

Facility: Salem Units 1 & 2

Date of Examination: 1/10/00

Exam Level (circle one): RO/SRO(I)/SRO(U)

Operating Test No.: 1

B.1: Control Room Systems

	System	JPM Description	Type Code*	Safety Function
1	CVCS (004)	Perform a dilution of the RCS	M,S	1
2	ECCS (006)	Shift to Cold Leg Recirculation with 2A 4KV Vital Bus unavailable <u>SRO(U)</u>	A,E,N,S	2
3	PZR (010)	Reduce RCS pressure during a natural circulation cooldown <u>SRO(U)</u>	A,E,N,S	3
4	RHR (005)	Place RHR In Service with the RCS depressurized <u>SRO(U)</u>	L,D,S	4(Pri)
5	CNMT CLG (022)	Service Water leak in a Containment Fan Coil Unit during EOP implementation	A,E,N,S	5
6	AC ELEC (062)	2C 4KV Vital Bus transfer fails	A,E,N,S	6
7	CCW (008)	Shift operating Component Cooling Water Pumps	D,S	8

B.2: Facility Walk-Through

8	AFW (061)	Local control of a MDAFW Pump and the associated valves to feed SG's	E,D,R	4(Sec)
9	EDG (064)	Local start of an Emergency Diesel Generator during EOP implementation <u>SRO(U)</u>	D,R	6
10	DC ELEC/RCS (APE068)	Align the ASDS Inverter to DC and energize RCS loop 22 and 23 WR Th and Tc <u>SRO(U)</u>	E,N	8

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol Room, (S)imulator, (L)ow-Power, (R)CA, (E)OP/AB

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

TASK NUMBER: 004 014 01 01

JPM NUMBER: NRC-2-01

APPLICABILITY: EO RO SRO

K/A NUMBER: 004 A4.12

IMPORTANCE FACTOR: 3.8 3.3

RO SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-SO.CVC-0006 S2.RE-RA.ZZ-0012
Boron Concentration Control Figures

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 15 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: Jill Lloyd for Ed Dally for
PRINCIPAL TRAINING SUPERVISOR 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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____ GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY: _____

EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

TASK NUMBER: 004 014 01 01

INITIAL CONDITIONS:

1. The unit is in Mode 3 with preparations in progress for a reactor startup this shift.
2. Chemistry has reported current boron concentration as 870 ppm. Per an ECP prepared by Reactor Engineering, boron concentration must be adjusted to 850 ppm before rod withdrawal begins.
NOTE: Any boron concentration values can be used for this JPM by adjusting the values in the JPM IAW the REM Figures. Ensure that sufficient latitude exists for interpolation between exponential curves when determining critical tasks.

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

SIMULATOR SETUP

1. Any HSB IC with Tavg approx. 547 °F.
2. CVCS Makeup Control Mode Select in AUTO with boron flow setpoint at approximately 7 gpm.
3. Place 2CV181 in MANUAL.

INITIATING CUE:

You are the RO. Perform the necessary calculations and adjust RCS boron concentration to 850 ppm.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	Operator obtains S2.OP-SO.CVC-0006	<i>NOTE:</i> Category II procedure use requirements apply.		
* #	2	DEPRESS the Makeup Control Mode Select STOP PB.	Presses the STOP pushbutton, STOP PB light illuminates.		
*	3	ENSURE following valves in AUTO: <ul style="list-style-type: none"> • 2CV179, PRI WTR FLOW. • 2CV181, MAKEUP FLOWPATH. • 2CV185, MAKEUP FLOWPATH. • 2CV172, BORIC ACID FLOW. 	Verifies AUTO light illuminated for 2CV179, 2CV172 and 2CV181. *Places 2CV185 in AUTO.		
#	4	OBTAIN Primary Water Flow setpoint for desired dilution rate from REM, Fig. 102.	<i>CUE:</i> Accomplish the dilution over the next 30 minutes period.		
# *	5	ADJUST 2CV179 setpoint to value obtained in previous step.	Adjusts 2CV179 setpoint to 46-67 gpm.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
#	6	DETERMINE amount of Primary Water required for dilution from REM, Fig. 101	Determines 1400-2000 gals. required.		
# *	7	Set Primary Water Flow Register to number of gallons as follows: <ul style="list-style-type: none"> • DEPRESS LIMIT 1 keypad. • IF desired value is not displayed, THEN DEPRESS CLR keypad and enter desired value. • DEPRESS ENT keypad. 	Sets Primary Water Flow Register to 1400-2000 gals.		
	8	ENSURE at least one Primary Water Pump in AUTO.	Verifies one PW Pump AUTO light is illuminated.		
# *	9	DEPRESS Makeup Control Mode Select DILUTE PB.	DILUTE PB illuminated.		
# *	10	DEPRESS Makeup Control Mode Select START PB.	START PB illuminated.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	11	ENSURE following actions occur: <ul style="list-style-type: none"> • 2CV172 CLOSES • Primary Water Pump selected to AUTO, STARTS. • 2CV181 OPENS. • 2CV179 MODULATES to setpoint flow. • Primary Water Flow Register indicates flow. • IF VCT level increases to 78%, THEN ENSURE letdown diverts to CVCS HUT. 	Verifies proper response.		
	12	When the dilution is complete, DEPRESS Makeup Control Mode Select STOP PB.	CUE: Assume that the Primary Water Flow Register has reached 0. STOP PB illuminated.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	13	ENSURE following actions occur: <ul style="list-style-type: none"> • Primary Water Pump selected for AUTO, STOPS. • 2CV181 CLOSES. • 2CV179 CLOSES. 	Verifies the green light illuminates for the PW Pump in AUTO, 2CV181, 2CV185 and 2CV179.		

TERMINATING CUE: Dilution is terminated.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: CVCS

TASK: Perform a dilution of the reactor coolant system.

TASK NUMBER: 004 014 01 01

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

INITIAL CONDITIONS:

- The unit is in Mode 3 with preparations in progress for a reactor startup this shift.
- Chemistry has reported current boron concentration as 870 ppm. Per an ECP prepared by Reactor Engineering, boron concentration must be adjusted to 850 ppm before rod withdrawal begins.

INITIATING CUE:

You are the RO. Perform the necessary calculations and adjust RCS boron concentration to 850 ppm.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem

SYSTEM: ECCS

TASK: TCAF LBLOCA: transfer to Cold Leg Recirculation w/2A vital bus de-energized

TASK NUMBER: 1150100501

JPM NUMBER:

K/A NUMBER: EPE 011 EA1.11

APPLICABILITY:

IMPORTANCE FACTOR:

EO RO SRO

4.1	4.1
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: 2-EOP-LOCA-3

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 9 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: See Initiating Cue

APPROVED:

J. H. Lloyd for
PRINCIPAL TRAINING SUPERVISOR

R. J. Hall
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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____

GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____

DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF LBLOCA: transfer to Cold Leg Recirculation w/2A vital bus de-energized

TASK NUMBER: 1150100501

INITIAL CONDITIONS:

1. Snapshot of LBLOCA, immediately following actuation of the RWST LOW level alarm, with 2A 4KV Vital Bus de-energized (on electrical fault).

INITIATING CUE:

You are the RO/PO. Execute the steps of LOCA-3. This task is time critical. IAW the procedure you should close SJ69 within 3 minutes and complete the shift to CLR within 11.7 minutes, as evidenced by closing SJ30, SJ1 and SJ2. The clock starts when you read the first step. Respond only to alarms associated with the evolution.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2A 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	Is Containment Recirc Sump level >62%?	<i>Evaluator: Log time for evaluation of critical time requirements: _____.</i> Verifies either Ch. A or B Sump Level indication is >62%.		
*	2	Depress "SUMP AUTO ARMED" PB's on 21 and 22SJ44 Bezels	WHITE indicating light energizes and valves stroke OPEN. The RED OPEN indicating light energizes when each valve reaches full stroke.		
	3	Remove lockouts for the following valves: • 2SJ67 • 2SJ68 • 2SJ69	Selects VALVE OPERABLE for SJ67, SJ68, and SJ69 on RP-4 Panel (No power is available to SJ68)		
	4	Are 21 and 22SJ 44 Open?	NO. Power is not available to 21SJ44		
	5	Reset SI	Verifies both SI RESET PB's illuminated		
	6	Reset Emergency Loading for each SEC	Verifies EMERGENCY LOADING RESET PB illuminated for 2B and 2C SEC, 2A SEC blocked.		
	7	Is 21SJ44 open?	NO		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2A 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
# , *	8	Stop 21 RHR Pp	Stops 21 RHR Pp		
* , #	9	Close SJ69	SJ69 closed indication		
	10	Start 22 RHR Pp	Verifies 22 RHR Pp running		
	11	Initiate close on 21RH4 and continue	No power available to 21RH4		
	12	Initiate open on 21SJ44 and continue	21SJ44 has no power		
	13	When 21SJ44 opens then start 21 RHR Pp	21SJ44 has no power		
	14	Reset SI	Previously performed		
	15	Reset EMERGENCY LOADING for each SEC	Verifies EMERGENCY LOADING RESET PB illuminated for 2B and 2C SEC, 2A SEC blocked.		
	16	Reset 230V CONTROL CENTERS	Verifies 230V CONTROL CENTER RESET PB on each DG Bezel is illuminated.		
	17	Are both CS Pp's running?	No		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2A 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	18	Close 21 and 22RH19	21 and 22RH19 (RHR HX DISCH X-CONN VALVES) closed indication <i>Evaluator: Log time for evaluating completion of time critical task: _____ (<3 minutes)</i>		
	19	Stop 23 Charging Pp	23 Charging Pump OOS		
	20	Select appropriate flowpath transition step from TABLE B	Determines 2B and 2C 4KV Vital Buses are energized and proceeds to Step 55		
*	21	Stop 21 Charging Pp	Stops 21 Charging Pp		
	22	Open 22CC16	Verifies 22CC16 (CCW to RHR HX) open		
*	23	Close 2SJ67	2SJ67 (SI Pp Miniflow) closed indication		
	24	Close 2RH1 and 2RH2	Verifies 2RH1 (Common Suction Valves) closed. No power available to 2RH2.		
*	25	Open 22SJ45	22SJ45 (RHR Pp to Charging Pp's) open indication		
*	26	Open 22SJ113	22SJ113 (SI-Chg Pp X-over) open indication		
	27	Start 22 SI and 22 Chg Pp	Verifies 22 SI and Chg Pp running		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2A 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	28	CONTINUOUS CAUTION: If any pump cavitates - ---			
	29	Remove the lockout from 2SJ30	Selects VALVE OPERABLE for 2SJ30 on RP-4 Panel		
*	30	Isolate the RWST as follows: <ul style="list-style-type: none"> • Close 2SJ30 • Close 2SJ1 • Close 2SJ2 	<ul style="list-style-type: none"> • 2SJ30 closed indication • 2SJ1 (RWST-Chg Pp) closed indication • 2SJ2 (RWST-Chg Pp) closed indication 		
*	31	Place controller for recirculation valve 22RH29 in MANUAL and CLOSE the valve	Selects MANUAL, presses CLOSE PB and verifies 22RH29 closed indication		

TERMINATING CUE: 22RH29 closed

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: ECCS

TASK: TCAF LBLOCA: transfer to Cold Leg Recirculation w/2A 4KV Vital Bus de-energized

TASK NUMBER: 1150100501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. A LBLOCA has occurred. All ECCS equipment functioned as designed except 2A Vital Bus failed to energize due to an electrical fault. The transition to LOCA-3 (from LOCA-1) was just made following actuation of the RWST LO Level alarm.

