** air supplies to the following:
 - a. 21AF52 (Inside 21 Aux Feedwater Panel 205)
 - b. 22AF52 (Inside 22 Aux Feedwater Panel 206)
 - c. 23AF52 (Inside 23 Aux Feedwater Panel 207)
 - 2. UNJACK the following valves locally:
 - a. 21AF52
 - b. 22AF52
 - c. 23AF52
 - 3. **OPEN** the following valves from the Control Room:
 - a. 21AF52
 - b. 22AF52
 - c. 23AF52
 - F. Direct NEO to CLOSE the following AUX FEED PUMP SUCTION VALVEs:
 - ____1. 21AF3
 - _____2. 22AF3
 - _____ 3. 23AF3
 - G. <u>IF</u> required to feed Steam Generators from Fresh Water and Fire Protection Water Storage Tank, <u>THEN:</u>
 - 1. **START** AFW Pump(s) IAW section(s) of this procedure.
 - 2. **NOTIFY** Chemistry that Steam Generators are being fed from Fresh Water and Fire Protection Water Tanks.
 - H. UPDATE WCM to reflect off-normal valve positions.

I. INITIATE performance of S2.OP-ST.AF-0011(Q), <u>AND</u> RECORD time and date of initiation IAW SH.OP-AP.ZZ-0108(Q), Operabioity Assessment and Equipment Control Program.



CAUTION

EDO/OS permission is required for aligning Service Water to supply AFW System.

- <u>5.8.4</u> <u>IF</u> all other feedwater sources are depleted or unavailable, <u>THEN</u> ALIGN Service Water to AFW, as follows:
 - A. OBTAIN EDO/OS permission to align Service Water to supply AFW System.
 - B. Direct NEO to ALIGN Service Water to AFW IAW Attachment 6.
 - C. <u>IF</u> required to feed Steam Generators from Service Water, <u>THEN</u>:
 - 1. IF 21 23AF3, AUX FEED PUMP SUCTION VALVEs, are open, <u>THEN</u> direct NEO to CLOSE the following AUX FEED PUMP SUCTION VALVEs:
 - _____a. 21AF3
 - _____b. 22AF3
 - _____ c. 23AF3
 - ____ 2. START AFW Pump(s) IAW appropriate Subsection(s) of this procedure.
 - 3. NOTIFY Chemistry that Steam Generators are being fed from Service Water.
 - _ D. UPDATE WCM to reflect off-normal valve positions.

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ATTACHMENT 4 (Page 1 of 2)

DEMIN WATER TO AFW ALIGNMENT

NOTE

When AFW Alternate Suction piping filled, inspections of Unit 1 and Unit 2 Elev. 64' Switchgear Rooms are required at least once per shift with results recorded in Control Room Narrative Log.

- 1.0 **CLOSE** the following ALTERNATE SUCTION PIPING DRAIN VALVEs:
- ♦ 2AF94 (Elev. 64' Switchgear Room)
- ♦ 1AF94 (Elev. 64' Switchgear Room)
- ♦ 1AF142 (Elev. 64' Aux Bldg, near 1 Waste Monitor Hold-Up Tank Pump)
- ♦ 2AF95 (Elev. 64' Aux Bldg corridor)
- ♦ 1AF95 (Elev. 64' Aux Bldg corridor)
- ____ 2.0 OPEN 1AF51, AF BU TIE TO ALT WT SUP VALVE (Elev. 84', outside Swgr Rms).
- _____ 3.0 Slowly OPEN 1DM254, AFW PUMP DM WTR SUP LINE FILL VALVE, to fill AFW Pump alternate suction piping (Elev. 88' TGA, above 15 TGA Sump Pump).

