

Draft Submittal
BRUNSWICK OCT/NOV 2004

EXAM 50-325, 324/2004-301
OCTOBER 29, 2004 &
NOVEMBER 2 - 10, 2004

Draft In-Plant JPMs

**PROGRESS ENERGY CAROLINAS
BRUNSWICK TRAINING SECTION**

**JOB PERFORMANCE MEASURE
SYSTEMS**

JPM H

LESSON TITLE: Vent Primary Containment via SBT to Control Drywell Pressure
per AOP-14

LESSON NUMBER: JPM H

REVISION NO: 00

RECOMMENDED BY: Curt Robert _____ DATE
Instructor/Developer

CONCURRENCE BY: _____ DATE
Line Superintendent/Supervisor

APPROVED BY: _____ DATE
Superintendent/Supervisor Training

SIMULATOR SETUP:

A. Initial Conditions:

1. Recommended Initial Conditions

IC 11 (Unit 2)
Rx. Pwr. 100%
Core Age BOC

2. Required Plant Conditions

B. Malfunctions

ES009F Inadvertent Core Spray B Initiation

C. Overrides

None

D. Remote Function

AUTO Trigger 1- CAC-V9 Control Switch, K6217JNT OPEN == True SW_IASW193
CLOSE.

AUTO Trigger 2- CAC-V23 Control Switch, K6225JNT OPEN == True SW_VHSW146L
OPEN.

E. Special Instructions

None.

SAFETY CONSIDERATIONS:

NONE

EVALUATOR NOTES: (Do not read to performer)

1. The applicable procedure section **WILL** be provided to the performer, once it is demonstrated he/she knows the correct procedure.
 2. If this is the first JPM of the JPM set, read the JPM briefing contained in NUREG 1021, Appendix E, or similar to the performer.
-

Read the following to the JPM performer.

TASK CONDITIONS:

1. An inadvertent Core Spray Initiation signal has caused a loss of Drywell Cooling and drywell pressure is rising approaching 1.7 psig.
2. Actions of APP A-3 2-6 direct performance of AOP-14 for rising Drywell Pressure.
3. An AO has been dispatched to transfer RBCCW cooling to the Conventional Service Water Header.
4. The 2B Core Spray Pump has been overridden off.
5. Div I/Div II NON-INTRPT RNA SV-5262/5261 valves have been overridden OPEN.

INITIATING CUE:

The Unit SCO has directed you to perform the necessary actions of AOP-14 section 3.2.3 Primary Containment Pressure High.

Notify the SCO when the actions are complete and primary containment pressure is being controlled.

PERFORMANCE CHECKLIST

NOTE: Sequence is assumed unless denoted in the Comments.

Step 1 – Obtain current revision of AOP-14, Section 3.2.3 and verify revision if applicable.
Current revision of AOP-14, Section 3.2.3 obtained.

SAT/UNSAT*

TIME START _____

START DRYWELL PRESSURE _____

Step 2 – ENSURE that all available Drywell Coolers are operating in accordance with 2OP-37.1.

Determines that A and D Drywell Coolers are running and that B and C are not running due to the failed Core Spray Initiation Logic.

SAT/UNSAT*

Step 3 – ENSURE that RBCCW is correctly aligned to the drywell cooling units in accordance with 2OP-21.

No action required. May check RBCCW system operation.

SAT/UNSAT*

NOTE: AOP-14 Section 3.2.3 Step 1c. is not applicable.

Step 3 – Vent the Drywell as necessary in accordance with 2OP-10.

Current revision of 2OP-10, Section 8.2. obtained.

SAT/UNSAT*

Vent Primary Containment via SGBT to Control Drywell Pressure per AOP-14

Step 4 - Record D12-RR-R600B, STACK RAD MONITOR, digital point display.

Value for D12-RR-R600B recorded in OP-10.

SAT/UNSAT*

Step 5 - Add 0.17 to the value to obtain the logarithmic equivalent of a 50% increase in stack radiation monitor reading and record result.

Value recorded in OP-10 of initial reading + 0.17.

SAT/UNSAT*

Step 6 - Monitor Stack Rad Monitor, D12-RM-R600B, for increase in activity during venting.

D12-RM-R600B periodically monitored.

SAT/UNSAT*

Step 7 - CLOSE REACTOR BUILDING SGBT TRAIN 2A INLET VALVE, VA-2D-BFV-RB.

VA-2D-BFV-RB indicates fully closed.

**** CRITICAL STEP ** SAT/UNSAT***

Step 8 - CLOSE REACTOR BUILDING SGBT 2B INLET VALVE, VA-2H-BFV-RB.

VA-2H-BFV-RB indicates fully closed.

**** CRITICAL STEP ** SAT/UNSAT***

Vent Primary Containment via SBT to Control Drywell Pressure per AOP-14

Step 9 - OPEN SBT DW SUCT DAMPER, VA-2F-BFV-RB.

VA-2F-BFV-RB, indicates open.

**** CRITICAL STEP ** SAT/UNSAT***

NOTE: Steps 10 and 11 2OP-10, Section 8.2 are not applicable.

Step 10 - OPEN DW PURGE EXH VALVE, CAC-V9.

CAC-V9 indicates full open.

**** CRITICAL STEP ** SAT/UNSAT***

Step 9 - OPEN DW PURGE EXH VALVE, CAC-V23.

CAC-V23 indicates full open.

**** CRITICAL STEP ** SAT/UNSAT***

PROMPT: Inform examinee as AO that RBCCW cooling has been aligned to the Conventional Header.

NOTE: Steps 12c. and 12d. of 2OP-10, Section 8.2 are not applicable. Examinee may align to vent from the drywell head by opening the CAC-V49 or CAC-V50 but this is not required.

Vent Primary Containment via SBT to Control Drywell Pressure per AOP-14

NOTE: This task should be completed before drywell pressure reaches 1.7 psig or the JPM should be considered UNSAT.

TERMINATING CUE: When the Unit SCO is notified that the vent line up is complete and drywell pressure is lowering, this JPM is complete.

TIME COMPLETED _____

STOP DRYWELL PRESSURE _____

LIST OF REFERENCES

RELATED TASKS:

261 008 B1 01
Perform Normal Primary Containment Venting.

