

TASK TITLE: Perform Emergency Boration for Inadequate Shutdown Margin

JPM No.: SIM-110

REV: 20070301

Task No.: R-OA-033

K/A No.: 004000A4.07

Objective No.: 4.D.OA-08

K/A IMP: 3.9/3.7

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: (*) 6, 7

APPROX COMPLETION TIME: 15 MINUTES

CRITICAL TIME: N/A

EVALUATION METHOD:

LOCATION:

PERFORM

IN PLANT

SIMULATE

SIMULATOR

GENERAL REFERENCES:

1. 1BwOA PRI-2, Rev. 101, Emergency Boration

MATERIALS:

1. 1BwOA PRI-2, Rev. 101.

TASK STANDARDS:

1. Determine emergency boration flow from the BAST is < 30 gpm.
2. Initiate emergency boration flow from the RWST in accordance with 1BwOA PRI-2.

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. Unit 1 is in Mode 3 at Normal Operating Temperature and Normal Operating Pressure.
3. 1BwOSR 3.1.1.1-1, SHUTDOWN MARGIN DAILY VERIFICATION DURING SHUTDOWN, was completed 10 minutes ago.
4. 1BwOSR 3.1.1.1-1 determined RCS Boron concentration is 58 ppm below the required Shutdown Margin.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to borate the RCS in accordance with 1BwOA PRI-2, EMERGENCY BORATION.
2. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
3. Inform the Unit 1 Unit Supervisor when you have initiated RCS boration.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	Refer to 1BwOA PRI-2 Emergency Boration CUE: As US/SM acknowledge request to evaluate for Emergency Plan conditions.	Refer to 1BwOA PRI-2, Emergency Boration • Inform US/SM to evaluate for Emergency Plan conditions.	SAT UNSAT N/A <u>Comments:</u>
2.	Check Centrifugal Charging pump status.	Perform the following at 1PM05J: • Verify 1A CV pump running.	SAT UNSAT N/A <u>Comments:</u>
3.	Establish Boration flow from the BAT.	Perform the following at 1PM05J: ○ Place 1CV8104, Emergency Boration Valve, C/S to OPEN. OR ○ Place 1CV110A, Boric Acid to Blender Valve, CS to OPEN. AND ○ Place 1CV110B, Boric Acid Blender to Charging Pump Valve, C/S to OPEN.	SAT UNSAT N/A <u>Comments:</u>
4.	Start Boric Acid Transfer pump.	Perform the following at 1PM05J: • Place 1AB03P, Unit 1 Boric Acid Transfer pump, to START.	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
5.	Determine BAST Emergency Boration flow inadequate. CUE: As US, acknowledge report of inadequate boration flow indication.	Perform the following at 1PM05J: <ul style="list-style-type: none"> ○ If 1CV8104 used for boration: <ul style="list-style-type: none"> ● Check Emergency Boration flow on 1FI-183A and determines it is less than 30 gpm. OR <ul style="list-style-type: none"> ○ If 1CV110A & B used for boration: <ul style="list-style-type: none"> ● Check Boration flow on recorder 1FR-110 and determines boration flow is less than 30 gpm. ● Informs US of lack of flow indication. 	SAT UNSAT N/A <u>Comments:</u>
EVALUATOR NOTE: Alternate path begins here.			
*6.	Align alternate boration flowpath from the RWST.	Perform the following at 1PM05J: <ul style="list-style-type: none"> ● Place 1AB03P, Unit 1 Boric Acid Transfer pump, to STOP. ● Place either 1CV112D AND/OR 1CV112E, RWST to Charging Pump Suction Valve(s), CS(s) to OPEN. 	SAT UNSAT N/A <u>Comments:</u>
*7.	Isolate charging pump suction from the VCT.	Perform the following at 1PM05J: <ul style="list-style-type: none"> ● Place either 1CV112B AND/OR 1CV112C, VCT Outlet Isolation Valve(s) to CLOSE. 	SAT UNSAT N/A <u>Comments:</u>
8.	Maximize letdown and charging flow.	Perform the following at 1PM05J: <ul style="list-style-type: none"> ○ VERIFY 120 gpm Letdown in service. ● Place 1FK-121, Centrifugal Charging Pump Flow Control Valve, controller in MANUAL by depressing the MAN pushbutton. ● Raise demand on 1FK-121 to 100%. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
9.	Align CV pump discharge flowpath.	Perform the following at 1PM05J: <ul style="list-style-type: none"> • Verify 1CV8105, Charging Line Containment Isolation Valve OPEN. • Verify 1CV8106, Charging Line Containment Isolation Valve OPEN. • Verify 1CV8324A, Charging to Regen Hx 1A Isolation Valve, OPEN. • Verify 1CV8147, Charging to RC Loop 1A Isolation Valve, OPEN. 	SAT UNSAT N/A <u>Comments:</u>
10.	Throttle 1CV121 to establish 1FI-121A flow at maximum for normal charging. CUE: As US, acknowledge report and inform the examinee, that another NSO will complete 1BWOA PRI-2.	Perform the following at 1PM05J: <ul style="list-style-type: none"> • Verify/Place 1FK-121, Centrifugal Charging Pump Flow Control Valve, controller in MANUAL by depressing the MAN pushbutton. • Verify/Raise demand on 1FK-121 to 100%. ○ Inform Unit 1 Unit Supervisor emergency boration flow is established. 	SAT UNSAT N/A <u>Comments:</u>