INITIATING CUE:

You are the RO/PO. Execute the steps of LOCA-3. This task is time critical. IAW the procedure you should close SJ69 within 3 minutes and complete the shift to CLR within 11.7 minutes, as evidenced by closing SJ30, SJ1 and SJ2. The clock starts when you read the first step. Respond only to alarms associated with the evolution.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem
SYSTEM: Emergency Operating Procedures
TASK: De-pressurize the RCS during a natural circulation cooldown: TRIP-4 (Alternate Path)
TASK NUMBER: 1150030501

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: EPE 009 EA1.3
IMPORTANCE FACTOR:

3.5	3.8
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: EOP-TRIP-4,
Natural Circulation Cooldown

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 5 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: J. Alford for PRINCIPAL TRAINING SUPERVISOR
D. Hall for OPERATIONS MANAGER

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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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: EOP's

TASK: De-pressurize the RCS during a natural circulation cooldown: TRIP-4 (Alternate Path)

TASK NUMBER: 1150030501

INITIAL CONDITIONS:

- Provide EOP-TRIP-4, marked up through Step 11
- Reset to IC - 2
- Initiate a Loss of Off-site Power and perform actions of TRIP-2
- Transition to TRIP-4 and complete the actions up through Step 11
- Override CV7 CLOSED

INITIATING CUE:

A Loss of Off-site Power has occurred from 100% power. The crew has completed the EOP's through Step 11, EOP-TRIP-4. Starting with Step 12, implement EOP-TRIP-4.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

NAME: _____

JOB PERFORMANCE MEASURE

DATE: _____

SYSTEM: EOP's

TASK: De-pressurize the RCS: TRIP-4 (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	OPEN 2CV2 AND 2CV277 (LETDOWN CONTROL VALVES) AND PLACE IN "AUTO"	Depresses the 2CV2 OPEN and 2CV277 OPEN buttons and verifies the buttons illuminate.		
	2	OPEN 2CV7 (LETDOWN CONTROL VALVE)	Depresses the 2CV7 OPEN button and observes valve remains closed		
	3	ADJUST 2CV55 (CHARGING FLOW CONTROL VALVE) TO RAISE CHARGING FLOW TO AT LEAST 87 GPM	Adjusts 2CV55 OPEN/CLOSE buttons to obtain the desired flow.		
	4	PERFORM THE FOLLOWING ACTIONS SIMULTANEOUSLY: <ul style="list-style-type: none"> • OPEN ONLY ONE ORIFICE ISOLATION VALVE • ADJUST 2CV18 (LETDOWN PRESSURE CONTROL VALVE) TO MAINTAIN LETDOWN PRESSURE AT 300 PSIG 	<p><u>With 2CV7 CLOSED, the candidate should note this step has no purpose, circle it, and continue on.</u></p> <p>Depresses the OPEN button for Orifice Isolation Valve 2CV4 or 2CV5.</p> <p>Adjusts CV18 OPEN as necessary to control letdown pressure.</p>		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: EOP's

TASK: De-pressurize the RCS: TRIP-4 (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	5	PLACE THE FOLLOWING IN "AUTO": • 2CV18	Verifies or returns CV18 to AUTO		
	6	• 2CV55	Verifies CV55 in AUTO		
	7	• MASTER FLOW CONTROLLER	Verifies Master Flow Controller in AUTO		
	8	IS LETDOWN IN SERVICE?	Answers NO		
	9	CAUTION: PZR PORV CYCLING SHOULD BE MINIMIZED	Notes the Caution.		
*	10	USE ONLY ONE PZR PORV TO LOWER RCS PRESSURE TO 1865 PSIG	Depresses the MANUAL and OPEN PB for only one PORV (2PR1 or 2PR2).		
	11	WAIT UNTIL RCS PRESSURE LESS THAN 1865 PSIG	Monitors RCS Pressure		

OPERATOR TRAINING PROGRAM

NAME: _____

JOB PERFORMANCE MEASURE

DATE: _____

SYSTEM: EOP's

TASK: De-pressurize the RCS: TRIP-4 (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	12	CLOSE BOTH PZR PORV's	<ul style="list-style-type: none"> • *RCS Pressure <1865 • *Selected PORV closed (It is acceptable to return it to AUTO) • Verifies other PORV closed 		

TERMINATING CUE: Selected PORV closed.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: EOP's

TASK: De-pressurize the RCS during a natural circulation cooldown: TRIP-4 (Alternate Path)

TASK NUMBER: 1150030501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

INITIAL CONDITIONS:

A Loss of Off-site Power has occurred from 100% power. The crew has completed the EOP's through Step 11, EOP-TRIP-4.

INITIATING CUE: Starting with Step 12, implement EOP-TRIP-4.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: RHR
TASK: Place RHR in service with RCS depressurized
TASK NUMBER: 005 006 01 01
JPM NUMBER: N/A

APPLICABILITY: EO RO SRO

K/A NUMBER: 005 A4.01
IMPORTANCE FACTOR:

3.6	3.4
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-SO.RHR-0001, Rev. 8

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 15 mins.

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: J. C. Lloyd for PRINCIPAL TRAINING SUPERVISOR
D. J. Hill for 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: RHR

TASK: Place RHR in service with RCS depressurized

TASK NUMBER: 005 006 01 01

INITIAL CONDITIONS:

1. IC-112 or snapshot on disk
2. Ensure closed: SJ69, RH20, CV8, 21 and 22RH18, 21CC16
3. Ensure open: RH1, RH2, 21RH4, 21RH12, 21RH17, CV3, CV4, CV5
4. Place 21RH29 in MANUAL
5. Ensure one SW Pump in AUTO
6. PR1 and PR2 OPEN to vent RCS

INITIATING CUE:

You are the Reactor Operator. The RCS is depressurized. It is shortly after core reload and decay heat load is low. Place RHR in service IAW S2.OP-SO.RHR-0001, Section 5.6, using 21 RHR Pump.

Successful Completion Criteria:

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

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: RHR

TASK: Place RHR in service with RCS depressurized.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	<p>Reviews copy of procedure provided by the evaluator.</p> <p><i>NOTE:</i> If candidate becomes concerned about PRT parameters during this evolution, have him/her continue with SO.RHR-0001 and tend to PRT after RHR is initiated.</p>	<p>Evaluator should provide a copy of the current revision of S2.OP-SO.RHR-0001, with all appropriate Prerequisites signed off.</p> <p><i>NOTE:</i> Procedure use should be IAW the Work Standards requirements for Cat. 1 procedures.</p>		
	2	<p>Ensure the following valve alignment:</p> <ul style="list-style-type: none"> • SJ69 closed • RH20 closed • CV8 closed • RH1 and RH2 open 	<p>Locates and verifies console indication for each valve.</p>		
	3	<p>Ensure RCS level >97.4' elevation.</p>	<p>Verifies level indication in PZR. If necessary, provide cue that RCS is >97.4'.</p>		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: RHR

TASK: Place RHR in service with RCS depressurized.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	4	If 21 RHR Pump is selected for operation: A. Ensure the following valve alignment: <ul style="list-style-type: none"> • 21RH4, 21 Pp Suction, Open • 21RH29, Recirculation, AUTO • 21RH12, HX Bypass, Open • 21RH17, LTDN Isol., Open • 21RH18, HX Flow Cont., Closed • 22RH18, HX Flow Cont., Closed 	Locates and verifies console indication for each valve. <i>NOTE:</i> 21RH12 and 21RH17 are located in the field. <i>CUE:</i> 21RH12 is OPEN. <i>CUE:</i> 21RH17 is OPEN <ul style="list-style-type: none"> • *[Opens or places 21RH29 in AUTO NLT the 21RH29 verification step.] <i>CUE:</i> If candidate is concerned about finding RH29 in MANUAL, I&C had been testing and the valve was inadvertently left in MANUAL. Continue with the procedure.		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: RHR

TASK: Place RHR in service with RCS depressurized.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	5	B. Establish CCW flow through 21RHR HX: <ul style="list-style-type: none"> • Start standby CCW Pp IAW S2.OP-SO.CC-0001 • Open 21CC16, 21 RHR HX Outlet • Throttle 21CC15, RHR HX CC Flow Cont., as required to control RCS temperature. • Stop CCW Pp's as required to maintain CCW pressure. 	<p><i>NOTE:</i> SO.CC-0001 is a CAT 2 procedure. The operator may refer to it, or not. 2CC131 should be placed in MANUAL prior to starting the CCW Pp and then returned to AUTO.</p> <ul style="list-style-type: none"> • Starts one CCW Pp • *[Opens 21CC16] <p><i>NOTE:</i> May not need to throttle 21CC15 while performing this JPM.</p> <ul style="list-style-type: none"> • Stops CCW Pp's, as necessary. 		
*	6	Start 21 RHR Pp	Starts 21 RHR Pp-verifies flow, amperage.		
	7	Ensure 21RH29 opens to provide minimum flow.	Verifies 21RH29 open.		
*	8	Slowly open 2RH20 to establish RHR flow	Establishes flow of at least 1000 gpm.		
	9	Simultaneously perform the following: <ul style="list-style-type: none"> • Throttle open CV8 • Adjust CV18 to maintain required letdown flow. 	Throttles open CV8 and adjusts CV18. <i>CUE:</i> If asked, match letdown to charging.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: RHR

TASK: Place RHR in service with RCS depressurized.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	10	Maintain RCS temperature by simultaneously performing the following as required to establish and maintain required RHR flow rate and RCS temperature: <ul style="list-style-type: none"> • Slowly throttle either or both RH18's • Slowly throttle 2RH20 	Throttles open at least one RH18 while closing 2RH20 and maintaining flow >1000 gpm. <i>NOTE:</i> Evaluator can provide CUE that temperature is being maintained anytime after it is clear the operator has control of flow.		

TERMINATING CUE: RH18/RH20 adjustments complete or evaluator cue that temperature is being maintained.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: RHR

TASK: Place RHR in service with RCS depressurized

TASK NUMBER: 005 006 01 01

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. You are the Reactor Operator. The RCS is depressurized with PR1 and PR2 open. It is shortly after core reload and decay heat load is low.

INITIATING CUE:

Place RHR in service IAW S2.OP-SO.RHR-0001, Section 5.6, using 21 RHR Pump.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem
SYSTEM: Emergency Procedures
TASK: Respond to High Containment Sump Level (CFCU SW Leak)
TASK NUMBER: 1150370501

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: E15 EA1.1
IMPORTANCE FACTOR:

2.9	3.0
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: EOP-TRIP-1
EOP-FRCE-2

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 8 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: Jill Lloyd for PRINCIPAL TRAINING SUPERVISOR
[Signature] 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Emergency Procedures

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

TASK NUMBER: 1150370501

INITIAL CONDITIONS:

1. IC-1
2. Enter MALFS RC:0001A and SW:218, Severity 2500, no ramp
3. Run Simulator until Containment Sump Level is greater than 75%. Ensure containment pressure >4#. If a RWST Lo Level Alarm is reached then perform LOCA-3 until the FRP implementation step is reached.
4. Freeze Simulator and snap, store in a temporary IC

INITIATING CUE:

A large break LOCA has occurred. Operators have implemented the EOP's. The CRS just directed a transition to FRCE-2, Response to High Containment Sump Level.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Emergency Procedures

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)
		Provide candidate with the Tear-Off Sheet			
	1	Is SW flow to 21-25 CFCUs normal?	Checks SW flow on all CFCU's and determines that #23 is not normal		
*	1.A	Identify and stop the affected CFCU	Stops 23 CFCU		
*	1.B	Close SW58 (Inlet Valve) on affected CFCU	Closes 23SW58		
*	1.C	Close SW72 (Outlet Valve) on affected CFCU	Closes 23SW72		
	2	Is 2FP147 (CIV) open?	Checks RP-5 and answers NO		
	3	Is CCW Surge Tk Level dropping in an uncontrolled or unexplained manner?	Checks level and answers NO		
	4	Is DMST Level dropping in an uncontrolled or unexplained manner as determined by Unit 1 indication?	<i>CUE: NO</i>		
	5	Is PWST Level dropping in an uncontrolled or unexplained manner?	Checks indication and answers NO		

Terminating Cue: PWST Level checked

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Emergency Procedures

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

TASK NUMBER: 1150370501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

A large break LOCA has occurred. Operators have implemented the EOP's. The CRS just directed a transition to FRCE-2, Response to High Containment Sump Level.