K/A REFERENCE AND IMPORTANCE RATING:

261000 A4.04 3.3/3.4
Ability to manually operate and monitor Primary Containment Pressure.

REFERENCES:

2OP-10, Sect. 8.2 Rev 60

TOOLS AND EQUIPMENT:

None

SAFETY FUNCTION (from NUREG 1123, Rev 2):

Safety Function 5, Containment Integrity

REASON FOR REVISION:

New, created for NRC 2004 exam.

Vent Primary Containment via SBTG to Control Drywell Pressure per AOP-14

Time Required for Completion: 15 Minutes (approximate).

Time Taken: _____

APPLICABLE METHOD OF TESTING

Performance: Simulate _____ Actual Unit: _____
Setting: Control Room _____ Simulator (Not applicable to In-Plant JPMs)
Time Critical: Yes _____ No Time Limit N/A
Alternate Path: Yes _____ No

EVALUATION

Performer: _____ SSN: _____

JPM: Pass _____ Fail _____

Remedial Training Required: Yes _____ No _____

Did Performer Verify Procedure? Yes _____ No _____
(Each Student should verify one JPM per evaluation set)

Comments: _____

Comments reviewed with Student

Evaluator Signature: _____ Date: _____

TASK CONDITIONS:

1. An inadvertent Core Spray Initiation signal has caused a loss of Drywell Cooling and drywell pressure is rising approaching 1.7 psig.
2. Actions of APP A-3 2-6 direct performance of AOP-14 for rising Drywell Pressure.
3. An AO has been dispatched to transfer RBCCW cooling to the Conventional Service Water Header.
4. The 2B Core Spray Pump has been overridden off.
5. Div I/Div II NON-INTRPT RNA SV-5262/5261 valves have been overridden OPEN.

INITIATING CUE:

You are directed to vent the Drywell as necessary to prevent exceeding 1.7 psig Drywell Pressure per AOP-14.

Notify the SCO when the vent line up is complete and drywell pressure is lowering.



**PROGRESS ENERGY CAROLINAS
BRUNSWICK TRAINING SECTION**

**JOB PERFORMANCE MEASURE
SYSTEMS**

JPM I

LESSON TITLE: Bypassing RWCU Filter Demineralizers

LESSON NUMBER: JPM I

REVISION NO: 00

RECOMMENDED BY: Curt Robert _____
Instructor/Developer DATE

CONCURRENCE BY: _____
Line Superintendent/Supervisor DATE

APPROVED BY: _____
Superintendent/Supervisor Training DATE

SAFETY CONSIDERATIONS:

1. Operating equipment and energized electrical equipment hazards.
 2. Hearing protection is required in this area when equipment is operating.
 3. Safety Glasses, Hard Hat, and approved footwear must be worn while in the area of this JPM.
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EVALUATOR NOTES: (Do not read to performer)

1. The applicable procedure section **WILL** be provided to the performer, once it is demonstrated he/she knows the correct procedure.
 2. If this is the first JPM of the JPM set, read the JPM briefing contained in NUREG 1021, Appendix E, or similar to the performer.
-

Read the following to the JPM performer.

TASK CONDITIONS:

1. Unit One (1) has experienced a plant transient that resulted in a Group 1 isolation and reactor scram.
2. The Main Condenser is not available as a Heat Sink.
3. Safety Relief Valves (SRVs) have failed.
4. Reactor Vessel Control Procedure (EOP-01-RVCP) and Alternate Emergency Depressurization Procedure (EOP-01-AEDP) are being executed.
5. RWCU pump B, and RWCU Filter Demineralizers A and B are in service.
6. A Control Operator (CO) is standing by ready to assist if any actions need to be performed in the Unit One (1) Control Room.

INITIATING CUE:

You are directed by the Unit SCO to perform the AO actions to Bypass the RWCU Filter Demineralizers per 0EOP-01-SEP-07. Inform the SCO when 0EOP-01-SEP-07 actions are complete.

PERFORMANCE CHECKLIST

NOTE: Sequence is assumed unless denoted in the **Comments**.

Step 1 – Obtain current revision of 0EOP-01-SEP-07.

Obtains current revision of 0EOP-01-SEP-07.

SAT/UNSAT*

TIME START _____

NOTE: Since both RWCU Filter Demineralizers (F/Ds) are in service the examinee may select either one to be the first F/D removed from service.

PROMPT: If asked the status of G31-Z002-FC-74A(74B) state that 74A is in MANUAL and 74B is in AUTO.

PROMPT: G31-Z002-FC-74A(74B) is in "MAN".

Step 2 – IF the F/D to remain in service is in automatic flow control, THEN PLACE F/D A(B) FLOW controller G31-Z002-FC-74A(74B) to "MAN".

PLACE F/D A(B) FLOW controller G31-Z002-FC-74A(74B) to "MAN".

****CRITICAL STEP**SAT/UNSAT***

PROMPT: As found Hold Pump is OFF, (GREEN light ON, RED light OFF) and F/D A(B) FLOW controller G31-Z002-FC-74A(74B) indicates 110 gpm.

Provide indication of lowering flow as *EFFLUENT FLOW CONTROL VALVE, G31-Z002-FCV-66A(66B)* throttle CLOSED with a pointer.

Hold Pump will start at 50-60 gpm indicated by GREEN light OFF, RED light ON.

Step 3 – SLOWLY REDUCE flow on F/D A(B) FLOW controller G31-Z002-FC-74A(74B) until Hold Pump A(B) starts (approximately 50-60 gpm) and maintains flow steady.

THROTTLES CLOSED EFFLUENT FLOW CONTROL VALVE, G31-Z002-FCV-66A(66B), using the manual thumbwheel on F/D A(B) FLOW controller G31-Z002-FC-74A(74B) until flow indicates 50 -60 gpm and the Filter Hold Pump starts.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: 4 seconds after the Hold Pump starts HOLDING PUMP DISCHARGE VALVE, G31-Z002-AO-14A(14B) strokes OPEN and indication is GREEN light is OFF, RED light is ON.