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC-8, BOL Rx startup, shutdown banks out.
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Insert **IOR ZAO1FI183A 0** to fail indicated boration flow to 0 gpm on 1FI-183A when using the emergency boration valve 1CV8104.
- Insert **IOR ZDI1CV110B CLS** to fail 1CV110B closed.
- If running the JPM repetitively, perform the following:
 - VERIFY/STOP 1AB03P, Unit 1 Boric Acid Transfer Pump.
 - VERIFY/OPEN 1CV112B AND 1CV112C, VCT Outlet Isolation Valves.
 - VERIFY/CLOSED 1CV112D AND 1CV112E, RWST to Charging Pump Suction Valves.
 - PLACE 1FK-121 in AUTO and verify 1FK-121 is maintaining PZR Level in automatic.
 - Clear ALL place keeping marks from 1BwOA PRI-2.

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 NSO.
2. Unit 1 is in Mode 3 at Normal Operating Temperature and Normal Operating Pressure.
3. 1BwOSR 3.1.1.1-1, SHUTDOWN MARGIN DAILY VERIFICATION DURING SHUTDOWN, was completed 10 minutes ago.
4. 1BwOSR 3.1.1.1-1 has determined that RCS Boron concentration is 58 ppm below the required Shutdown Margin.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to borate the RCS in accordance with 1BWOA PRI-2, EMERGENCY BORATION.
2. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
3. Inform the Unit 1 Unit Supervisor when you have initiated RCS boration.

TASK TITLE: Lower 1C SI Accumulator Level

JPM Number: SIM-206

Task No.: R-SI-002

Objective No.: 4C.SI-03

Rev: 20070301

K/A No.: 006000A1.13

K/A Imp.: 3.5/3.7

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: (*) 6, 7

APPROX COMPLETION TIME: 25 MINUTES

CRITICAL TIME: 40 MINUTES

EVALUATION METHOD:

LOCATION:

PERFORM

IN PLANT

SIMULATE

SIMULATOR

GENERAL REFERENCES:

1. BwAR 1-5-C1, ACCUM 1C LEVEL HIGH/LOW, Rev. 8E2
2. BwOP SI-6, LOWERING SI ACCUMULATOR LEVEL, Rev. 17.
3. Technical Specification 3.5.1

MATERIALS:

1. Copy of BwOP SI-6, Rev. 17.

TASK STANDARDS:

1. Align SI Accumulator 1C drain path in accordance with BwOP SI-6.
2. Lower 1C SI Accumulator level to within Tech Spec limits within 40 minutes in accordance with Tech Spec 3.5.1.

TASK CONDITIONS:

1. **This is a time critical JPM.**
2. You are the Unit 1 Assist NSO.
3. All systems are properly aligned for the current Unit 1 mode.
4. Annunciator 1-5-C1, ACCUM 1C LEVEL HIGH/LOW alarmed 20 minutes ago.
5. BwAR 1-5-C1 has been addressed by the Unit 1 NSO.