INITIATING CUE: You are the licensed operator assigned to perform FRCE-2.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Electrical Distribution
TASK: Failure of 2C 4KV Vital Bus to transfer to the Alternate Source
TASK NUMBER: 062 004 01 01

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: 062 A4.01
IMPORTANCE FACTOR:

3.3	3.1
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-SO.4KV-0003(Q), S2.OP-AB.4KV-0003(Q),
2C 4KV Vital Bus Operation Loss of 2C 4KV Vital Bus

TOOLS AND EQUIPMENT: NONE

VALIDATED JPM COMPLETION TIME: 15 MIN

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: Jill Lloyd for PRINCIPAL TRAINING SUPERVISOR
W. Halliday 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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____ GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE
SIMULATOR SETUP INSTRUCTIONS**

SYSTEM: Electrical Distribution

TASK: Failure of 2C 4KV Vital Bus to transfer to the Alternate Source

TASK NUMBER: 062 004 01 01

SIMULATOR IC: 100% IC or as snapped on disk

**MALFUNCTIONS
REQUIRED:**

**OVERRIDES
REQUIRED:** FLOW > 100-FC809 G3
C812:OVDI:24CSD OPEN

**SPECIAL
INSTRUCTIONS:** Ensure 21 Charging Pp in service and 22 BAT Pp and 22 PW Pp are in AUTO.

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Electrical Distribution

TASK: Failure of 2C 4KV Vital Bus to transfer to the Alternate Source

TASK NUMBER: 062 004 01 01

INITIAL CONDITIONS:

1. The unit is at 100% power. 23 Station Power Transformer will be removed from service while an oil leak is repaired.

INITIATING CUE:

Transfer 2C Vital Bus to 24 Station Power Transformer.

Successful Completion Criteria:

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

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Electrical Distribution

TASK: Failure of 2C 4KV Vital Bus to transfer to the alternate source

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	Operator reviews procedure	<p>Evaluator provides a copy of the procedure with all appropriate sections signed off.</p> <p><i>NOTE: This is a Category I procedure. Work Standards require that the operator refer to the procedure at each step of the task. Individual step documentation shall be complete prior to proceeding to the next step.</i></p>		
	2	<p>ENSURE the following conditions exist prior to transferring 2C 4KV Vital Bus from one SPT to the other SPT:</p> <ul style="list-style-type: none"> • 2C 4KV Vital Bus 125 VDC control power is energized. • 2C 4KV Vital Bus 28 VDC control power is energized. • SPT assuming load is energized and available for service. 	Step signed off in procedure		
	3	IF 2CC131, RCP THERMAL BARRIER ISOLATION, is in AUTO, THEN PLACE in MANUAL.	Presses the 2CC131 MANUAL button and verifies the button illuminates.		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Electrical Distribution

TASK: Failure of 2C 4KV Vital Bus to transfer to the alternate source

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	4	<p><u>IF</u> transferring 2C 4KV Vital Bus from 23 SPT to 24 SPT, <u>THEN</u>:</p> <p>ENSURE <u>ALL</u> Overhead Annunciators for the 24 SPT are clear.</p>	Observes no OHA alarms on K Section		
	5	<p>PRESS Mimic Bus 2C VITAL BUS INFEED 24CSD BREAKER pushbutton <u>AND ENSURE</u> Console Bezel 24CSD MIMIC BUS INTLK CLOSE SELECTION illuminates.</p>	<ul style="list-style-type: none"> • Presses the Mimic Bus 2A VITAL BUS INFEED 24CSD BREAKER button. • Verifies button color changes to yellow. • Verifies 24CSD MIMIC BUS INTLK CLOSE SELECTION illuminates. 		
	6	<p>PRESS Console Bezel 24CSD CLOSE pushbutton <u>AND ENSURE</u> the following:</p> <ul style="list-style-type: none"> • 24CSD is closed. • 23CSD is open. • 2C 4KV Vital Bus voltage is 4.22-4.36KV. • Console Bezel 24CSD MIMIC BUS INTLK CLOSE SELECTION is extinguished. 	<p>Notes 24CSD failed to close and 2C EDG energized the bus.</p> <p>Responds to alarms and enters S2.OP-AB.4KV-0003</p>		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Electrical Distribution

TASK: Failure of 2C 4KV Vital Bus to transfer to the alternate source

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	7	Was 22 Charging Pump providing Seal Injection and Charging Flow?	Checks Charging Pump status and answers NO.		
*	8	PLACE 21 Primary Water Pump in AUTO.	Presses the 21 Primary Water Pump AUTO button and verifies the button illuminates.		
*	9	PLACE 21 BAT Pump in AUTO.	Presses the 21 BAT Pump AUTO button and verifies the button illuminates.		
	10	Is 2C 4KV Vital Bus energized from the Diesel Generator?	Checks the 2C Diesel Bezel and 2C Bus voltage and answers YES.		
	11	RESET EMERGENCY loading for 2C Diesel Generator.	Presses the RESET EMERGENCY LOADING button and verifies the button illuminates.		
	12	RESET 230V Control Center.	Presses the RESET 230V button and verifies the button illuminate.		
*	13	OPEN 23SW20 Turbine Area 22 Header isolation.	Presses the 23SW20 OPEN button and verifies the button illuminates.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Electrical Distribution

TASK: Failure of 2C 4KV Vital Bus to transfer to the alternate source

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	14	START/STOP 2C Vital Bus loads (Attachment 1) as necessary.	Refers to Attachment 1 and stops 22CCP and 23 CCW Pp		
	15	IF the automatic start of a CCW pump closed 1CC131, THEN OPEN 2CC131, RCP Thermal Barrier Valve AND Place in AUTO.	Presses the 2CC131 AUTO button and verifies the button illuminates.		

TERMINATING CUE: 2CC131 step completed.

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

- The unit is at 100% power. 23 Station Power Transformer (SPT) will be removed from service while an oil leak is repaired.

INITIATING CUE:

Transfer 2C Vital Bus to 24 Station Power Transformer.

JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Component Cooling Water
TASK: Shift Operating CC Pumps
TASK NUMBER: 008 001 01 01

JPM NUMBER:

APPLICABILITY: NEO RO SRO

K/A NUMBER: 008000 A4.01

IMPORTANCE FACTOR: 3.3 RO 3.1 SRO

EVALUATION /SETTING METHOD: Simulator

REFERENCES: S2.OP-SO.CC-0001(Q)

TOOLS AND EQUIPMENT: NONE

VALIDATED JPM COMPLETION TIME: 5 mins.

TIME PERIOD FOR TIME CRITICAL STEPS: _____

APPROVED: *J. H. Lloyd* *A. J. Halling*
PRINCIPAL TRAINING SUPERVISOR **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 "as left" condition by a qualified individual.

ACTUAL TIME TO COMPLETE JPM: _____
CANDIDATE'S NAME: _____
GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY:
EVALUATOR'S SIGNATURE: **DATE:**

JOB PERFORMANCE MEASURE

SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Component Cooling Water

TASK: Shift Operating CC Pumps

TASK NUMBER 008 001 01 01

SIMULATOR IC: Any Mode 1, 100% power IC

**MALFUNCTIONS
REQUIRED:** NONE

**OVERRIDES
REQUIRED:** NONE

SPECIAL

- 21 and 22 CCW Pumps in service
- CC Surge Tank level between 42-58%

INSTRUCTIONS:

JOB PERFORMANCE MEASURE

SYSTEM: COMPONENT COOLING WATER

TASK: Shift Operating CC Pumps

TASK NUMBER: 008 001 0101

INITIAL CONDITIONS: 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.

SUCCESSFUL COMPLETION CRITERIA:

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

JOB PERFORMANCE MEASURE

SYSTEM: Component Cooling Water
TASK: Shift operating pumps

CANDIDATE'S NAME: _____
EVALUATOR'S NAME: _____
DATE: _____

NOTES: 1) "# " denotes a sequential step, while "*" denotes a Critical Step. 2) **COMMENT** required for an UNSAT Evaluation

# *	STEP No.	STEP	STANDARD	EVAL S/U	COMMENTS
		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	<u>IF</u> 2CC131 is selected to <u>AUTO THEN</u> select 2CC131 to MANUAL.	Depresses 2CC131 MANUAL button. Verifies MANUAL button LIT.		
*	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		

JOB PERFORMANCE MEASURE

SYSTEM: Component Cooling Water

TASK: Shift operating pumps

CANDIDATE'S NAME: _____

EVALUATOR'S NAME: _____

DATE: _____

NOTES: 1) "# " denotes a sequential step, while "*" denotes a Critical Step. 2) **COMMENT** required for an UNSAT Evaluation

# *	STEP No.	STEP	STANDARD	EVAL S/U	COMMENTS
# *	5.5.4	STOP 21 CCW Pump.	Depresses #21 CCW pump STOP button. Verifies STOP button LIT Verifies amps and flow respond as expected		
*	5.5.5	Select one CCW Pump to AUTO.	Depresses the AUTO button for #21 CCW pump. Verifies the AUTO button LIT		
*	5.5.6	<u>IF</u> 2CC131 was selected to MANUAL, <u>THEN</u> SELECT 2CC131 to AUTO.	Depresses the AUTO button for 2CC131. Verifies the AUTO button LIT.		

Terminating Cue: 2CC131 in AUTOMATIC

JOB PERFORMANCE MEASURE

SYSTEM: Component Cooling Water

TASK: Shift operating pumps

CANDIDATE'S NAME: _____

EVALUATOR'S NAME: _____

DATE: _____

NOTES: 1) "# " denotes a sequential step, while "*" denotes a Critical Step. 2) **COMMENT** required for an UNSAT Evaluation

INITIAL CONDITIONS: 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.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Auxiliary Feedwater
TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.
TASK NUMBER: 113 006 05 01
JPM NUMBER: NRC-2-08

APPLICABILITY: EO RO SRO K/A NUMBER: APE 068 AA1.03
IMPORTANCE FACTOR: 4.1 4.3
RO SRO

EVALUATION SETTING/METHOD: In-Plant Simulate

REFERENCES: S2.OP-AB.CR-0001, Control Room Evacuation

TOOLS AND EQUIPMENT: JAM Key

VALIDATED JPM COMPLETION TIME: 15 mins.

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: [Signature] PRINCIPAL TRAINING SUPERVISOR [Signature] OPERATIONS MANAGER

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission for the SNSS Or Unit NSS;
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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

TASK NUMBER: 113 006 05 01

INITIAL CONDITIONS:

1. The control room has been evacuated.

INITIATING CUE:

The control room has been evacuated IAW S2.OP-AB.CR-0001. The CRS has assigned you to locally start 21 and 22 AFW Pumps and feed the SG's IAW Attachment 4..

Successful Completion Criteria:

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

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Evaluator provides copy of Attachment 4, S2.OP-AB.CR-0001, Control Room Evacuation.	Operator reviews Attachment 4 of S2.OP-AB.CR-0001, Control Room Evacuation. <i>NOTE: This is a Category I procedure. Work Standards require that the operator refer to the procedure at each step of the task. Individual step documentation shall be complete prior to proceeding to the next step.</i>		
	1	Is 21 AFW Pump operating?	<i>CUE:</i> No, 21 AFW Pump is not operating.		
*	2	Perform the following to start 21 AFW Pump: <ul style="list-style-type: none"> • Place 21 AFW Pump Remote-Local Switch to LOCAL. • Place 21 AFW Pump Start-Stop Switch to START. 	At Panel 205, selects LOCAL and START. <i>CUE:</i> If actions were proper-21AFW Pump is running.		
	3	Is 22 AFW Pump operating?	<i>CUE:</i> No, 22 AFW Pump is not operating.		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	4	Perform the following to start 22 AFW Pump: <ul style="list-style-type: none"> • Place 22 AFW Pump Remote-Local Switch to LOCAL. • Place 22 AFW Pump Start-Stop Switch to START. 	At Panel 206, selects LOCAL and START. <i>CUE:</i> If actions were proper-22AFW Pump is running.		
	5	Is 23 AFW Pump operating?	<i>CUE:</i> No, 23 AFW Pump will not be operated.		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	6	Perform the following to take MANUAL control of 21AF21, Aux Feed-S/G Level Control Valve: <ul style="list-style-type: none"> • Manually adjust hand jack for 21AF21 to the valve's present position. • Close manual isolation valve 21AF21 A/S to pressure regulator in No. 2 Unit Redundant Air Supply Panel 700-2M. • Open the drain cock of the pressure regulator. • Manually adjust 21AF21 as required to maintain SG level at 15 to 33% NR level indicated on LI-517A. 	<ul style="list-style-type: none"> • Locates AF21 and discusses operation of hand jack. • Locates Panel 700-2M and discusses operation of correct valve. • Discusses operation of drain cock. • Discusses how to open 21AF21. <p><i>CUE: Open 21AF21 approx. 25%.</i></p> <p><i>NOTE: If operation of 21AF21 was correct and confident, then the Evaluator may terminate the JPM after 21AF21 has been operated.</i></p>		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	7	Perform the following to take MANUAL control of 22AF21, Aux Feed-S/G Level Control Valve: <ul style="list-style-type: none"> • Manually adjust hand jack for 22AF21 to the valve's present position. • Close manual isolation valve 22AF21 A/S to pressure regulator in No. 2 Unit Redundant Air Supply Panel 700-2Y. • Open drain cock of the pressure regulator. • Manually adjust 22AF21 as required to maintain SG level at 15-33% NR level indicated on LI-527A. 	<ul style="list-style-type: none"> • Locates AF21 and discusses operation of hand jack. • Locates Panel 700-2Y and discusses operation of correct valve. • Discusses operation of drain cock. • Discusses how to open 22AF21. <p><i>CUE: Open 22AF21 approx. 25%.</i></p> <p><i>NOTE: If operation of 22AF21 was correct and confident, then the Evaluator may terminate the JPM after operating 22AF21.</i></p>		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	8	Perform the following to take MANUAL control of 23AF21, Aux Feed-S/G Level Control Valve: <ul style="list-style-type: none"> • Manually adjust hand jack for 23AF21 to the valve's present position. • Close manual isolation valve 23AF21 A/S to pressure regulator in No. 2 Unit Redundant Air Supply Panel 700-2F. • Open drain cock of the pressure regulator. • Manually adjust 23AF21 as required to maintain SG level at 15-33% NR level indicated on LI-537A. 	<ul style="list-style-type: none"> • Locates AF21 and discusses operation of hand jack. • Locates Panel 700-2F and discusses operation of correct valve. • Discusses operation of drain cock. • Discusses how to open 23AF21. <p><i>CUE: Open 23AF21 approx. 25%.</i></p> <p><i>NOTE: If operation of 23AF21 was correct and confident, then the Evaluator may terminate the JPM after operating 23AF21.</i></p>		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	9	Perform the following to take MANUAL control of 24AF21, Aux Feed-S/G Level Control Valve: <ul style="list-style-type: none"> • Manually adjust hand jack for 24AF21 to the valve's present position. • Close manual isolation valve 24AF21 A/S to pressure regulator in No. 2 Unit redundant Air Supply Panel 700-2E. • Open drain cock of the pressure regulator. • Manually adjust 24AF21 as required to maintain SG level at 15-33% NR level indicated on LI-547A. 	<ul style="list-style-type: none"> • Locates AF21 and discusses operation of hand jack. • Locates Panel 700-2E and discusses operation of correct valve. • Discusses operation of drain cock. • Discusses how to open 24AF21. <p><i>CUE:</i> Open 24AF21 approx. 25%.</p>		

TERMINATING CUE: Feeding Steam Generators via at least one AF21.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Control Room Evacuation-Feed SG's using 21/22 AFW Pump.

TASK NUMBER: 113 006 05 01

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The control room has been evacuated IAW S2.OP-AB.CR-0001.

INITIATING CUE:

The CRS has assigned you to locally start 21 and 22 AFW Pumps and feed the SG's IAW S2.OP-AB.CR-0001, Att. 4.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM

SYSTEM: EDG

TASK: Local start of EDG per LOPA-1

TASK NUMBER: 1150140501

JPM NUMBER:

K/A NUMBER: 2.1.30

APPLICABILITY:

IMPORTANCE FACTOR:

EO RO SRO

3.9	3.4
RO	SRO

EVALUATION SETTING/METHOD: In-Plant

REFERENCES: EOP-LOPA-1

S2.OP-SO.DG-0001

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 15 mins. (dependent on
of startup checks pre-
signed)

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED:

JCL Almond for
PRINCIPAL TRAINING SUPERVISOR

W. G. Halliday for
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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____

GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____

DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: EDG

TASK: Local start of EDG per LOPA-1

TASK NUMBER: 1150140501

INITIAL CONDITIONS:

1. There has been a loss of all AC power. The operating crew has implemented EOP-LOPA-1.
2. Electricians have replaced a relay on 2A EDG and believe it is ready to be started.
3. A NEO has completed all of the startup checks for equipment located inside the EDG room.

INITIATING CUE:

The CRS has directed you to locally start 2A EDG IAW S2.OP-SO.DG-0001.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Electrical

TASK: Locally start an Emergency Diesel Generator

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	Evaluator provides the current revision and section of S2.OP-SO.DG-0001, properly marked up with all the EDG Room and outside Control Point steps signed off.	Candidate reviews procedure <i>NOTE:</i> Category I procedure use requirements apply.		
	2	Diesel Generator (Control Room) Startup checks: <ul style="list-style-type: none"> • 2A-DF-ECP-1 DIESEL LOCKOUT SWITCH is in DIESEL IN SERVICE • EXCITER REGULATOR REMOTE MANUAL-AUTOMATIC switch AUTOMATIC lamp is ON • 2A-DF-GCP-1, 2A DIESEL GEN LOADING SW indicates AUTO (ISOCR) • 2A-DF-GCP-2, 2A DIESEL UNIT TRIP RELAY (DUTR) is RESET • 2DAE4-LT2 EDG Voltage permissive indication light is OFF • 2DAE4-LT3 EDG Speed permissive indication light is OFF • 2A EDG K1C Field Flashing Supervisory Light Switch is ON • All Protective Relay Flags located on Generator Control Panel Doors are RESET 	<ul style="list-style-type: none"> • 2A-DF-ECP-1 DIESEL LOCKOUT SWITCH is in <u>DIESEL IN SERVICE</u> • EXCITER REGULATOR REMOTE MANUAL-AUTOMATIC switch AUTOMATIC lamp is <u>ON</u> • 2A-DF-GCP-1, 2A DIESEL GEN LOADING SW indicates <u>AUTO (ISOCR)</u> • 2A-DF-GCP-2, 2A DIESEL UNIT TRIP RELAY (DUTR) is <u>RESET</u> • 2DAE4-LT2 EDG Voltage permissive indication light is <u>OFF</u> • 2DAE4-LT3 EDG Speed permissive indication light is <u>OFF</u> • 2A EDG K1C Field Flashing Supervisory Light Switch is <u>ON</u> • All Protective Relay Flags located on Generator Control Panel Doors are <u>RESET</u> 		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Electrical

TASK: Locally start an Emergency Diesel Generator

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	3	NOTIFY NCO that 2A Diesel Generator is to be started locally.	Locates nearest page <i>CUE:</i> NCO acknowledges		
	4	VERIFY voltage permissive indicator light, EDG VOLTAGE, on Generator Control Panel is OFF	Light is OFF per startup checks		
	5	VERIFY speed permissive indicator light, EDG SPEED, on Generator Control Panel is OFF.	Light is OFF per startup checks		
*	6	PLACE GENERATOR LOADING switch in MANUAL (DROOP).	Points out correct switch and MANUAL (DROOP) position		
	7	ENSURE local annunciator B-9, GENERATOR LOADING IN DROOP MODE, is in alarm.	Points out alarm B-9 <i>CUE:</i> Alarm has actuated		
*	8	PLACE Diesel Generator STOP/START switch to START.	Points out correct switch and position. <i>CUE:</i> D/G is accelerating		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Electrical

TASK: Locally start an Emergency Diesel Generator

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	9	If DG Speed is not 900 rpm, THEN SET speed to 900 rpm using the SPEED CONTROL SWITCH (GS).	<i>CUE:</i> Speed is 880 rpm Points out correct switch and turns in proper direction <i>CUE:</i> Speed is 900 rpm		
	10	VERIFY voltage permissive indicator light, EDG VOLTAGE, on Generator Control Panel is ON	Points out correct light <i>CUE:</i> Voltage Permissive light is ON		
	11	VERIFY speed permissive indicator light, EDG SPEED, on Generator Control Panel is ON	Points out correct light <i>CUE:</i> Speed permissive light is on		
	12	IF Field Ground Relay 64/G white indicating light is NOT illuminated, and local annunciator C-6, GENERATOR FIELD GROUND, is clear, THEN RESET 64/G relay AND ENSURE 64/G white indicating lamp is illuminated.	<i>CUE:</i> Field Ground Relay 64/G white indicating light is illuminated		
	13	ENSURE 1A Diesel Generator K1C Field Flashing Relay Supervisory Light is OFF.	<i>CUE:</i> K1C Field Flashing light is OFF		

TERMINATING CUE: Reaches step for recording readings.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: EDG

TASK: Local start of EDG per LOPA-1

TASK NUMBER: 1150140501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

- There has been a loss of all AC power. The operating crew has implemented EOP-LOPA-1.
- Electricians have replaced a relay on 2A EDG and believe it is ready to be started.
- A NEO has completed all of the startup checks for equipment located inside the EDG room.

INITIATING CUE:

The CRS has directed you to locally start 2A EDG IAW S2.OP-SO.DG-0001.

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

STATION: Salem
SYSTEM: Electrical (115 VAC)
TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc
TASK NUMBER: 1140140401
JPM NUMBER: NRC-2-10

APPLICABILITY: EO RO SRO
K/A NUMBER: APE 068 AA1.12
IMPORTANCE FACTOR:

4.4	4.4
RO	SRO

EVALUATION SETTING/METHOD: In-Plant

REFERENCES: S1.OP-SO.115-0002 S1.OP-AB.CR-0002
Alternate Shutdown System Control Room Evacuation Due to Fire in Control Room,
Inverter Operation Relay Room, or Ceiling of the 460/230v Switchgear Room

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: _____

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: _____ N/A

APPROVED: *Jill Alford for* *D. Kelly*
PRINCIPAL TRAINING SUPERVISOR 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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____ **GRADE:** SAT UNSAT

REASON, IF UNSATISFACTORY: _____

EVALUATOR'S SIGNATURE: _____ **DATE:** _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Electrical (115 VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

TASK NUMBER: 1140140401

INITIAL CONDITIONS:

1. The control room has been evacuated due to a fire in the Relay Room. The actions of S1.OP-AB.CR-0002 are in progress.
2. 2C Vital Bus must be isolated and de-energized. As a result, the ASDS Inverter must be shifted to the DC Source.

INITIATING CUE:

Shift the ASDS Inverter to the DC Source IAW S1.OP-SO.115-0002, THEN energize RCS Loop 12 and 13 Th and Tc IAW Attachment 7, S1.OP-AB.CR-0002.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Electrical (115VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Provide candidate with a properly marked up copy of S1.OP-SO.115-0002 and S1.OP-AB.CR-0002, Attachment 7.	Enters the proper section of the procedure. <i>CUE:</i> Assume that you provided with all of the equipment required by Attachment 7, Step 1.0. <i>NOTE: These are Category I procedures. Work Standards require that the operator refer to the procedure at each step of the task. Individual step documentation shall be complete prior to proceeding to the next step.</i>		
	1	Ensure the following: <ul style="list-style-type: none"> • 1ASDS-IPS-1, No. 1ASDS Inverter Power Supply 125VDC Breaker is ON. 	<ul style="list-style-type: none"> • Verifies the 1ASDS-IPS-1, No. 1ASDS Inverter Power Supply 125VDC Breaker is ON. 		
	2	<ul style="list-style-type: none"> • 1ASDS Inverter ON BATTERY red light is extinguished. 	<i>CUE:</i> 1ASDS Inverter ON BATTERY red light is extinguished.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Electrical (115VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	3	<ul style="list-style-type: none"> • DC Voltage (142-144VDC on 1VM349). • Frequency (59.6-60.4 HZ on 1FM351). • Voltage (118-122VAC on 1VM347). • DC Current (>0 amps on 1AM350). 	<p><i>CUE:</i></p> <ul style="list-style-type: none"> • DC Voltage 142-144VDC. • Frequency 59.6-60.4 HZ. • Voltage 118-122VAC. • DC Current (>0 amps). 		
	4	Notify RO/PO that Control Room Auxiliary Annunciator point 564, ALTERNATE SHUTDOWN SYS, LOSS OF INVERTER will alarm.	<i>CUE:</i> The RO acknowledges.		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Electrical (115VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	5	Open 1ASDS-IPS-2, No. 1ASDS IVERTER POWER SUPPLY 208VAC INPUT BKR (NORMAL), and ENSURE the following: <ul style="list-style-type: none"> • Frequency (59.6-60.4 HZ on 1FM351). • Voltage (118-122VAC on 1VM347). • ASDS Inverter ON BATTERY light is illuminated and flashing. 	*Opens 1ASDS-IPS-2, No. 1ASDS IVERTER POWER SUPPLY 208VAC INPUT BKR (NORMAL) CUE: <ul style="list-style-type: none"> • Frequency is 60 HZ. • Voltage is 121VAC. • ASDS Inverter ON BATTERY light is illuminated and flashing. 		
*	6	If IC VITAL BUS is to be de-energized, THEN: <ul style="list-style-type: none"> • Place 1ASDS-IPS-2, No. 1ASDS IVERTER POWER SUPPLY 208VAC INPUT BKR (ALTERNATE) in OFF. • Ensure ALT SOURCE FAIL red light is illuminated and flashing. • Ensure SYNC DISCONN red light is illuminated and flashing. 	*Places 1ASDS-IPS-2, No. 1ASDS IVERTER POWER SUPPLY 208VAC INPUT BKR (ALTERNATE) in OFF. CUE: <ul style="list-style-type: none"> • ALT SOURCE FAIL red light is illuminated and flashing. • SYNC DISCONN red light is illuminated and flashing. 		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Electrical (115VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	7	Ensure the following: <ul style="list-style-type: none"> • Current (>0 amps on 1AM348). • Control Room Auxiliary Annunciator point 564 ALTERNATE SHUTDOWN SYS, LOSS OF INVERTER is in alarm. • Control Room Auxiliary Annunciator point 566, ALTERNATE SHUTDOWN SYS, LOSS OF 115VAC, is clear. 	<i>CUE:</i> <ul style="list-style-type: none"> • Current >0 amps • Control Room Auxiliary Annunciator point 564 ALTERNATE SHUTDOWN SYS., LOSS OF INVERTER is in alarm. • Control Room Auxiliary Annunciator point 566, ALTERNATE SHUTDOWN SYS., LOSS OF 115VAC, is clear. 		
	8	UPDATE TRIS to reflect off-normal position of breakers manipulated in this section.	<i>CUE:</i> TRIS will be updated when complete.		
	9	The candidate refers to S1.OP-AB.CR-0002, Attachment 7 and locates the proper step.	Candidate refers to step 12.0 of Attachment 7.		
	10	Proceed to Panel 1016.	Locates Panel 1016 in Elec. Pen. El. 78.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Electrical (115VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	11	Place SW1 12 RCS Loop Power key switch in ASDS ALT SHUTDOWN position to energize TA-14941 and TA-14942 (12 Loop Wide Range Th and Tc)	Discusses inserting the key into the switch and selects SW1 to ASDS ALT SHUTDOWN.		
	12	Proceed to Panel 1017.	Locates Panel 1017 in Elec. Pen. El. 78.		
*	13	Place SW2, 13 RCS Loop Power key switch in ASDS ALT SHUTDOWN position to energize TA-14943 and TA-14944 (13 Loop Wide Range Th and Tc)	Discusses inserting the key into the switch and selects SW1 to ASDS ALT SHUTDOWN.		

TERMINATING CUE: When Loop 12 & 13 Th & Tc are energized, the JPM may be terminated..

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Electrical (115 VAC)

TASK: ASDS Inverter to DC and transfer and energize loop 22 and 23 WR Th and Tc

TASK NUMBER: 1140140401

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The control room has been evacuated due to a fire in the Relay Room. The actions of S1.OP-AB.CR-0002 are in progress.
2. 2C Vital Bus must be isolated and de-energized. As a result, the ASDS Inverter must be shifted to the DC Source.

INITIATING CUE:

Shift the ASDS Inverter to the DC Source IAW S2.OP-SO.115-0002, THEN energize RCS Loop 22 and 23 Th and Tc IAW Attachment 7, S1.OP-AB.CR-0002.

Facility: Salem Units 1 & 2Date of Examination: 1/10/00Exam Level (circle one): RO/SRO(I)/SRO(U)Operating Test No.: 2**B.1: Control Room Systems**

	System	JPM Description	Type Code*	Safety Function
1	CVCS (004)	Perform calculations and setup the VCT makeup controller for AUTO	M,S	1
2	ECCS (006)	Shift ECCS to Cold Leg Recirculation with 2B 4KV Vital Bus unavailable	A,E,N,S	2
3	PZR (010)	Control RCS pressure following a reactor trip	A,E,D,S	3
4	AFW (061)	Establish minimum required AFW flow following a reactor trip	A,D,E,S	4(Sec)
5	CNMT CLG (022)	Containment Fan Coil Unit Surveillance Test	N,S	5
6	AC ELEC (062)	Synchronize the Main Generator to the grid	A,L,M,S	6
7	CCW (008)	Split the CCW system headers	E,M,S	8

B.2 Facility Walk-Through

8	ESFAS (013)	Defeat AUTO SI following Control Rm Evacuation	D,E	2
9	AFW (061)	Defeat the AFW Pump low suction pressure trip	E,N,R	4(Sec)
10	AC ELEC (062)	Transfer PZR B/U Heaters to 2A Vital Bus	D	6

* **Type Codes:** (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol Room, (S)imulator, (L)ow-Power, (R)CA, (E)OP/AB

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Chemical and Volume Control
TASK: Set the controller for blended makeup
TASK NUMBER: 004 012 01 01

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: 004 A4.15
IMPORTANCE FACTOR:

3.6	3.7
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-SO.CVC-0006 S2.RE-RA.ZZ-0012
Boron Concentration Control REM Figures

TOOLS AND EQUIPMENT: NONE

VALIDATED JPM COMPLETION TIME: 10 mins.

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS:

APPROVED: J. C. Boyd for PRINCIPAL TRAINING SUPERVISOR
D. J. Kelly for 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Set the controller for blended makeup

TASK NUMBER: 004 012 01 01

INITIAL CONDITIONS: Any 100% IC

1. Set CV179 controller to 70 +/- 2 gpm.
2. Set the CV172 controller to 7.5 +/- .2 gpm.
3. Place CV185 in MANUAL.

INITIATING CUE:

Chemistry calls and reports that boron concentration is 650 ppm. Set up the controller for auto blended makeup at 650 ppm.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Set up the controller for blended makeup.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Operator obtains S2.OP-SO.CVC-0006, Boron Concentration Control	Correct revision obtained. <i>NOTE:</i> Category II procedure use requirements apply.		
	1	Depress the Makeup Control Mode Select STOP Pushbutton.	Presses the STOP pushbutton.		
*	2	Place the following valves in AUTO: <ul style="list-style-type: none"> • 2CV179, Primary Water Flow Control Valve • 2CV172, Boric Acid Flow Control Valve • 2CV185, Makeup from Blender to Charging Pump Suction • 2CV181, Makeup from Blender to VCT 	Verifies 2CV179, 172, and 181 in AUTO. *Places 2CV185 in AUTO.		
*	3	Adjust 2CV179 Setpoint to 62 gpm.	Adjusts 2CV179 setpoint to 62 +/-2 gpm.		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: CVCS

TASK: Set up the controller for blended makeup.

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
#	4	Determine the boric acid flow setpoint from S2.RE-RA.ZZ-0012, Reactor Engineering Manual, Figure 100A, for the existing RCS boron.	Determines 6.7-7.25 gpm as the proper setpoint.		
* #	5	Adjust 2CV172 setpoint to the value obtained in the previous step.	Adjusts 2CV172 setpoint to obtain 6.7-7.25 gpm.		
	6	Ensure at least one Primary Water Pump in AUTO.	Verifies one PW pump in AUTO.		
	7	Ensure at least one Boric Acid pump in AUTO	Verifies one Boric Acid pump in AUTO.		
*	8	Depress the Makeup Control Mode Select AUTO pushbutton.	Presses AUTO pushbutton.		
*	9	Depress the Makeup Control Mode Select START pushbutton.	Presses START pushbutton.		

TERMINATING CUE: Makeup Control Mode Select START pushbutton pressed.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: CVCS

TASK: Set up the controller for blended makeup.

TASK NUMBER: 004 012 01 01

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. Per simulator IC. Following several small dilutions, the shift requested a boron analysis.

INITIATING CUE:

Chemistry reports RCS boron concentration is 650 ppm. Set up the CVC AUTO M/U controls accordingly.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem

SYSTEM: ECCS

TASK: TCAF LBLOCA: transfer to Cold Leg Recirculation w/2B Vital Bus de-energized

TASK NUMBER: 1150100501

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: EPE 011 EA1.11
IMPORTANCE FACTOR:

4.1	4.1
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: 2-EOP-LOCA-3

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 9 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: See Initiating Cue

APPROVED: J. L. Klond for
PRINCIPAL TRAINING SUPERVISOR

[Signature]
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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____ GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF LBLOCA: transfer to Cold Leg Recirculation w/2B Vital Bus de-energized

TASK NUMBER: 1150100501

INITIAL CONDITIONS:

1. Snapshot of LBLOCA, immediately following actuation of the RWST LOW level alarm, with 2B 4KV Vital Bus de-energized (on electrical fault).

INITIATING CUE:

You are the RO/PO. Execute the steps of LOCA-3. This task is time critical. IAW the procedure you should close SJ69 within 3 minutes and complete the shift to CLR within 11.7 minutes, as evidenced by closing SJ30, SJ1 and SJ2. The clock starts when you read the first step. Respond only to alarms associated with the evolution.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2B 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	Is Containment Recirc Sump level > 62%?	<i>Evaluator: Log time for evaluation of critical time requirements: _____.</i> Verifies either Ch. A or B Sump Level indication is > 62%.		
*	2	Depress "SUMP AUTO ARMED" PB's on 21 and 22SJ44 Bezels	WHITE indicating light energizes and valves stroke OPEN. The RED OPEN indicating light energizes when each valve reaches full stroke.		
	3	Remove lockouts for the following valves: • 2SJ67 • 2SJ68 • 2SJ69	Selects VALVE OPERABLE for SJ67, SJ68, and SJ69 on RP-4 Panel		
	4	Are 21 and 22SJ 44 Open?	NO. Power is not available to 22SJ44		
	5	Reset SI	Verifies both SI RESET PB's illuminated		
	6	Reset Emergency Loading for each SEC	Verifies EMERGENCY LOADING RESET PB illuminated for 2A and 2C SEC. 2B Blocked		
	7	Is 21SJ44 open?	YES		
# , *	8	Stop 22 RHR Pp	22 RHR Pp stopped		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2B 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
* , #	9	Close SJ69	SJ69 closed indication		
	10	Start 22 RHR Pp	Verifies 22 RHR Pp running		
	11	Initiate close on 22RH4 and continue	22RH4 (RHR SUCTION) closed indication		
	12	Initiate open on 22SJ44 and continue	22SJ44 has no power		
	13	When 22SJ44 opens then start 21 RHR Pp	22SJ44 has no power		
	14	Reset SI	SI RESET previously		
	15	Reset EMERGENCY LOADING for each SEC	SEC's RESET or BLOCKED previously		
	16	Reset 230V CONTROL CENTERS	Verifies 230V CONTROL CENTER RESET PB on each DG Bezel is illuminated.		
	17	Are both CS Pp's running?	YES		
*	18	Stop 22 CS Pump	22 CS Pump stopped		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2B 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	19	Close 21 and 22RH19	21 and 22RH19 (RHR HX DISCH X-CONN VALVES) closed indication <i>Evaluator: Log time for evaluating completion of time critical task: _____ (< 3 minutes)</i>		
	20	Stop 23 Charging Pp	23 Charging Pump is OOS		
	21	Select appropriate flowpath transition step from TABLE B	Determines 2A and 2C 4KV Vital Buses are energized and proceeds to Step 70		
*	22	Stop 22 SI Pp	22 SI Pp stopped		
	23	Open 21CC16	Verifies 21CC16 (CCW to RHR HX) open		
*	24	Close 2SJ67 and 2SJ68	2SJ67&68 (SI Pp Miniflow) closed indication		
	25	Close 2RH1 and 2RH2	Verifies 2RH2 (Common Suction Valves) closed. No power available to 2RH1.		
*	26	Open 21SJ45	21SJ45 (RHR Pp to Charging Pp's) open indication		
*	27	Open 21SJ113	21SJ113 (SI-Chg Pp X-over) open indication		
	28	Start 21 SI and 22 Chg Pp	Verifies 21 SI and 22 Chg Pp running		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: ECCS

TASK: TCAF a LBLOCA: transfer to CL Recirculation with 2B 4KV Vital Bus de-energized

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	29	CONTINUOUS CAUTION: If any pump cavitates - ---			
	30	Remove the lockout from 2SJ30	Selects VALVE OPERABLE for 2SJ30 on RP-4 Panel		
*	31	Isolate the RWST as follows: • Close 2SJ30 • Close 2SJ1	• 2SJ30 closed indication • 2SJ1 (RWST-Chg Pp) closed indication		
	32	Send an operator to close 2SJ2	<i>CUE:</i> OSC notified to dispatch operator to close 2SJ2		
*	33	Place controller for recirculation valve 21RH29 in MANUAL and CLOSE the valve	Selects MANUAL, depresses CLOSE PB and verifies 21RH29 closed indication		

TERMINATING CUE: 21RH29 closed

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: ECCS

TASK: TCAF LBLOCA: transfer to Cold Leg Recirculation w/2B 4KV Vital Bus de-energized

TASK NUMBER: 1150100501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. A LBLOCA has occurred. All ECCS equipment functioned as designed except 2A Vital Bus failed to energize due to an electrical fault. The transition to LOCA-3 (from LOCA-1) was just made following actuation of the RWST LO Level alarm.