As the examinee adjusts flow simulate indicated flow on G31-Z002-FC-74A(74B) with a pointer.

Step 4 – WHEN HOLDING PUMP DISCHARGE VALVE, G31-Z002-AO-14A(14B), is fully open, THEN REDUCE filter flow to 0 gpm.

Verifies that HOLDING PUMP DISCHARGE VALVE, G31-Z002-AO-14A(14B), is fully open, THEN REDUCES filter flow to 0 gpm.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: RED HOLD light ON. RED Filter light OFF.

Step 5 – DEPRESS the HOLD START push button for the off-line F/D.

DEPRESSES the HOLD START push button for the off-line F/D.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: After examinee PLACES the INFLUENT & EFFLUENT switch for the off-line F/D to "ISOLATE," GREEN light is ON, RED light is OFF for EFFLUENT ISOLATION VALVE, G31-Z002-AO-31A(31B) and INFLUENT ISOLATION VALVE, G31-Z002-AO-32A(32B)

Step 6 – On Local Panel G31-Z002-26, PLACE the INFLUENT & EFFLUENT switch for the off-line F/D to "ISOLATE," and VERIFY that the following off-line F/D valves close:

- a. EFFLUENT ISOLATION VALVE, G31-Z002-AO-31A(31B)
- b. INFLUENT ISOLATION VALVE, G31-Z002-AO-32A(32B)

Places INFLUENT & EFFLUENT switch for the off-line F/D to "ISOLATE," G31-Z002-AO-31A(31B) and G31-Z002-AO-32A(32B) are CLOSED

****CRITICAL STEP**SAT/UNSAT***

NOTE: 0EOP-01-SEP-07, Step 7 is N/A since only 1B RWCU pump is in service per initial conditions.

1-XU83 has filter B valves on the LEFT and Filter A valves on the RIGHT. This is not typical convention and examinee has to use self-check to operate the correct valve.

PROMPT: GREEN light is ON, RED light is OFF for EFFLUENT STRAINER ISOLATION VALVE, G31-Z002-AO-41A(41B).

Step 7 – CLOSE the off-line F/D A(B) EFFLUENT STRAINER ISOLATION VALVE, G31-Z002-AO-41A(41B).

CLOSES off-line F/D A(B) EFFLUENT STRAINER ISOLATION VALVE, G31-Z002-AO-41A(41B).

****CRITICAL STEP**SAT/UNSAT***

PROMPT: G31-Z002-FC-74A(74B) is in "MAN".

Step 8 – ENSURE F/D A(B) FLOW controller G31-Z002-FC-74A(74B) is in "MAN".

Verifies that G31-Z002-FC-74A(74B) is in "MAN".

****CRITICAL STEP**SAT/UNSAT***

NOTE: Examinee will establish communications with the control room with a radio.

PROMPT: Once contacted as Control Operator inform examinee that you will OPEN Filter Bypass Valve, G31-F044 as he CLOSES the Effluent Flow Control Valve.

PROMPT: As found Hold Pump is OFF, (GREEN light ON, RED light OFF) and F/D A(B) FLOW controller G31-Z002-FC-74A(74B) indicates 110 gpm.

Provide indication of lowering flow as *EFFLUENT FLOW CONTROL VALVE, G31-Z002-FCV-66A(66B)* throttle CLOSED with a pointer.

Hold Pump will start at 50-60 gpm indicated by GREEN light OFF, RED light ON.

Step 9 – THROTTLE CLOSED EFFLUENT FLOW CONTROL VALVE, G31-Z002-FCV-66A(66B), using the manual thumbwheel on F/D A(B) FLOW controller G31-Z002-FC-74A(74B). (PERFORMED simultaneously with CO opening the Filter Bypass Valve)

THROTTLES CLOSED EFFLUENT FLOW CONTROL VALVE, G31-Z002-FCV-66A(66B), using the manual thumbwheel on F/D A(B) FLOW controller G31-Z002-FC-74A(74B) until flow indicates 50 -60 gpm and the Filter Hold Pump starts.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Simulate with a pointer indicated flow on G31-Z002-FC-74A(74B) lowering below 50 gpm while the Hold Pump discharge valve strokes OPEN, (4 sec. after Hold Pump starts. As examinee adjust thumbwheel in response to low flow indicate flow being restored to 60 gpm.

Step 10 – MAINTAIN flow steady at approximately 60 gpm.

Adjusts manual thumbwheel on F/D A(B) FLOW controller G31-Z002-FC-74A(74B) to maintain 60 gpm flow.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: 4 seconds after the Hold Pump starts HOLDING PUMP DISCHARGE VALVE, G31-Z002-AO-14A(14B) strokes OPEN and indication is GREEN light is OFF, RED light is ON.

As the examinee adjusts flow simulate indicated flow on G31-Z002-FC-74A(74B) with a pointer.

Step 11 – WHEN HOLDING PUMP DISCHARGE VALVE, G31-Z002-AO-14A(14B), is fully open, THEN REDUCE filter flow to 0 gpm.

Verifies that HOLDING PUMP DISCHARGE VALVE, G31-Z002-AO-14A(14B), is fully open, THEN REDUCES filter flow to 0 gpm.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: RED HOLD light ON. RED Filter light OFF.

Step 12 – DEPRESS the HOLD START push button for the off-line F/D.

DEPRESSES the HOLD START push button for the off-line F/D.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: After examinee PLACES the INFLUENT & EFFLUENT switch for the off-line F/D to "ISOLATE," GREEN light is ON, RED light is OFF for EFFLUENT ISOLATION VALVE, G31-Z002-AO-31A(31B) and INFLUENT ISOLATION VALVE, G31-Z002-AO-32A(32B)

Step 13 – On Local Panel G31-Z002-26, PLACE the INFLUENT & EFFLUENT switch for the off-line F/D to "ISOLATE," and VERIFY that the following off-line F/D valves close:

- a. EFFLUENT ISOLATION VALVE, G31-Z002-AO-31A(31B)
- b. INFLUENT ISOLATION VALVE, G31-Z002-AO-32A(32B)

Places INFLUENT & EFFLUENT switch for the off-line F/D to "ISOLATE," G31-Z002-AO-31A(31B) and G31-Z002-AO-32A(32B) are CLOSED

****CRITICAL STEP**SAT/UNSAT***

PROMPT: GREEN light is ON, RED light is OFF for EFFLUENT STRAINER ISOLATION VALVE, G31-Z002-AO-41A(41B).