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ATTACHMENT 4 (Page 2 of 2)

DEMIN WATER TO AFW ALIGNMENT

4.0 <u>IF any AUTO VENT valve fails to CLOSE after all air is expelled from alternate suction piping,</u> <u>THEN</u> CLOSE associated AUTO VENT ISOL VALVE: [C0455]

(AUTO VENT	AUTO VENT ISOL VALVE	LOCATION
	1DM256	1DM255	El. 88' TGA
	1AF137	1AF136	El. 84', outside Switchgear rooms
	1AF139	1AF138	El. 84' Aux Bidg, 11 CC Hx room
	11AF141	11AF140	El. 84' Aux Bldg, 11 AFW Pump alt. suction line
	12AF141	12AF140	El. 84' Aux Bldg, 12 AFW Pump alt. suction line
	13AF141	13AF140	El. 84' Aux Bldg, 13 AFW Pump alt. suction line
	2AF139	2AF138	El. 84' Aux Bldg, 21 CC Hx room
	21AF141	21AF140	El. 84' Aux Bldg, 21 AFW Pump alt. suction line
	22AF141	22AF140	El. 84' Aux Bldg, 22 AFW Pump alt. suction line
	23AF141	23AF140	El. 84' Aux Bldg, 23 AFW Pump alt. suction line

5.0 <u>WHEN</u> suction piping is filled, <u>THEN</u> OPEN 1DM216, AF PUMP DM WTR SUP VALVE (Elev. 88' TGA).

6.0 CLOSE 1DM254, AFW PUMP DM WTR SUP LINE FILL VALVE

7.0 NOTIFY NCO that Demin Water is aligned to AFW alternate suction piping.

	OPERATOR TRAINING PROGRAM	NC.TQ-WB.ZZ-0310(Z)
STATION:	JOB PERFORMANCE MEASURE SALEM	
SYSTEM:	ESFAS (013)	
TASK:	De-energize SEC's IAW LOPA-1	
TASK NUMBER:	1150140501	
JPM NUMBER:	2002 GOLF NRC SRO P2	
ALTERNATE PATH:		ER: 2.1.30 OR: 3.9 3.4
APPLICABILITY: EO X		RO SRO
EVALUATION SETT	ING/METHOD: Plant/Simulate	
REFERENCES: 1	-EOP-LOPA-1, Rev. 22	
TOOLS AND EQUIP	MENT: NONE	
VALIDATED JPM CO	OMPLETION TIME: 10 Minutes	_
TIME PERIOD IDEN	TIFIED FOR TIME CRITICAL STEPS:	N/A
APPROVAL:		AAA M
BARGAINING	UNIT TRAINING SUPERVISOR	OPERATIONS MANAGER
REPRESENTA	TIVE or designee	or designee
	plant equipment shall be operated du / without the following:	iring the performance of a
1. 2. 3. \	Permission from the OS or Unit CRS; Direct oversight by a qualified individ individual granting permission based Verification of the "as left" condition	lual (determined by the on plant conditions). by a qualified individual.
ACTUAL JPM COM	Permission from the OS or Unit CRS; Direct oversight by a qualified individ individual granting permission based Verification of the "as left" condition 	lual (determined by the on plant conditions). by a qualified individual.
ACTUAL JPM COMI	Permission from the OS or Unit CRS; Direct oversight by a qualified individ individual granting permission based Verification of the "as left" condition PLETION TIME:	lual (determined by the on plant conditions). by a qualified individual.
ACTUAL JPM COMI ACTUAL TIME CRIT	Permission from the OS or Unit CRS; Direct oversight by a qualified individ individual granting permission based Verification of the "as left" condition 	lual (determined by the on plant conditions). by a qualified individual.
ACTUAL JPM COMI ACTUAL TIME CRIT JPM PERFORMED I REASON, IF UNSAT	Permission from the OS or Unit CRS; Direct oversight by a qualified individ individual granting permission based Verification of the "as left" condition PLETION TIME: <u>Minutes</u> 'ICAL COMPLETION: <u>Minute</u> 3Y: <u>GRADE</u> 'ISFACTORY:	lual (determined by the on plant conditions). by a qualified individual.

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____

DATE:

SYSTEM: ESFAS (013)

TASK: De-energize SEC's IAW LOPA-1

TASK NUMBER: 1150140501

INITIAL CONDITIONS:

- 1. A station blackout has occurred.
- 2. The operating crew has implemented 1-EOP-LOPA-1.

SIMULATOR SETUP:

N/A

INITIATING CUE:

You have been dispatched from the WCC to de-energize all Unit 1 SEC's by opening 1AVIB24, 1BVIB27, and 1CVIB9.