INITIATING CUE:

You are the RO/PO. Execute the steps of LOCA-3. This task is time critical. IAW the procedure you should close SJ69 within 3 minutes and complete the shift to CLR within 11.7 minutes, as evidenced by closing SJ30, SJ1 and SJ2. The clock starts when you read the first step. Respond only to alarms associated with the evolution.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem
SYSTEM: Emergency Operating Procedures
TASK: Control RCS Pressure (Alternate Path)
TASK NUMBER: 1150030501

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: EPE 007 EA1.03
IMPORTANCE FACTOR:

4.2	4.1
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: EOP-TRIP-2 Rev 22

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 5 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: J. L. Klopfer for PRINCIPAL TRAINING SUPERVISOR
[Signature] 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: EOP's

TASK: Control RCS Pressure

TASK NUMBER: 1150030501

INITIAL CONDITIONS:

- Provide EOP-TRIP-2, marked up through Step 8
- IC-194 on 1999 LOR Annual Exam ZIP Disk. IC-194 was developed by:
 1. Reset to IC-1
 2. Initiate a manual reactor trip and perform actions through Step 8, TRIP-2
 3. Enter PR016A and C severity 2100 and 2238 respectively after RCS Pressure has recovered
 4. Stop 21 and 23 RCP's
 5. Allow RCS Pressure to exceed PORV setpoint and then freeze, snap and store in IC slot
 6. Mark up EOP-TRIP-2, through Step 8

INITIATING CUE:

The Reactor was manually tripped due to a secondary problem. The crew has completed the EOP's through Step 8, EOP-TRIP-2. Starting with Step 9, implement EOP-TRIP-2.

Successful Completion Criteria:

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

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: EOP's

TASK: Control RCS Pressure (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	9	Is Pressurizer Pressure > 1765?	Yes		
	9.1	Is Pressurizer Pressure stable at or trending to 2235?	No		
	A	Is Pressurizer Pressure >2235 and rising?	Yes		
*	B	Place Pressurizer Heaters in MANUAL and off	Heaters selected to MANUAL and OFF		
	C	Is Normal Spray Available?	No		
	D	Is Letdown flow established?	Verifies letdown flow by valve positions and or flow indication <i>EVALUATOR:</i> If letdown flow is NOT established then JPM Step F rather than Step E will be implemented.		
*	E	Depressurize the RCS using AUX SPRAY <ul style="list-style-type: none"> • Open CV75 • Close CV77 • Close CV79 	CV75 indicating open and CV77 & 79 indicating closed		
*	F	Use one PORV to control RCS pressure	Maintains RCS pressure <PORV AUTO setpoint but > low pressure SI setpoint		

TERMINATING CUE: RCS Pressure within or on a controlled trend to the normal band

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: EOP's

TASK: Control RCS Pressure (Alternate Path)

TASK NUMBER: 1150030501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

The Reactor was manually tripped due to a secondary problem. The crew has completed the EOP's through Step 8, TRIP-2.

INITIATING CUE: Starting with Step 9, implement EOP-TRIP-2.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem
SYSTEM: EOP/AFW
TASK: Initiate AFW flow/AF21 Pressure Override
TASK NUMBER: 0610020101/1150020501

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: 061 A2.05
IMPORTANCE FACTOR:

3.1	3.4
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: EOP-TRIP-2

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 5 minutes

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS:

APPROVED: Jill Klayton for PRINCIPAL TRAINING SUPERVISOR
[Signature] 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
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. IC-189 on 1999 LOR Exam ZIP Disk
 - Enter AF:0182A and B
 - Trip Both SGFPs
 - Perform TRIP-1 through the transition to TRIP-2
 - Trip 23 AFW Pump

INITIATING CUE:

A manual reactor trip was initiated due to the simultaneous loss of both SGFP's. The crew has just transitioned to 2-EOP-TRIP-2. You are the control board operator. Starting at Step 1, TRIP-2, execute the steps 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 (and NRC concurrence is obtained).

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)
	1	Announce twice on Station PA "Unit 2 Reactor Trip"	Makes announcement		
	2	Implement the Event Classification Guide	Informs OS (Evaluator)		
	3	Is total AFW >22E4lbm/hr?	No		
		Start 21-23 AFW Pumps	Determines that 21 and 22 AFW Pps are running and 23 AFW Pp is tripped		
		Open 21-24AF11 and 21-24AF21	Verifies AF11s open Presses open on 21-24AF21 and notes that they did not open. Should note that AFW Pp discharge pressure is above the opening setpoint.		
		Depress pressure override defeat	Pressure Override Defeat depressed <i>NOTE:</i> This is not a specific procedural step in TRIP-2 but is a step in other procedures. Operators are expected to take compensatory action for failures. It is acceptable to reference another procedure or to transition to FRHS-1 in order to initiate AFW flow.		
*		Is AFW Flow >22E4lbm/hr?	Operates AF21's to establish AFW flow at least 22E4lbm/hr		

Terminating Cue: AFW Flow verified >22E4lbm/hr

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**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: AFW

TASK: Initiate AFW

TASK NUMBER: 0610020101/1150020501

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

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

INITIATING CUE:

You are the control board operator. Starting at Step 1, TRIP-2, execute the steps of the procedure.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Containment Systems
TASK: Determine CFCU Operability
TASK NUMBER: 022 505 02 01

JPM NUMBER:

APPLICABILITY:

EO RO SRO

K/A NUMBER: 022 A4.01

IMPORTANCE FACTOR:

3.6	3.6
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-ST.CBV-0003, Rev. 9
Containment Systems-Cooling
System

TOOLS AND EQUIPMENT: NONE

VALIDATED JPM COMPLETION TIME: 15 MIN

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED:

J. H. Lloyd
PRINCIPAL TRAINING SUPERVISOR

R. J. Hall
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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____

GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____

DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE
SIMULATOR SETUP INSTRUCTIONS**

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

TASK NUMBER: 022 505 02 01

SIMULATOR IC: Any at power IC

**MALFUNCTIONS
REQUIRED:** NONE

**OVERRIDES
REQUIRED:** NONE

**SPECIAL
INSTRUCTIONS:** Align CFCUs with 23 CFCU and any other 3 CFCUs in high speed.

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

TASK NUMBER: 022 505 02 01

INITIAL CONDITIONS:

1. The unit is at 100% power.

INITIATING CUE: Perform the monthly surveillance on 23 CFCU IAW S2.OP-ST.CBV-0003(Q).

Successful Completion Criteria:

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

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Evaluator provides a copy of S2.OP-ST.CBV-0003, with Prerequisites signed off.	Candidate reviews procedure. <i>NOTE: This is a Category I procedure. Work Standards require that the operator refer to the procedure at each step of the task. Individual step documentation shall be complete prior to proceeding to the next step.</i>		
		Perform test on each Containment Fan Coil Unit required to be tested IAW the following instructions:	Identifies 23 CFCU is unit to be tested		
	A.	IF CFCU not already in Low Speed, THEN START CFCU in Low Speed IAW S2.OP-SO.CBV-0001(Q), Containment Ventilation Operation.	Obtains and refers to S2.OP-SO.CBV-0001 to shift 23 CFCU to Low Speed from High Speed.		
*	B.	<ul style="list-style-type: none"> PRESS FAN HIGH SPEED STOP bezel 	23 CFCU STOP PB illuminated		
	C.	<ul style="list-style-type: none"> ENSURE FAN STOP bezel illuminates. 	Ensures FAN STOP button illuminates.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	D.	<ul style="list-style-type: none"> When approximately 25 seconds have elapsed from depressing HIGH SPEED STOP bezel, PRESS FAN LOW SPEED START bezel. 	23 CFCU LOW SPEED START illuminated		
	E.	<ul style="list-style-type: none"> ENSURE following dampers are in indicated positions: <ul style="list-style-type: none"> ROUGH FILTER DPR CLOSED HEPA INLET DPR OPEN HEPA OUTLET DPR OPEN 	Verifies ROUGH FILTER DPR CLOSED, HEPA INLET DPR OPEN, HEPA OUTLET DPR OPEN illuminated		
	F.	ENSURE Service Water flow of ≥ 2646 gpm.	Verifies SW flow ≥ 2646 gpm		
	G.	IF Service Water flow is < 930 gpm, THEN STOP the CFCU AND REFER to step 3.11.	Continues with procedure		
	H.	Record start time on applicable Attachment	Records ST start time on Attachment 3		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	I.	When >15 minutes has elapsed, record the following on Attachment 3 <ul style="list-style-type: none"> • Stop time. • Cooling water flow. • CFCU "Test Results" by initialing the SAT or UNSAT column IAW the Acceptance Criteria stated. 	<i>CUE: 15 minutes have elapsed since start of test.</i> <ul style="list-style-type: none"> • Records required information • Determines Acceptance Criteria met • *Initials appropriate column 		
	J.	Align CFCU as required to support plant conditions.	<i>CUE: Return 23 CFCU to High Speed.</i> Refers to S2.OP-SO.CBV-0001(Q)		
*	K.	PRESS FAN LOW SPEED STOP bezel.	LOW SPEED STOP PB illuminated		
	L.	ENSURE following bezel illuminated for 23 CFCU: <ul style="list-style-type: none"> • FAN STOP • ROUGH FILTER DPR OPEN. • HEPA INLET DPR CLOSED. • HEPA OUTLET DPR CLOSED. 	Verifies indication illuminated: <ul style="list-style-type: none"> • FAN STOP • ROUGH FILTER DPR OPEN • HEPA INLET DPR CLOSED • HEPA OUTLET DPR CLOSED 		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	M.	ENSURE CFCU is filled and vented IAW S2.OP-SO.CBV-0003, Filling and Venting Containment Fan Coil Units.	CFCU is filled and vented.		
	N.	Ensure Service Water is available.	SW is available.		
	O.	PRESS FAN HIGH SPEED START bezel.	23 CFCU HIGH SPEED START PB illuminated		
	P.	ENSURE bezels illuminate for 23 CFCU: <ul style="list-style-type: none"> • ROUGH FILTER DPR OPEN • HEPA INLET DPR CLOSED • HEPA OUTLET DPR CLOSED 	Verifies indication illuminated: <ul style="list-style-type: none"> • ROUGH FILTER DPR OPEN • HEPA INLET DPR CLOSED • HEPA OUTLET DPR CLOSED 		
	Q.	ENSURE Service Water flow of ≥930 gpm.	Verifies SW flow ≥930 gpm.		
	R.	Acceptance Criteria	Initials for satisfactory completion of surveillance		

TERMINATING CUE: 23 CFCU running in HIGH SPEED and Attachment 3 provided to Evaluator.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Containment Systems

TASK: Determine CFCU Operability

OPEN REFERENCE:

TASK NUMBER: 022 505 02 01

QUESTION:

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The unit is at 100% power.

INITIATING CUE:

Perform the monthly surveillance on 23 CFCU IAW S2.OP-ST.CBV-0003(Q).