Step 14 – CLOSE the off-line F/D A(B) EFFLUENT STRAINER ISOLATION VALVE, G31-Z002-AO-41A(41B).

CLOSES off-line F/D A(B) EFFLUENT STRAINER ISOLATION VALVE, G31-Z002-AO-41A(41B).

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Notify the examinee as CO that you will THROTTLE RETURN TO VESSEL VLV, G31-F042, to maintain pump flow.

TERMINATING CUE: When RWCU F/D A and B are bypassed per 0EOP-01-SEP-07 and the Unit SCO is notified, this JPM is complete.

TIME COMPLETED _____

LIST OF REFERENCES

RELATED TASKS:

200655B504

Bypass RWCU Filter Demineralizers per SEP-07.

K/A REFERENCE AND IMPORTANCE RATING:

295025 EA1.08 (3.3/3.7)

Ability to manually operate and/or monitor as they apply to High Reactor Pressure.

REFERENCES:

0EOP-01-SEP-07, BYPASSING RWCU FILTER DEMINERALIZERS

TOOLS AND EQUIPMENT:

RADIO

SAFETY FUNCTION (from NUREG 1123, Rev 2.):

Safety Function 3: Reactor Pressure Control

REASON FOR REVISION:

New for NRC 2004.

Bypassing RWCU Filter Demineralizers

Time Required for Completion: 20 Minutes (approximate).

Time Taken: _____

APPLICABLE METHOD OF TESTING

Performance: Simulate Actual Unit: 1
Setting: Control Room Simulator (Not applicable to In-Plant JPMs)
Time Critical: Yes No Time Limit N/A
Alternate Path: Yes No

EVALUATION

Performer: _____ SSN: _____

JPM: Pass Fail

Remedial Training Required: Yes No

Did Performer Verify Procedure? Yes No
(Each Student should verify one JPM per evaluation set)

Comments:

Comments reviewed with Student

Evaluator Signature: _____ Date: _____

TASK CONDITIONS:

1. Unit One (1) has experienced a plant transient that resulted in a Group 1 isolation and reactor scram.
2. The Main Condenser is not available as a Heat Sink.
3. Safety Relief Valves (SRVs) have failed.
4. Reactor Vessel Control Procedure (EOP-01-RVCP) and Alternate Emergency Depressurization Procedure (EOP-01-AEDP) are being executed.
5. RWCU pump B, and RWCU Filter Demineralizers A and B are in service.
6. A Control Operator (CO) is standing by ready to assist if any actions need to be performed in the Unit One (1) Control Room.

INITIATING CUE:

You are directed by the Unit SCO to perform the AO actions to Bypass the RWCU Filter Demineralizers per 0EOP-01-SEP-07. Inform the SCO when 0EOP-01-SEP-07 actions are complete.

**PROGRESS ENERGY CAROLINAS
BRUNSWICK TRAINING SECTION**

**JOB PERFORMANCE MEASURE
SYSTEMS**

JPM J

LESSON TITLE: Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

LESSON NUMBER: AOT-OJT-JP-303-A09

REVISION NO: 01

RECOMMENDED BY: Curt Robert
Instructor/Developer DATE

CONCURRENCE BY: _____
Line Superintendent/Supervisor DATE

APPROVED BY: _____
Superintendent/Supervisor Training DATE

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

SAFETY CONSIDERATIONS:

1. Standard electrical precautions when working around energized electrical equipment.
 2. Hard Hat, safety glasses, and ear protection are required in the Diesel Building.
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EVALUATOR NOTES: (Do not read to trainee)

1. The applicable procedure section **WILL** be provided to the trainee.
 2. If this is the first JPM of the JPM set, read the JPM briefing contained in NUREG 1021, Appendix E, or similar to the trainee.
 3. Nomex coat over flame resistant or 100% cotton clothing AND low voltage gloves (<1000V red or yellow rubber with leather protectors) AND face shield over safety glasses **SHALL** be used when racking in or out 480 V breakers. The student will demonstrate the ability to locate this equipment.
-

Read the following to trainee.

TASK CONDITIONS:

1. A complete Loss of Offsite Power has occurred in both Unit 1 and Unit 2.
2. Diesel Generators 2, 3 and 4 cannot be started.
3. Diesel Generator 1 is running, tied to E1, and has been verified to be operating normally.
4. Emergency buses E3 and E1 have been cross-tied, 480V bus E7 is energized.
5. 480 VAC Buses E5 and E6 have been cross-tied.
6. The emergency switchgear bag from the ASSD Equipment Cabinet was used for 4KV Bus cross-tie actions and is simulated located in front of the Bus E1-E3 Cross-Tie Breaker Cubicle (Breaker AJ5) at Bus E3. You will be required to state the normal location of this equipment.
7. All necessary safety equipment may be simulated but you will be required to state the normal location of this equipment.

INITIATING CUE:

You are directed by the Control Operator to perform the Auxiliary Operator actions associated with cross-tying 480V Substation E7 to E8 in accordance with AOP-36.2, Section 3.2.11 and inform the Control Room when the E7 to E8 cross-tie breakers are ready to be closed.

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

PERFORMANCE CHECKLIST

NOTE: Sequence is assumed unless denoted in the **Comments**.

Step 1 - Obtain current revision of 0AOP-36.2 Section 3.2.11 and verify copy if applicable.
Current revision of 0AOP-36.2 Section 3.2.11 obtained and verified if applicable.

SAT/UNSAT*

PROMPT: If requested, indicate Nuclear Service Water Pump 2B is not running as indicated green light lit on front of Compt AL1, or that breaker is open by green mechanical open indicator.

NOTE: Control power fuses are located in lower right corner of upper cubicle. The control power fuses are the set on the right. The Green light will go out when fuses are removed. Flame resistant or 100% cotton clothing is required per AI-142 for removal of fuses.