INITIATING CUES:

1. The Unit 1 Unit Supervisor directs you to lower 1C SI Accumulator level to 58% by draining to the HUT in accordance with BwOP SI-6, Lowering SI Accumulator Level, step F.2.
CUE: Hand examinee copy of BwOP SI-6.
2. Equipment operators are standing by in the field to assist you.
3. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
4. Inform the Unit 1 Unit Supervisor when you have restored 1C SI Accumulator level to 58%.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	<p>Refer to BwOP SI-6, Lowering SI Accumulator level.</p> <p>CUE: All Prerequisites, Precautions, Limitations and Actions are met.</p> <p>CUE: Perform step F.2 per SM direction (from initiating cue).</p> <p>NOTE: Critical Time begins when examinee understands initiating cue and accepts responsibility for task performance.</p> <p>Record critical time start time: _____</p>	<p>Refer to BwOP SI-6:</p> <ul style="list-style-type: none"> Determine step F.2 is to be performed (from initiating cue). 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
2.	<p>Dispatch operator to Verify/Close 1SI8971A and B, SI Test Line to RWST/HUT Inst. Root to 1FI-SI046 and 1FI-928A/B. (step F.2.a)</p> <p>NOTE: If dispatched as equipment operator to verify valve positions, provide the following cues:</p> <p>CUE: 1SI8971A is closed.</p> <p>CUE: 1SI8971B is closed.</p>	<p>Perform the following:</p> <ul style="list-style-type: none"> Dispatch operator to Verify/Close: <ul style="list-style-type: none"> 1SI8971A 1SI8971B 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
3.	<p>Verify/Close 1SI8878C at 1PM06J. (step F.2.b)</p>	<p>Perform the following at 1PM06J:</p> <ul style="list-style-type: none"> Verify 1SI8878C, SI Accumulator 1C Make-Up Valve, CLOSED light LIT. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
4.	Perform SI Test Line Valve Lineup at 1PM11J. (step F.2.c)	Perform the following at 1PM11J <ul style="list-style-type: none"> • Verify 1SI8879A, B, C, & D, SI Accumulator 1A, B, C, & D Test Line Isolation Valves, CLOSED lights LIT. • Verify 1SI8877A, B, C, & D, SI Accumulator 1A, B, C, & D Test Line Isolation Valves, CLOSED lights LIT. • Verify 1SI8889A, B, C, & D, SI to Loop 1A, B, C, & D Hot Leg Test Line Isolation Valves, CLOSED lights LIT. • Verify 1SI8823, SI Pumps to Cold Legs Test Line Isolation Valve, CLOSED (from MCB placard). • Verify 1SI8824, SI Pumps to 1B & C Hot Legs Test Line Isolation Valve, CLOSED (from MCB placard). • Verify 1SI8825, RH Pumps to 1A & C Hot Legs Test Line Isolation Valve, CLOSED (from MCB placard). • Verify 1SI8881, SI Pumps to 1A & D Hot Legs Test Line Isolation Valve, CLOSED (from MCB placard). • Verify 1SI8882, CV Pumps to Cold Legs Test Line Isolation Valve, CLOSED light LIT. • Verify 1SI8843, CV Pumps to Cold Legs Test Line Isolation Valve, CLOSED (from MCB placard). • Verify 1SI8890A and B, RH Pumps to 1A & D and 1B & C Cold Legs Test Line Isolation Valves, CLOSED (from MCB placard). 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
5.	Align HUT drain path. (step F.2.d) NOTE: If dispatched as equipment operator to verify valve positions, provide the following cues: CUE: 1SI8959 is open. CUE: 1AB024 is open. CUE: 1SI8963 is locked closed.	Dispatch operators to perform lineup to drain to the HUT: <ul style="list-style-type: none"> • Verify OPEN 1SI8959 • Verify OPEN 1AB024 • Verify LOCKED CLOSED 1SI8963 	SAT UNSAT N/A <u>Comments:</u>
*6.	Align SI Accumulator drain path. (step F.2.e)	Perform the following at 1PM11J: <ul style="list-style-type: none"> • Place 1SI8964, SI Test Lines to Radwaste Isolation Valve, C/S to OPEN. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*7.	<p>Lower 1C SI Accumulator Level. (step F.2.f)</p> <p>NOTE: Critical Time ends when accumulator level is less than 63%.</p> <p>Record time that 1C SI accumulator level is <63%: _____</p> <p>Critical time = _____ - _____ (end time) (start time)</p> <p>≤ 40 minutes.</p> <p>NOTE: At discretion of examiner, when Annunciator 1-5-C1, ACCUM 1C LEVEL HIGH/LOW, clears provide the following cue:</p> <p>CUE: 1C SI Accumulator level is 58%.</p>	<p>Perform the following at 1PM06J/1PM11J:</p> <ul style="list-style-type: none"> ○ Verify 1SI8888, SI Pump to Accumulator Fill Valve, CLOSED light LIT. ○ Place 1SI8877C, SI Accumulator 1C Test Line Isolation Valve, C/S to OPEN. ● Place 1SI8871, SI Fill/Test Line Isolation Valve, C/S to OPEN. ○ Monitor SI accumulator level on 1LI-954/955 until desired level (58%) is reached. ○ Inform Unit 1 Unit Supervisor that 1C SI Accumulator level is within Tech Spec limits when level is <63%. <p>When 1C SI Accumulator is at 58% (± 2%), perform the following:</p> <ul style="list-style-type: none"> ● Place 1SI8871, SI Fill/Test Line Isolation Valve, C/S to CLOSED. ● Place 1SI8877C, SI Accumulator 1C Test Line Isolation Valve, C/S to CLOSED. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
8.	Restore lineup. (steps F.2.g – F.2.k) NOTE: If dispatched as equipment operator to verify valve positions, provide the following cues: CUE: 1SI8963 is locked closed. CUE: 1SI8959 is open. CUE: 1AB024 is open. CUE: 1SI8971A is open. CUE: 1SI8971B is open. CUE: As US, acknowledge report.	Perform the following to restore the lineup to 1C SI accumulator: <ul style="list-style-type: none"> • Place 1SI8964, SI Test Lines to Radwaste Isolation Valve, C/S to CLOSED at 1PM11J. • Verify/Lock Closed 1SI8963 • Verify/Open 1SI8959 • Verify/Open 1AB024 • Open 1SI8971A and B • Inform Unit 1 Unit Supervisor 1C SI Accumulator level is restored. 	SAT UNSAT N/A <u>Comments:</u>