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Main Generator
TASK: Synchronize the Main Generator to the Grid (Alternate Path)
TASK NUMBER: 0450040101

JPM NUMBER:

APPLICABILITY:

EO RO SRO

K/A NUMBER: 062 A4.07

IMPORTANCE FACTOR:

3.1	3.1
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: S2.OP-SO.TRB-0001(Q)
Turbine Generator Operations

TOOLS AND EQUIPMENT: NONE

VALIDATED JPM COMPLETION TIME: 15 MIN

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED:

J. Alford
PRINCIPAL TRAINING SUPERVISOR

D. J. Hall
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: _____

ACTUAL TIME CRITICAL COMPLETION TIME: _____

JPM PERFORMED BY: _____

GRADE: SAT UNSAT

REASON, IF UNSATISFACTORY:

EVALUATOR'S SIGNATURE: _____

DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Main Generator

TASK: Synchronize the Main Generator to the Grid (Alternate Path)

TASK NUMBER: 0450040101

SIMULATOR IC: IC- (Turbine Sync)

**MALFUNCTIONS
REQUIRED:** Generator fails to load automatically

**OVERRIDES
REQUIRED:** NONE

**SPECIAL
INSTRUCTIONS:**

1. Turbine must be running at approx. 1800 RPM, with the controls in OPER AUTO
2. Perform S2.OP-SO.TURB-0001 through completion of Attachment 1, Section 1.0 and 2.0.
3. Tag the 500KV 1-9 Breaker
4. Leave turbine speed at a point where minor adjustment is required to get the synchroscope rotating at the correct speed.

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Main Generator

TASK: Synchronize the Main Generator to the Grid-Turbine (Alternate Path)

TASK NUMBER: 0450040101

INITIAL CONDITIONS:

1. The Main Turbine is operating at approximately 1800 rpm, with excitation applied.
2. 500KV Breaker 1-9 (32X) is isolated and tagged.
3. Leave turbine in OPER AUTO with speed requiring minor adjustment to get the synchroscope rotating at the correct speed.

INITIATING CUE:

Commencing with Step 5.5.2, S2.OP-SO.TRB-0001, synchronize the Main Generator to the grid.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Main generator

TASK: Synchronize the Main Generator to the Grid (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	1	Candidate reviews procedure	Provide copy of S2.OP-SO.TRB-0001, marked up through completion of Att. 1 <i>Category 1 procedure use requirements apply</i>		
	2	ENSURE 500KV 9-10 (30X) Breaker selected to 9-10 LOCAL	Verifies 500KV 9-10 (30X) Breaker selected to LOCAL		
	3	At 2RP6, SELECT NO. 2 UNIT SCOPE TRANSFER Switch to either REGULAR SCOPE or SPARE SCOPE position.	Selects REGULAR (Scope on 1RP4)		
	4	MONITOR selected synchroscope while performing the following: <ul style="list-style-type: none"> • DEPRESS SCOPE TEST pushbutton on 500KV BREAKER SECTIONS 1-9 (32X) Bezel. • ENSURE synchroscope hand indicates 12 o'clock. • ENSURE INCOM KV and RUN KV Voltmeters both respond by moving upscale. • RELEASE SCOPE TEST pushbutton. 	<ul style="list-style-type: none"> • Presses and holds the SCOPE TEST button. • Verifies the scope hand indicates 12 o'clock. • Verifies the INCOM KV and RUN KV Voltmeters move upscale. • Releases the SCOPE TEST button. 		
	5	ENSURE MN GEN SYNC PERM BYPASS key lock switch is in NORMAL position	Verifies switch in NORMAL		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Main generator

TASK: Synchronize the Main Generator to the Grid (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	6	<u>IF</u> 500KV 1-9 (32X) Breaker is available, <u>THEN</u> :	<i>CUE</i> : The 1-9 Breaker is NOT available.		
	7	<u>IF</u> 500KV 1-9 (12X) Breaker is NOT available, <u>THEN</u> : <ul style="list-style-type: none"> • SELECT Mimic Bus 500 KV BUS SEC 9-10 BREAKER (30X). - ENSURE Mimic Bus pushbutton back light is yellow. - ENSURE 9-10 (10X) bezel MIMIC BUS INTLK CLS SEL back light is illuminated. • SELECT 9-10 SYNCH POT ON. 	<ul style="list-style-type: none"> • Presses the 500 KV BUS SEC 9-10 BREAKER on Mimic Bus • Verifies the button illuminates yellow. • Verifies the 9-10 MIMIC BUS INTERLOCK CLOSE SEL is illuminated. • Presses the 9-10 SYNCH POT ON button and verifies the button illuminates. 		
	8	If Voltage Regulator Voltage Matching Circuit is available, then select VOLTAGE MATCHING ON	Selects VOLTAGE MATCHING ON		
	9	Maintain Generator Voltage 3-5KV greater than RUN KV (Line Voltage).	Monitors Incoming and Running voltages.		
	10	ADJUST turbine speed so that synchroscope is rotating in FAST direction at a rate of 1 revolution in every 25 to 30 seconds.	Adjusts speed to attain correct rate		

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Main generator

TASK: Synchronize the Main Generator to the Grid (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	11	REQUEST Systems Operator permission to load Main Generator.	<i>CUE:</i> You have permission to load Main Generator.		
	12	NOTIFY Hope Creek OS/CRS that Unit 2 Generator is to be synchronized to the grid.	<i>CUE:</i> Hope Creek CRS acknowledges.		
	13	<u>IF</u> turbine is in OPER AUTO, <u>THEN</u> :			
	14	ENSURE GV TRACKING METER at 0% (nulled)	Checks meter and adjusts, as necessary		
	15	<u>IF</u> MAIN GEN SYNC PERMISSIVE green indicating light is not illuminating each time synchroscope indicator is near 12 o'clock position, <u>OR</u> is illuminated at any other position of synchroscope, <u>THEN</u> :	Determines the green indicating light is operating properly.		
*	16	When synchroscope is 1 to 2 minutes before 12 o'clock, PRESS CLOSE pushbutton on selected breaker: <ul style="list-style-type: none"> • 1-9 500 KV Breaker <li style="text-align: center;"><u>OR</u> • 9-10 500 KV Breaker 	Presses the 9-10 500 KV Breaker button at the proper time and verifies the button illuminates.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Main generator

TASK: Synchronize the Main Generator to the Grid (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	17	SELECT SYNCH POT OFF for selected breaker: <ul style="list-style-type: none"> • 1-9 500 KV Breaker <li align="center">OR • 9-10 500 KV Breaker 	Presses the SYNCH POT OFF for the 9-10 breaker and verifies the button illuminates.		
*	18	If load does not increase to 40-60 MW within 15 secs., then either: <ul style="list-style-type: none"> • Select Load Rate 4%/min and raise SETTER 1% above REFERENCE for each 10 MW (not to exceed 4%) utilizing the REF PB. <li align="center">OR • Select TURB MANUAL and raise turbine load to 40-60 MW utilizing the GVA PB • Notify OS/CRS • When turbine OPER AUTO is available select OPER AUTO under OS/CRS direction 	Recognizes generator did not load and raises load to >0 MW, by either method. NOTE: TURB MANUAL is very sensitive. Use of that method may result in a large load swing.		
	19	ENSURE turbine LOAD CONTROL light is illuminated.	Verifies the Turbine LOAD CONTROL light is illuminated.		
	20	ENSURE REFERENCE and SETTER Displays agree.	Verifies the REFERENCE and SETTER Displays agree.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____
DATE: _____

SYSTEM: Main generator

TASK: Synchronize the Main Generator to the Grid (Alternate Path)

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	21	ENSURE VOLTAGE MATCHING OFF Bezel illuminated	Verifies VOLTAGE MATCHING OFF		
	22	LOG time of generator synchronization in Narrative Log.	<i>CUE:</i> The time has been logged.		
	23	NOTIFY Electric System Operator that Salem Unit 1 is available for loading.	<i>CUE:</i> The Electric System Operator acknowledges.		

TERMINATING CUE: Electric System Operator is notified.

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

- The Main Turbine is operating at approximately 1800 rpm, with excitation applied.
- Turbine control is in OPER AUTO.
- 500KV Breaker 1-9 (32X) is isolated and tagged.

INITIATING CUE:

Commencing with Step 5.5.2, S2.OP-SO.TRB-0001, synchronize the Main Generator to the grid.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Emergency Response
TASK: Split the CCW Headers
TASK NUMBER: 1150040501

JPM NUMBER:

APPLICABILITY: EO RO SRO

K/A NUMBER: 008 A4.01
IMPORTANCE FACTOR:

3.3	3.1
RO	SRO

EVALUATION SETTING/METHOD: Simulator

REFERENCES: 2-EOP-LOCA-0003, Rev. 21
Transfer to Cold Leg
Recirculation

TOOLS AND EQUIPMENT: NONE

VALIDATED JPM COMPLETION TIME: 8 MIN

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: J. H. Boyd for PRINCIPAL TRAINING SUPERVISOR
[Signature] 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

SIMULATOR SETUP INSTRUCTIONS

SYSTEM: Emergency Response

TASK: Split the CCW Headers

TASK NUMBER: 1150040501

SIMULATOR IC:

**MALFUNCTIONS
REQUIRED:** LBLOCA

**OVERRIDES
REQUIRED:** NONE

**SPECIAL
INSTRUCTIONS:** 22 and 23 CCW Pump in service. Run a Large Break LOCA and perform and mark LOCA-3 to Step 23.

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Emergency Response

TASK: Split the CCW Headers

TASK NUMBER: 1150040501

INITIAL CONDITIONS:

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

INITIATING CUE:

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

Successful Completion Criteria:

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

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)
	1	IS SW AVAILABLE TO <u>BOTH</u> CCW HXs	Checks SW Pump/Valve alignment and answers YES		
	2	ARE AT LEAST TWO CCW PUMPS RUNNING	Verifies 22 and 23 CCW Pumps running		
	3	IS 21 CCW PUMP RUNNING	Answers NO		
*	4	OPEN THE FOLLOWING VALVES: • 2CC17, CCW PUMP SUCTION CROSSOVER	Locates and opens 2CC17 by pressing the OPEN button and verifying the button illuminates.		
*	5	• 21CC3, PUMP OUTLET X-CONN	• Locates and opens 2CC3 by pressing the OPEN button and verifying the button illuminates.		
*	6	• 2CC30, 22 CC Hx OUT TO AUX HDR	• Locates and opens 2CC30 by pressing the OPEN button and verifying the button illuminates.		

**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)
*	7	CLOSE THE FOLLOWING VALVES: <ul style="list-style-type: none">• 2CC18, CCW PUMP SUCTION CROSSOVER	Locates and closes 2CC18 by pressing the CLOSE button and verifying the button illuminates.		
*	8	<ul style="list-style-type: none">• 22CC3, PUMP OUTLET X-CONN	Locates and closes 2CC3 by pressing the CLOSE button and verifying the button illuminates.		
*	9	<ul style="list-style-type: none">• 2CC31, 22 CC Hx OUT TO AUX HDR	Locates and closes 2CC31 by pressing the CLOSE button and verifying the button illuminates.		

TERMINATING CUE: Reads step "RETURN TO PROCEDURE IN EFFECT"

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Emergency Response

TASK: Split the CCW Headers

OPEN REFERENCE:

TASK NUMBER: 1150040501

QUESTION:

RESPONSE: _____

RESULT: -SAT -UNSAT

A Gull

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

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

INITIATING CUE: Perform EOP-LOCA-3, beginning at Step 23.

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NTC-207
DATE: 08/31/98

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem
SYSTEM: Abnormal Procedures
TASK: TCAF Control Room Evacuation – defeat SI IAW S1.OP-AB.CR-0001
TASK NUMBER: 1140140401
JPM NUMBER: NRC-1-10

APPLICABILITY: EO RO SRO
K/A NUMBER: APE 068 AA1.21
IMPORTANCE FACTOR:

3.9	4.1
RO	SRO

EVALUATION SETTING/METHOD: In-Plant

REFERENCES: S1.OP-AB.CR-0001,
Control Room Evacuation

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 10 mins.

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: Jill Alford for [Signature]
PRINCIPAL TRAINING SUPERVISOR 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Abnormal Procedures

TASK: TCAF Control Room Evacuation – defeat SI IAW S1.OP-AB.CR-0001

TASK NUMBER: 1140140401

INITIAL CONDITIONS: The control room has been evacuated due to a bomb threat. The actions of S1.OP-AB.CR-0001 are in progress.