Step 2 – Remove control power fuses from Bus E4, Compt AL1, NUC SERV WTR PMP 2B (Row-M1).

Control power fuses removed from Nuc Ser Wtr Pump 2B, Compt AL1 at E4.

SAT/UNSAT*

PROMPT: If requested, as each breaker is opened, indicate breaker is open as indicated by green mechanical open indicator and/or sound of breaker opening.

NOTE: A 480 V racking tool is contained in the ASSD Equipment bag. Since 4 KV Buses are cross-tied as an initial condition, this bag would be available in the DG Building.

Step 3 – At 480V Sub E7 TRIP AX9, FEEDER TO MCC 1-1XA-2 (Row-B2).
AX9 OPEN at E7.

SAT/UNSAT*

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

Step 4 - At 480V Sub E7 TRIP AY0, MCC 2XC (Row-B3).
AY0 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 5 - At 480V Sub E7 TRIP AY2 MCC 2XA (Row-C1).
AY2 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 6 - At 480V Sub E7 TRIP AY3 MCC 1XJ (Row-C2).
AY3 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 7 - At 480V Sub E7 TRIP AZ2 MCC 2XG (Row-E3).
AZ2 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 8 - At 480V Sub E7 TRIP AY8 MCC DGC (Row-A2).
AY8 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 9 - At 480V Sub E7 TRIP AY4 MCC 2XE (Row-C3).
AY4 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 10 - At 480V Sub E7 TRIP AY5 MCC 2PA (Row-C4).
AY5 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Step 11 - At 480V Sub E7 TRIP AX6 MCC 2XL (Row-D2).
AX6 OPEN at E7.

**** CRITICAL STEP ** SAT/UNSAT***

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

Step 12 - At 480V Sub E8 TRIP AZ6 MCC 2XH (Row-B3).
AZ6 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 13 - At 480V Sub E8 TRIP AZ7 DISTR PNL E12 (Row-C1).
AZ7 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 14 - At 480V Sub E8 TRIP AZ8 DISTR PNL E11 (Row-C2).
AZ8 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 15 - At 480V Sub E8 TRIP AZ9 FEEDER TO MCC 1XB-2 (Row-C3).
AZ9 OPEN at E8.

SAT/UNSAT*

Step 16 - At 480V Sub E8 TRIP AO2 MCC 2XB (Row-D1).
AO2 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 17 - At 480V Sub E8 TRIP AO3 MCC 1XK (Row-D2).
AO3 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 18 - At 480V Sub E8 TRIP AO4 MCC 2XF (Row-D3).
AO4 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 19 - At 480V Sub E8 TRIP AO5 MCC 2PB (Row-D4).
AO5 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

Step 20 - At 480V Sub E8 TRIP AO8 MCC 2XD (Row-E3).
AO8 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 21 - At 480V Sub E8 TRIP AO1 MCC DGD (Row-F2).
AO1 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 22 - At 480V Sub E8 TRIP AO7 MCC 2XM (Row-E2).
AO7 OPEN at E8.

**** CRITICAL STEP ** SAT/UNSAT***

Step 23 - Verify Tie breaker to E8, Compt AX5 (Row-A1), on Bus E7 is open.
Tie breaker to E8, Compt AX5, on Bus E7 verified open.

SAT/UNSAT*

PROMPT: If asked, inform the examinee that the locking hasp position is as seen.

PROMPT: Inform examinee that use of electrical safety equipment may be simulated, but that the examinee should state the location of this equipment.

NOTE: Breaker racking shutter cannot be lifted unless hasp is depressed.

Step 24 - If necessary, depress the locking hasp on E7 Compt. AX5 to allow opening of the racking shutter.

Locking hasp DEPRESSED or verified to already be depressed on E7 Compt. AX5.

**** CRITICAL STEP ** SAT/UNSAT***

PROMPT: As each breaker is racked in, if requested, indicate breaker fully racked into connect position. As the tie breaker at E7 toggle is turned on, indicate that springs are charged as indicated by yellow mechanical spring indicator.

NOTE: Springs will charge ONLY if spring motor toggle is turned on.

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

Step 25 - Rotate the racking crank CLOCKWISE at Compt AX5 on Bus E7 until breaker stops in the CONNECT position.

Breaker Compt AX5 on Bus E7 in CONNECT position (racked in).

**** CRITICAL STEP ** SAT/UNSAT***

Step 26 - Place the Compt AX5 on Bus E7 charging power switch to the ON position, and confirm charge is satisfactory by SPRINGS CHARGED indicator.

Charging power switch for E7 Compt AX5 ON and springs charged.

**** CRITICAL STEP ** SAT/UNSAT***

Step 27 - Verify Tie breaker to E7, Compt A10 (Row-F1), on Bus E8 is open.

Tie breaker to E7, Compt A10, on Bus E8 verified open.

SAT/UNSAT*

PROMPT: If asked, inform the examinee that the locking hasp position is as seen.

Step 28 - If necessary, depress the locking hasp on E8 Compt. A10 to allow opening of the racking shutter.

Locking hasp DEPRESSED or verified to already be depressed on E8 Compt. A10.

**** CRITICAL STEP ** SAT/UNSAT***

Step 29 - Rotate the racking crank CLOCKWISE at Compt A10 on Bus E8 until breaker stops in the CONNECT position.

Breaker Compt A10 on Bus E8 in CONNECT position (racked in).

**** CRITICAL STEP ** SAT/UNSAT***

PROMPT: As requested, inform the examinee that the closing springs failed to charge as indicated by lack charging noise when toggle switch turned on and/or lack of spring charged indicator at front of breaker.

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

Step 30 - Place the Compt A10 on Bus E8 charging power switch to the ON position, and determine springs failed to charge.

Charging power switch for E8 Compt A10 ON, springs determined not charged.

SAT/UNSAT*

NOTE: A manual charging handle for the 480 VAC cross-tie breaker springs is located in the Emergency Switchgear Operator ASSD bag and would be available to the examinee.

The manual charging lever is located at the bottom middle of the 480 VAC breaker. The breaker compartment door CAN be opened to demonstrate location of the manual charging lever even with the breaker racked out.