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.
NC.TQ-WB.ZZ-0310(Z)

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: ESFAS (013)

De-energize SEC's IAW LOPA-1 TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:			
	1	Provide Candidate with tearoff sheet.	NOTE: Breakers can be operated in any sequence.		
*	2	1AVIB24, 1A SEC	Locates 1AVIB24 (1A VIB Bus Panel, Relay Room) and points out OPEN position.		
*	3	1BVIB27, 1B SEC	Locates 1BVIB27 (1B VIB Bus Panel, Relay Room) and points out OPEN position.		
*	4	1CVIB9, 1C SEC	Locates 1CVIB9 (1C VIB Bus Panel, Relay Room) and points out OPEN position.		
	5	Makes report to control room	Locates nearest phone or page		
		STOP TIME:			

Terminating Cue: Acknowledge report and state "this JPM is complete".

INITIAL CONDITIONS:

- 1. A station blackout has occurred.
- 2. The operating crew has implemented 1-EOP-LOPA-1.

INITIATING CUE:

You have been dispatched from the WCC to de-energize all Unit 1 SEC's by opening 1AVIB24, 1BVIB27, and 1CVIB9.

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STATION:	OPERATOR TRAII JOB PERFORMA SALEM	NING PROGRAM NCE MEASURE			
SYSTEM:	Pressurizer Pressure	e (010)			
TASK:	Take local control of	the PZR backup h	eaters		
TASK NUMBER:	1140130401				
JPM NUMBER:	2002 GOLF NRC SF	ROI P3/SROU P2			
ALTERNATE PATH:		K/A NUMBER	R: 2.1.30 R: 3.9 3.4		
APPLICABILITY: EO X F			RO SRO		
EVALUATION SETTIN	IG/METHOD: Plant	/Simulate			
REFERENCES: S1	.OP-AB.CR-0001, Rev	v. 7			
TOOLS AND EQUIPMENT: NONE					
VALIDATED JPM COMPLETION TIME: 15 Minutes					
TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A					
APPROVAL: BARGAINING UI REPRESENTATI	NIT TRAININ VE or	G SUPERVISOR designee	OPERATIONS MANAGER or designee		
 CAUTION: No plant equipment shall be operated during the performance of a JPM without the following: 1. Permission from the OS or Unit CRS; 2. Direct oversight by a qualified individual (determined by the individual granting permission based on plant conditions). 3. Verification of the "as left" condition by a qualified individual. 					
ACTUAL JPM COMPLETION TIME: Minutes					
ACTUAL TIME CRITI	CAL COMPLETION:	Minutes	_		

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JPM PERFORMED BY:	GRADE: 🔄 SAT 🗌 UNSAT
REASON, IF UNSATISFACTORY:	
EVALUATOR'S SIGNATURE:	DATE:

NC.TQ-WB.ZZ-0310(Z)

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME:	
DATE:	

SYSTEM: Pressurizer Pressure (010)

TASK: Take local control of the PZR backup heaters.

TASK NUMBER: 1140130401

INITIAL CONDITIONS:

- 1. The Control Rooms have been evacuated in accordance with S1 and S2.OP-AB.CR-0001.
- 2. The Hot Shutdown Panels are manned.
- 3. Remote panel operators are being dispatched.
- 4. All pressurizer pressure controls were in MANUAL when the Control Room was evacuated

SIMULATOR SETUP:

N/A INITIATING CUE:

You have been assigned to operate the Unit 1 pressurizer heaters in accordance with S1.OP-AB.CR-0001 (AB.CR-1), Attachment 12. Report to the local pressurizer heater control station and simulate establishing communications.

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.

NC.TQ-WB.ZZ-0310(Z)

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: ______ DATE: _____

SYSTEM: Pressurizer Pressure (010)

TASK: Take local control of the PZR backup heaters.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
		START TIME:	Provide a copy of S1.OP-AB.CR-0001, Attachment 12.		
	1	Candidate proceeds to the Unit 1 Electrical Penetration Area, El. 78.			
	(1.0)	Establish communications with the Hot Shutdown Panel (HSD) Operator.	Locates/points out headset and jack.		
	(2.0)	Locally close the following PZR Heater supply breakers:			
		1EX1EPX, 1EP 480V PZR HTR BUS MN BKR	Locates 1EX1EPX, Verify closed.		
		 1GX1EP1GP, 1GP 480V PZR HTR BUS B/U SECT MN BKR 	Locates 1GX1EP1GP, Verify closed.		