INITIATING CUE:

The CRS has dispatched you to assist the #1 NEO by defeating SI IAW Attachment 7, S1.OP-AB.CR-0001.

Successful Completion Criteria:

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

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Abnormal Procedures

TASK: TCAF Control Room Evacuation – defeat SI IAW AB.CR-1

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Provide the candidate with a properly marked up, current copy of S1.OP-AB.CR-0001, Attachment 7.	Candidate reviews applicable steps of the procedure. <i>NOTE: This is a Category I procedure. Work Standards require that the operator refer to the procedure at each step of the task. Individual step documentation shall be complete prior to proceeding to the next step.</i>		
		Locates proper step in procedure. Defeat SI by opening the following breakers:	The Operator refers to Step 6.0 of Attachment 7.		
*	1	Breaker 1AVIB5, Reactor Protection Output Cabinet Train A #103 in 1A 115VAC Vital Instrument Bus for Train "A" in Relay Room Elevation 100'.	Locates 1AVIB5 in 1A 115VAC Vital Instrument Bus (El. 100, Relay Room) and points out open position.		
*	2	Breaker 1AVIB24, 1A Safeguard Emergency Cabinet.	Locates 1AVIB24 and points out open position.		

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Abnormal Procedures

TASK: TCAF Control Room Evacuation – defeat SI IAW AB.CR-1

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	3	Breaker 1BVIB8, Reactor Protection Output Cabinet Train B #37 in 1B 115 VAC Vital Instrument Bus for Train "B" in Relay Room Elevation 100'.	Locates 1BVIB8 in 1B 115VAC Vital Instrument Bus (El. 100, Relay Room) and points out open position.		
*	4	Breaker 1BVIB27, 1B Safeguard Emergency Cabinet.	Locates 1BVIB27 and points out open position.		
*	5	Breaker 1CVIB9, 1C Safeguard Emergency Cabinet.	Locates 1CVIB9 and points out open position.		

TERMINATION: Candidate simulates report to HSD Panel Operator.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Abnormal Procedures

TASK: TCAF Control Room Evacuation – defeat SI IAW S1.OP-AB.CR-0001

TASK NUMBER: 1140140401

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. The control room has been evacuated due to a bomb threat. The actions of S1.OP-AB.CR-0001 are in progress.

INITIATING CUE:

The CRS has dispatched you to assist #1 NEO by defeating SI IAW Attachment 7, S1.OP-AB.CR-0001

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: Salem
SYSTEM: Auxiliary Feedwater
TASK: TCAF Adverse Environmental Conditions-Arm the AFW Pump Low Suction Trip Circuits
TASK NUMBER: 1140430401
JPM NUMBER: NRC-1-08

APPLICABILITY: EO RO SRO
K/A NUMBER: 061 A3.04
IMPORTANCE FACTOR:

4.1	4.2
RO	SRO

EVALUATION SETTING/METHOD: Simulate @ Plant

REFERENCES: S1.OP-AB.ZZ-0001, Adverse Environmental Conditions

TOOLS AND EQUIPMENT: None

VALIDATED JPM COMPLETION TIME: 10 min

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: J. L. Lloyd for PRINCIPAL TRAINING SUPERVISOR
D. Kelly for 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Adverse Environmental Conditions-Arm the AFW Pump Low Suction Trip Circuits.

TASK NUMBER: 1140430401

INITIAL CONDITIONS:

1. Both units are at 100% power.
2. This JPM can be evaluated on either or both units by circling the pump numbers on the evaluation sheet.

INITIATING CUE:

A tornado warning has been issued by the National Weather Service. You are assigned to arm the Unit 1 AFW Pump low suction pressure trip circuits IAW S1.OP-AB.ZZ-0001(Q), Adverse Environmental Conditions.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Adverse Environmental Conditions-Arm the AFW Pump Low Suction Pressure Trip Circuits

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Operator obtains or is provided with a copy of S1.OP-AB.ZZ-0001(Q), Adverse Environmental Conditions	Candidate reviews current revision of S1.OP-AB.ZZ-0001, Adverse Environmental Conditions. <i>NOTE:</i> Category I procedure use requirements apply.		
		Operator locates proper step.	In S1.OP-AB.ZZ-0001, the step is 3.6.I.		
*	1	<p>IF a Tornado Warning has been issued by National Weather Service, THEN at local AFW Pump panels, PLACE the following AFW LOW SUCTION CMC switches in ARMED position:</p> <ul style="list-style-type: none"> • AFW Pump Panel 205: 11 AFWP 	<p>The Control Room should be notified prior to opening any panel doors.</p> <ol style="list-style-type: none"> 1. Open the door to Panel 205: 11 AFWP 2. Locate and simulate turning the switch in the clockwise direction to the ARMED position. 3. Close the panel door. 		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Adverse Environmental Conditions-Arm the AFW Pump Low Suction Pressure Trip Circuits

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
*	2	<ul style="list-style-type: none"> AFW Pump Panel 206: 12 AFWP 	<ol style="list-style-type: none"> Open the door to Panel 206: 12 AFWP Locate and simulate turning the switch in the clockwise direction to the ARMED position. Close the panel door. 		
*	3	<ul style="list-style-type: none"> AFW Pump Panel 207: 13 AFWP 	<ol style="list-style-type: none"> Open the door to Panel 207: 13 AFWP Locate and simulate turning the switch in the clockwise direction to the ARMED position. Close the panel door. 		
	4	The operator should notify the Control Room when all doors are closed.	<p>Candidate locates nearby phone or page and simulates report to control room.</p> <p>CUE: Acknowledge report</p>		

TERMINATING CUE: Report made and all panel doors closed..

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

NAME: _____
DATE: _____

SYSTEM: Auxiliary Feedwater

TASK: TCAF Adverse Environmental Conditions-Arm the AFW Pump Low Suction Trip Circuits.

TASK NUMBER: 1140430401

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

RESULT: -SAT -UNSAT

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

INITIAL CONDITIONS:

1. Both units are operating at 100% power.

INITIATING CUE:

A tornado warning has been issued by the National Weather Service. You are assigned to arm the Unit 1 AFW Pump low suction pressure trip circuits IAW S1.OP-AB.ZZ-0001(Q), Adverse Environmental Conditions.

OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE

STATION: SALEM
SYSTEM: Pressurizer/Pressure Relief
TASK: Transfer Pressurizer 22 Backup Heaters to Emergency Power Supply

TASK NUMBER: 1150430501

JPM NUMBER: NOS02PPR002J

APPLICABILITY: EO RO SRO K/A NUMBER: 010 A4.02
IMPORTANCE FACTOR: 3.6 3.4
RO SRO

EVALUATION SETTING/METHOD: In-plant Simulate

REFERENCES: S2.OP-SO.PZR-0010(Q)Rev 6

TOOLS AND EQUIPMENT: JA Master Key

VALIDATED JPM COMPLETION TIME: 20 min

TIME PERIOD IDENTIFIED FOR TIME CRITICAL STEPS: N/A

APPROVED: [Signature] PRINCIPAL TRAINING SUPERVISOR [Signature] OPERATIONS MANAGER

CAUTION: No plant equipment shall be operated during the performance of a JPM without the following:
1. Permission for 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: _____
ACTUAL TIME CRITICAL COMPLETION TIME: _____
JPM PERFORMED BY: _____ GRADE: SAT UNSAT
REASON, IF UNSATISFACTORY: _____
EVALUATOR'S SIGNATURE: _____ DATE: _____

**OPERATOR TRAINING PROGRAM
JOB PERFORMANCE MEASURE**

NAME: _____

DATE: _____

SYSTEM: Pressurizer/Pressure Relief

TASK: Transfer Pressurizer 22 Backup Heaters to Emergency Power Supply

TASK NUMBER: 1150430501

INITIAL CONDITIONS:

1. Due to a loss of power to the group buses it is necessary to energize the Backup Heaters from their emergency power supply.

INITIATING CUE:

The CRS directs you to perform S2.OP-SO.PZR-0010(Q), Section 5.3, Transferring Pzr Htr 22 BU Group To The Emergency Power Supply. 2A EDG is carrying 2A Vital Bus and is loaded to 2400 KW.

Successful Completion Criteria:

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

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Pressurizer/Pressure Relief

TASK: Transfer Pressurizer 22 Backup Heaters to the Emergency Power Supply

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
		Provide the candidate with a properly marked up copy of S2.OP-SO.PZR-0010.	Candidate reviews procedure. <i>NOTE: This is a Category I procedure. Work Standards require that the operator refer to the procedure at each step of the task. Individual step documentation shall be complete prior to proceeding to the next step</i>		
	4.1	Additional Tools and Equipment: JA Master key	Candidate notes need for JA Master Key <i>CUE: All operations will be simulated.</i>		
# *	5.3.1	ENSURE breaker 2AX1AX14X, No. 2EP PRESSURIZER HEATER BUS (EMERGENCY) is OPEN	Locates breaker 2AX1AX14X on 2A 460V Vital Bus, Elev. 84' Swgr Rm and determines current breaker position. <i>CUE: Breaker indicates OPEN.</i>		
	5.3.2	REQUEST the NCO to PLACE the 22 Backup Group in MANUAL, <u>AND</u> PRESS the 22 BACKUP OFF pushbutton	Locates nearest means of communications and requests NCO to place 22 B/U Htrs in MANUAL and OFF. <i>CUE: NCO reports 22 B/U Htrs are in MANUAL and OFF.</i>		

OPERATOR TRAINING PROGRAM

JOB PERFORMANCE MEASURE

NAME: _____

DATE: _____

SYSTEM: Pressurizer/Pressure Relief

TASK: Transfer Pressurizer 22 Backup Heaters to the Emergency Power Supply

# *	STEP NO.	STEP (*Denotes a Critical Step) (#Denotes a Sequential Step)	STANDARD	EVAL S/U	COMMENTS (Required for UNSAT Evaluation)
	5.3.3	ENSURE breaker 2EX1EP2EPX, 2EP 480V PRESSURIZER HEATER BUS MAIN BREAKER is OPEN	Locates breaker on El. 78 Electrical Pen. <i>CUE: Breaker is open.</i>		
	5.3.4	REMOVE interlock key from breaker 2EX1EP2EPX	Turns key and removes from lock.		
*	5.3.5	PLACE all but <u>three</u> individual pressurizer heater breakers on the 2EP Pzr Htr Bus in the OFF position.	Operator locates individual heater breakers, places all but three breakers in OFF and notes breakers left ON as N/A in procedure.		
*	5.3.6	PLACE no-load disconnect switch, 2AX1AX14X-1, 2EP PZR HTR BUS EMERGENCY FEED DISCONNECT SWITCH, in the ON position <u>AND</u> padlock the switch.	Operator locates manual disconnect on El. 78 El. Pen., unlocks, places it in ON and re-padlocks.		
*	5.3.7	INSERT interlock key, and UNLOCK breaker 2AX1AX14X.	Locates Corry Key Interlock on 2AX1AX14X breaker, inserts and turns key.		
	5.3.8	NOTIFY the NCO that Pzr Htr 22 BU Group has been transferred to the emergency power supply (2A 460V Vital Bus).	Candidate makes report to the Control Room.		

Terminating Cue: Evaluator acknowledges report that 22 Backup Heaters are aligned to emergency power source.

**JOB PERFORMANCE MEASURE
FOLLOW-UP QUESTION DOCUMENTATION:**

NAME: _____
DATE: _____

SYSTEM: Pressurizer/Pressure Relief

TASK: Transfer Pressurizer 22 Backup Heaters to the Emergency Power Supply

TASK NUMBER: 1150430501

QUESTION: _____

RESPONSE: _____

REFERENCES: _____

RESULT: -SAT -UNSAT

QUESTION: _____

RESPONSE: _____

REFERENCES: _____

RESULT: -SAT -UNSAT

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. Due to a loss of power to the group buses it is necessary to energize the Backup Heaters from their emergency power supply.

INITIATING CUE:

The CRS directs you to perform S2.OP-SO.PZR-0010(Q), Section 5.3, Transferring Pzr Htr 22 BU Group To The Emergency Power Supply. The 2A EDG is carrying 2A Vital Bus and is loaded to 2400 KW.