Step 31 – Manually charge closing springs as follows:

- a. Place charging power toggle switch to OFF.
Charging power toggle switch is OFF.

SAT/UNSAT*

- b. Open breaker compartment door and insert manual charging handle.
Manual charging handle is inserted in the breaker.

**** CRITICAL STEP ** SAT/UNSAT***

PROMPT: Springs Charged indicated.

- c. Pump manual charging handle until closing springs are charged (clicks into position) and confirm charge is satisfactory by Springs Charged indicator.
Closing springs are fully charged.

**** CRITICAL STEP ** SAT/UNSAT***

- d. Remove manual charging handle and close compartment door.
Manual charging handle removed, compartment door closed.

SAT/UNSAT*

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

- e. Place charging power toggle switch to ON.
Charging power toggle switch is ON.

SAT/UNSAT*

PROMPT: When requested as control room to close E7-E8 tie breakers, inform examinee that the breakers are closed.

Step 32 – Inform Control Room that E7-E8 tie breakers are racked in and ready to be closed.
Control Room informed.

SAT/UNSAT*

TERMINATING CUE: Substation E8 is ready to be cross-tied to substation E7 IAW AOP-36.2 Sect. 3.2.11.

* Comments required for any step evaluated as UNSAT.

LIST OF REFERENCES

RELATED TASKS:

262605B104
Rack in a 480 V Electrically Operated Breaker per OP-50/AOP-36.2.

K/A REFERENCE AND IMPORTANCE RATING:

262001 AA1.01 3.7/3.8
Ability to Operate and/or Monitor AC Electrical Distribution System as it applies to a Station Blackout

REFERENCES:

0AOP-36.2, Section 3.2.11, Rev. 25

TOOLS AND EQUIPMENT:

1. Plant page (or)
2. Radio
3. Racking tool for 480V Breakers
4. Manual charging handle for 480 V Breaker

SAFETY FUNCTION (from NUREG 1123, Rev 2):

6 (Electrical Distribution)

REASON FOR REVISION:

Changed electrical protection requirements to match the procedure.
Changed CP&L to Progress Energy Carolinas.

Station Blackout: Cross-Tying 480 V Emergency Buses – Breaker Charging Spring Failure

Time Required for Completion: 18 Minutes (approximate).

APPLICABLE METHOD OF TESTING

Performance: Simulate Actual Unit:
Setting: Control Room Simulator (Not applicable to In-Plant JPMs)
Time Critical: Yes No Time Limit N/A
Alternate Path: Yes No

EVALUATION

Trainee: _____ SSN: _____

JPM: Pass Fail

Remedial Training Required: Yes No

Did Trainee Verify Procedure as Authorized Copy?: Yes No
(Each Student should verify one JPM per evaluation set.)

Comments: _____

Comments reviewed with Student

Evaluator Signature: _____ Date: _____

TASK CONDITIONS:

1. A complete Loss of Offsite Power has occurred in both Unit 1 and Unit 2.
2. Diesel Generators 2, 3 and 4 cannot be started.
3. Diesel Generator 1 is running, tied to E1, and has been verified to be operating normally.
4. Emergency buses E3 and E1 have been cross-tied, 480V bus E7 is energized.
5. 480 VAC Buses E5 and E6 have been cross-tied.
6. The emergency switchgear bag from the ASSD Equipment Cabinet was used for 4KV Bus cross-tie actions and is simulated located in front of the Bus E1-E3 Cross-Tie Breaker Cubicle (Breaker AJ5) at Bus E3. You will be required to state the normal location of this equipment.
7. All necessary safety equipment may be simulated but you will be required to state the normal location of this equipment.

INITIATING CUE:

You are directed by the Control Operator to perform the Auxiliary Operator actions associated with cross-tying 480V Substation E7 to E8 in accordance with AOP-36.2, Section 3.2.11 and inform the Control Room when the E7 to E8 cross-tie breakers are ready to be closed.

3.2.11 Cross-Tieing 4160V Bus E1(E3) to E3(E1)

NOTE: Battery Charger operation can be confirmed by proper voltage indication at the RTGB.

r. **ENSURE** that the following Battery Chargers have energized **AND** are supplying DC Loads:

- ___ - *BATTERY CHARGER 1A-1* (Sub E5/MCC 1CA)
- ___ - *BATTERY CHARGER 1A-2* (Sub E5/MCC 1CA)
- ___ - *BATTERY CHARGER 1B-1* (Sub E6/MCC 1CB)
- ___ - *BATTERY CHARGER 1B-2* (Sub E6/MCC 1CB)

s. **START** the following Battery Room Vent Fans:

- ___ - *BATTERY ROOM 1A VENT FANS, 1C-SF-CB and 1C-EF-CB* (Sub E5/MCC 1CA)
- ___ - *BATTERY ROOM 1B VENT FANS, 1B-SF-CB and 1B-EF-CB* (Sub E6/MCC 1CB)

t. **IF** DG No. 1 is operating and loaded, **THEN ENSURE** that the supply fans for the following applicable Drywell Coolers have started:

- ___ - *DRYWELL COOLER 1A* (Sub E5/MCC 1XL)
- ___ - *DRYWELL COOLER 1B* (Sub E6/MCC 1XM)

14. **IF** Bus E4 is deenergized **AND** no Diesel Generators are available to reenergize it, **THEN CROSS-TIE** 480V Sub E7 to E8 as follows:

- ___ a. **REMOVE** the control power fuses from Bus E4, Compt AL1, *NUC SERV WTR PMP 2B* (Row-M1).