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140.1Q*44D.22-0310(2)

OPERATOR TRAINING PROGRAM JOB PERFORMANCE MEASURE

NAME: _____ DATE: _____

SYSTEM: Pressurizer Pressure (010)

Take local control of the PZR backup heaters. TASK:

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT evaluation)
	(3.0)	Determine if PZR Pressure is controlling pressure at 2235 psig in AUTO by communicating with HSD Panel Operator.	Simulates communications with HSD Operator.		
*	(3.1)	 If Pressurizer pressure is not controlling in AUTO, then manually control Pressurizer pressure at 2200 psig to 2250 psig by taking LOCAL/MANUAL control and operating Pressurizer heater breakers as required to stabilize pressure. 	Locates the LOCAL and MANUAL control stations (There is one station for LOCAL control and one station for MANUAL control for 11 Backup heaters. There is one station for LOCAL control and one station for MANUAL control for 12 Backup heaters. Both are attached on the upper right end of the heater busses. Candidate takes manual control by selecting LOCAL/REMOTE switches to LOCAL for 11 and 12 Backup heaters.		
*	(3.2)	When directed by the HSD Panel Operator, reduce pressure by deenergizing Pressurizer heaters during RCS cooldown.	 CUE: An RCS cooldown is in progress, de- energize 11 Backup heaters. Candidate locates MANUAL station on 1GP Heater bus and selects OFF for 11 Backup heaters. CUE: The heaters are off. 		
		STOP TIME:			

Terminating Cue: Once heater breakers are off then state "this JPM is complete".

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INITIAL CONDITIONS:

1. The Control Rooms have been evacuated in accordance with S1 and S2.OP-AB.CR-0001.

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- 2. The Hot Shutdown Panels are manned.
- 3. Remote panel operators are being dispatched.
- 4. All pressurizer pressure controls were in MANUAL when the Control Room was evacuated

INITIATING CUE:

You have been assigned to operate the Unit 1 pressurizer heaters in accordance with S1.OP-AB.CR-0001 (AB.CR-1), Attachment 12. Report to the local pressurizer heater control station and simulate establishing communications.

ALL ACTIVE ON-THE-SPOT CHANGES MUST BE ATTACHED FOR FIELD USE 20020922

s1.0p-AB.CR-0001(Q)

ATTACHMENT 12 (Page 1 of 1)

LOCAL PRESSURIZER HEATER CONTROL (Electrical Penetration Area elevation 78', Panels 1GP and 1EP)

<u>NOTE</u>

- All operations at local control stations are directed by the Hot Shutdown Panel Operator.
- The following indications and controls are available for local operation: Pressurizer Heater Backup Group LOCAL/REMOTE Switch Pressurizer Heater Backup Group ON/OFF Switches Pressurizer Heater Backup Group power supply breakers
- Pressurizer Heater AUTO cutout at 17% level is defeated <u>only</u> when the control power is removed from the breaker and the breaker is operated with the Close/Trip buttons located on the breaker.

(ANDIDATE 1.0 ESTABLISH communications with the Hot Shutdown Panel Operator.

CANDIDATE 2.0 Locally CLOSE Pressurizer Heater supply breakers.

- ♦ 1EX1EPX, 1EP 480V PZR HTR BUS MN BKR
- ♦ 1GX1EP1GP, 1GP 480V PZR HTR BUS B/U SECT MN BKR
- CANDIDATE 3.0 DETERMINE if Pressurizer Pressure is controlling pressure at 2235 psig in Automatic by communicating with Hot Shutdown Panel Operator.
 - CANDIDATE 3.1 IF Pressurizer pressure is not controlling in automatic, <u>THEN</u> MANUALLY control Pressurizer pressure at 2200 psig to 2250 psig by taking LOCAL/MANUAL control and operating pressurizer heater breakers as required to stabilize pressure.

N/A 3.2 When directed by Hot Shutdown Panel Operator, REDUCE pressure by deenergizing Pressurizer Heaters during RCS cooldown.

4.0 MAINTAIN communications with the Hot Shutdown Panel Operator until access is restored to Control Room.