CUE: THIS COMPLETES THIS JPM

RECORD STOP TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC-21, BOL 100% Power, Steady State, Equilibrium Xenon.
- OR -
- IC-8 if JPM is being performed concurrently with JPM SIM-110 (JPM IC must be Mode 3 with RCS pressure greater than 1000 psig or higher mode)
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- OPEN Monitor Screen and perform the following:
 - SET **SIMACC[3] = 58,900** to raise 1C SI Accumulator Level to 65%.
 - SET **SIMN2ACC[3] = 1228** to lower 1C SI Accumulator Pressure within limits.
- If running the JPM repetitively, set the above monitor items prior to each performance.

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. **This is a time critical JPM.**
2. You are the Unit 1 Assist NSO.
3. All systems are properly aligned for the current Unit 1 mode.
4. Annunciator 1-5-C1, ACCUM 1C LEVEL HIGH/LOW alarmed 20 minutes ago.
5. BwAR 1-5-C1 has been addressed by the Unit 1 NSO.

INITIATING CUES:

1. The Unit 1 Unit Supervisor directs you to lower 1C SI Accumulator level to 58% by draining to the HUT in accordance with BwOP SI-6, Lowering SI Accumulator Level, step F.2.
2. Equipment operators are standing by in the field to assist you.
3. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
4. Inform the Unit 1 Unit Supervisor when you have restored 1C SI Accumulator level to 58%.

TASK TITLE: Secure 1B RH Pump from Shutdown Cooling and Align for Cold Leg Injection

JPM Number: SIM-400P

Rev. 20070301

Task No: R-RH-005

K/A No.: 005000A4.01

Objective No.: 4C.RH-06

K/A Imp.: 3.6

EXAMINEE: _____

RO

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

Critical Elements: (*) 2, 3, 4, 5

Approx. Completion Time: 25 MINUTES

Critical Time: N/A

EVALUATION METHOD:

LOCATION:

PERFORM

IN PLANT

SIMULATE

SIMULATOR

GENERAL REFERENCES:

1. BwOP RH-11, SECURING THE RH SYSTEM FROM SHUTDOWN COOLING, Rev 20.

MATERIALS:

1. Copy of BwOP RH-11, Rev 20

TASK STANDARDS:

1. Remove 1B RH Train from shutdown cooling.
2. Secure the 1B RH Pump.
3. Align 1B RH Pump for cold leg injection.

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. Unit 1 is in Mode 5.
3. RH Train swap is in progress with both RH trains running.
4. RH letdown is aligned to 1A RH pump.
5. ALL SVAG valves are energized.