3.2.11 Cross-Tieing 4160V Bus E1(E3) to E3(E1)

b. **TRIP** the following breakers at Sub E7:

- ___ - Compt AX9, *FEEDER TO MCC 1-1XA-2* (Row-B2)
- ___ - Compt AY0, *MCC 2XC* (Row-B3)
- ___ - Compt AY2, *MCC 2XA* (Row-C1)
- ___ - Compt AY3, *MCC 1XJ* (Row-C2)
- ___ - Compt AZ2, *MCC 2XG* (Row-E3)

c. **IF** DG No. 3 is **NOT** available, **THEN TRIP** the following additional breakers at Sub E7:

- ___ - Compt AY8, *MCC DGC* (Row-A2)
- ___ - Compt AY4, *MCC 2XE* (Row-C3)
- ___ - Compt AY5, *MCC 2PA* (Row-C4)
- ___ - Compt AX6, *MCC 2XL* (Row-D2)

3.2.11 Cross-Tieing 4160V Bus E1(E3) to E3(E1)

d. **TRIP** the following breakers at Sub E8:

- ___ - Compt AZ6, *MCC 2XH* (Row-B3)
- ___ - Compt AZ7, *DISTR PNL E12* (Row-C1)
- ___ - Compt AZ8, *DISTR PNL E11* (Row-C2)
- ___ - Compt AZ9, *FEEDER TO MCC 1XB-2* (Row-C3)
- ___ - Compt AO2, *MCC 2XB* (Row-D1)
- ___ - Compt AO3, *MCC 1XK* (Row-D2)
- ___ - Compt AO4, *MCC 2XF* (Row-D3)
- ___ - Compt AO5, *MCC 2PB* (Row-D4)
- ___ - Compt AO8, *MCC 2XD* (Row-E3)
- ___ - Compt AO1, *MCC DGD* (Row-F2)

e. **IF** DG No. 3 is **NOT** available, **THEN TRIP** the following additional breaker at Sub E8:

- ___ - Compt AO7, *MCC 2XM* (Row-E2)

___ f. **RACK IN** Sub E7, Compt AX5, *TIE BREAKER TO E8* (Row-A1) in accordance with Steps 3.2.11.14.g through 3.2.11.14.k, **AND THEN CONTINUE** at Step 3.2.11.14.l.

___ g. **CONFIRM** locally breaker is open.

___ h. **IF** necessary, **THEN DEPRESS** locking hasp to allow opening of racking shutter.

___ i. **ROTATE** racking crank in the clockwise direction until the breaker stops in *CONNECT*.

___ j. **PLACE** charging power toggle switch to *ON*, **AND CONFIRM** charge is satisfactory by *SPRINGS CHARGED* indicator.

3.2.11 Cross-Tieing 4160V Bus E1(E3) to E3(E1)

CAUTION

IF closing springs fail to charge **AND** require charging manually **THEN** caution should be used to not overcharge closing springs to prevent binding of the breaker.

R6

k. **IF** closing springs fail to charge, **THEN PERFORM** the following:

- - **PLACE** charging power toggle switch to *OFF*.
- - **OPEN** breaker compartment door **AND INSERT** Manual Charging Handle.
- - **PUMP** Manual Charging Handle until closing springs are charged (clicks into position) **AND CONFIRM** charge is satisfactory by *SPRINGS CHARGED* indicator.
- - **REMOVE** Manual Charging Handle **AND CLOSE** breaker compartment door.
- - **PLACE** charging power toggle switch to *ON*.

l. **REPEAT** Steps 3.2.11.14.g through 3.2.11.14.k to rack in Sub E8, Compt A10, *TIE BREAKER TO E7* (Row-F1), **AND CONTINUE** at Step 3.2.11.14.m.

m. **PLACE** Unit 1(2) RTGB control switch for the following Sub E8 feeder breakers to *TRIP AND CONFIRM* breakers open:

- - *SUB E8 480V MAIN BREAKER, BREAKER AZ5.*
- - *BUS E4 TO SUB E8, BREAKER AK7.*

R6

n. **IF SUB E8 480V MAIN BREAKER, BREAKER AZ5** fails to open from RTGB, **THEN PERFORM** the following locally at Sub E8:

- - **DEPRESS TRIP** pushbutton on *SUB E8 480V MAIN BREAKER, COMPT. AZ5* to manually trip breaker.
- - **CONFIRM** open *SUB E8 480V MAIN BREAKER, COMPT. AZ5.*

**PROGRESS ENERGY CAROLINAS
BRUNSWICK TRAINING SECTION**

**JOB PERFORMANCE MEASURE
SYSTEMS**

JPM K

LESSON TITLE: Control Room Evacuation IAW AOP-32, Placing the RHR System
in SP Cooling

LESSON NUMBER: LOT-OJT-JP-302-E03

REVISION NO: 07

RECOMMENDED BY: Curt Robert _____ DATE
Instructor/Developer

CONCURRENCE BY: _____ DATE
Line Superintendent/Supervisor

APPROVED BY: _____ DATE
Superintendent/Supervisor Training

SAFETY CONSIDERATIONS:

1. Operating equipment and energized electrical equipment hazards.
2. Hearing protection is required in this area when equipment is operating.
3. Safety Glasses, Hard Hat, and approved footwear must be worn while in the area of this JPM.

EVALUATOR NOTES: (Do not read to performer)

1. The applicable procedure section **WILL** be provided to the performer, once it is demonstrated he/she knows the correct procedure.
 2. If this is the first JPM of the JPM set, read the JPM briefing contained in NUREG 1021, Appendix E, or similar to the performer.
-

Read the following to the JPM performer.

TASK CONDITIONS:

1. The Shift Superintendent has determined that Control Room evacuation is required.
2. All immediate actions associated with AOP-32, PLANT SHUTDOWN FROM OUTSIDE CONTROL ROOM, are complete.
3. Remote shutdown equipment has been distributed and communication between the Remote Shutdown Stations is established.
4. NORMAL/LOCAL switches listed in Table 1 and 2 have been placed in LOCAL IAW AOP-32.
5. The 'B' RHR loop has been filled and vented.
6. The RHRSW System has been placed in service.
7. Service Water has been supplied to the vital header.
8. The Station 4 Operator is available in the Diesel Building for starting and stopping loads required by this procedure.
9. This JPM will be performed on Unit _____.

INITIATING CUE:

You are directed by the Unit SCO to perform ALL Station 2 (Reactor Building Operator) actions, including Remote Shutdown Panel actions, associated with placing the 'B' Loop RHR System in Suppression Pool Cooling from outside the Control Room per 0AOP-32, Step 3.2.11.3. Notify the Unit SCO when Suppression Pool Cooling has been established.

PERFORMANCE CHECKLIST

NOTE: Sequence is assumed unless denoted in the **Comments**.

Step 1 – Obtain current revision of AOP-32.

Obtains current revision of AOP-32.

SAT/UNSAT*

TIME START _____

PROMPT: Prompts are for as found indication. Provide MCC valve light indications commensurate with Performer actions.

PROMPT: Green light is on, red light is off.

Step 2 – Start the 'B' RHR room cooler fan at MCC 1(2)XB, Comp. 1-DP5(2-BV9). Position indication is located on DP7, Row A2.

'B' RHR room cooler is started.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Green light is off, red light is on.

Step 3 – CLOSE RHR Heat Exchanger B Inlet Valve, E11-F047B, at MCC 1(2)XB, Comp. DM7, Row N2.

E11-F047B is closed.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Green light is off, red light is on.

Step 4 – CLOSE RHR Heat Exchanger B Bypass Valve, E11-F048B, at MCC 1(2)XB, Comp. DM8, Row N3.

E11-F048B is closed.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Green light is off, red light is on.

Step 5 – Verify OPEN RHR Heat Exchanger B Outlet Valve, E11-F003B, at MCC 1(2)XB, Comp. DK8, Row N1.

E11-F003B is verified open.

SAT/UNSAT*

PROMPT: Green light is on, red light is off.

Step 6 – OPEN RHR Suppression Pool Discharge Isolation Valve, E11-F028B, at MCC 1(2)XB-2, Comp. DM5, Row B4.

E11-F028B is opened.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Respond as the Station 4 (Diesel Generator) Operator in the following step.
After one minute report that B or D RHR pump has been started.

NOTE: RHR System flow must be raised to >500 gpm in one minute to prevent pump overheating.

Step 7 – Contact the Station 4 (Diesel Generator) Operator and direct starting the B or D RHR pump by placing the local START/STOP switch to START.

B or D RHR pump is started by Station 4.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Green light is on, red light is off.

Step 8 – OPEN RHR Heat Exchanger B Bypass Valve, E11-F048B, at MCC 1(2)XB, Comp. DM8, Row N3.

E11-F048B is opened.

****CRITICAL STEP**SAT/UNSAT***

NOTE: The Evaluator may act as a second Operator stationed at the RSDP to provide RHR flow indication. Ensure the Performer can accurately read gauge increments if this option is used.

PROMPT: Green light is on, red light is off.

PROMPT: Provide indication of rising flow as E11-F024B is throttled open

Step 9 – THROTTLE OPEN RHR Suppression Pool Cooling Isolation Valve, E11-F024B, at MCC 1(2)XB-2, Comp. DM2, Row J2 until RHR System flow is >6000 gpm and <7500 as read on the RSDP.

E11-F024B is throttled open until flow is between 6000 and 7500 gpm.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Green light is on, red light is off.

Step 10 – OPEN RHR Heat Exchanger B Inlet Valve, E11-F047B, at MCC 1(2)XB, Comp. DM7, Row N2.

E11-F047B is opened.

****CRITICAL STEP**SAT/UNSAT***

PROMPT: Notify the Performer that no adjustment of E11-F048B is required.

Control Room Evacuation IAW AOP-32, Placing the RHR System in SP Cooling

Step 11 – Notify the Unit SCO that Suppression Pool Cooling has been established with the 'B' RHR Loop.

Unit SCO is notified.

SAT/UNSAT*

TERMINATING CUE: When the 'B' Loop of RHR is in Suppression Pool Cooling and the Unit SCO is notified, this JPM is complete.

TIME COMPLETED _____

LIST OF REFERENCES

RELATED TASKS:

200604B504

Perform MCC Operator Actions For Placing Suppression Pool Cooling In Service Per ASSD-002 or AOP-32.

K/A REFERENCE AND IMPORTANCE RATING:

219000 A4.12 (4.1/4.1)

Ability to manually operate and/or monitor in the control room: Suppression pool temperature

REFERENCES:

AOP-32, PLANT SHUTDOWN FROM OUTSIDE CONTROL ROOM

TOOLS AND EQUIPMENT:

Equipment from the Remote Shutdown Equipment Locker.

SAFETY FUNCTION (from NUREG 1123, Rev 2.):

Safety Function 5: Containment Integrity

REASON FOR REVISION:

Update to new revision of AOP-32.

Control Room Evacuation IAW AOP-32, Placing the RHR System in SP Cooling

Time Required for Completion: 15 Minutes (approximate).

Time Taken: _____

APPLICABLE METHOD OF TESTING

Performance: Simulate Actual Unit: 1/2
Setting: Control Room Simulator (Not applicable to In-Plant JPMs)
Time Critical: Yes No Time Limit N/A
Alternate Path: Yes No

EVALUATION

Performer: _____ SSN: _____

JPM: Pass Fail

Remedial Training Required: Yes No

Did Performer Verify Procedure? Yes No
(Each Student should verify one JPM per evaluation set)

Comments: _____

Comments reviewed with Student

Evaluator Signature: _____ Date: _____

TASK CONDITIONS:

1. The Shift Superintendent has determined that Control Room evacuation is required.
2. All immediate actions associated with AOP-32, PLANT SHUTDOWN FROM OUTSIDE CONTROL ROOM, are complete.
3. Remote shutdown equipment has been distributed and communication between the Remote Shutdown Stations is established.
4. NORMAL/LOCAL switches listed in Table 1 and 2 have been placed in LOCAL IAW AOP-32.
5. The 'B' RHR loop has been filled and vented.
6. The RHRSW System has been placed in service.
7. Service Water has been supplied to the vital header.
8. The Station 4 Operator is available in the Diesel Building for starting and stopping loads required by this procedure.
9. This JPM will be performed on Unit _____.

INITIATING CUE:

You are directed by the Unit SCO to perform ALL Station 2 (Reactor Building Operator) actions, including Remote Shutdown Panel actions, associated with placing the 'B' Loop RHR System in Suppression Pool Cooling from outside the Control Room per 0AOP-32, Step 3.2.11.3. Notify the Unit SCO when Suppression Pool Cooling has been established.