INITIATING CUES:

1. The Unit Supervisor directs you to secure the 1B RH pump and align the 1B RH pump for cold leg injection in accordance with BwOP RH-11, SECURING THE RH SYSTEM FROM SHUTDOWN COOLING.

CUE: Hand examinee marked up copy of BwOP RH-11.

2. BwOP RH-11 steps F.1 thru F.8 are complete.
3. Equipment operators are standing by in the field to assist you.
4. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
5. Inform the Unit Supervisor when the 1B RH pump is aligned for cold leg injection.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	<p>Refer to BwOP RH-11 (steps F.1 – F.8)</p> <p>CUE: Provide copy of procedure to examinee.</p> <p>CUE: All prerequisites, precautions, and limitations and actions are met.</p>	<p>Refer to BwOP RH-11.</p> <ul style="list-style-type: none"> Determine step F.1 thru F.8 are complete 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
*2.	<p>Secure 1B RH Pump. (steps F.9 – F.10)</p>	<p>Perform the following at 1PM06J:</p> <ul style="list-style-type: none"> Place 1B RH Pump C/S to TRIP. Verify 1RH611, RH Pump 1B Miniflow Valve, C/S in AUTO. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
*3.	<p>Align 1B RH Pump for Cold Leg Injection. (steps F.11 – F.12)</p> <p>NOTE: If examinee requests US to determine if LCO 3.4.12 must be entered when closing 1RH8702A or B, provide the following cue:</p> <p>CUE: LCO 3.4.12 entry is NOT required.</p>	<p>Perform the following at 1PM06J:</p> <ul style="list-style-type: none"> Determine 1RH8702A, Loop C to RH Pump 1B Suction Valve is ENERGIZED. Place 1B RH Pump C/S to PULL OUT. Place 1RH8702A, Loop 1C to RH Pump 1B Suction Valve, to CLOSED. Place 1RH8702B, Loop 1C to RH Pump 1B Suction Valve, to CLOSED. Place 1FK-619, RH Hx 1B Bypass Flow Controller in MANUAL and lower demand to 0%. (should already be in manual at 0% from step F.7.b & c) Throttle open 1RH607, RH Hx 1B Flow Control Valve, by raising POT demand to 100%. Verify 1SI8840, RH to Hot Leg 1A & 1C, CLOSED. Verify 1SI8809B, RH to Cold Legs 1B & 1C, OPEN. Place 1RH8716B, RH Hx 1B Discharge Crosstie Valve, C/S to OPEN. Verify 1SI8804B, 1B RH Hx to CV Pump Suction Isolation Valve, CLOSED. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*4	<p>Switch 1B RH Pump Suction to the RWST: (steps F.13-14)</p>	<p>Perform the following at 1PM06J:</p> <p>Prevent steam binding of the 1B RH pump suction by performing the following:</p> <ul style="list-style-type: none"> • Determine 1B RH Pump was stopped and at least ONE Hot Leg Suction valves was closed when RCS hot leg temperature was < 260°F. • Place 1SI8812B, RH Pump 1B Suction from RWST Valve, C/S to OPEN. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
*5.	<p>Complete 1B RH Pump alignment (steps F.15 – 20)</p> <p>CUE: As equipment operator, report 1RH8734B is locked closed.</p> <p>NOTE: Examinee may elect to leave both CC pumps running.</p> <p>CUE: As equipment operator, report 1RH8735 is locked closed.</p> <p>CUE: Inform examinee another NSO will complete RH piping vent.</p>	<p>Perform the following:</p> <ul style="list-style-type: none"> • Dispatch an operator to LOCK CLOSED 1RH8734B, RH Train 1B to CV Letdown Hx Isolation Valve. • Place 1CC9412B, CC to RH Hx 1B Isolation Valve, C/S to CLOSE. ○ Stop ONE CC Pump. • Dispatch an equipment operator to verify 1RH8735, RH Recirc to RWST Isolation Valve, is LOCKED CLOSED. • Place 1B RH Pump C/S in Normal After Trip at 1PM06J. ○ Verify 1SI8811B, Containment Sump 1B Isolation Valve, CLOSED light is LIT at 1PM06J. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC-4, BOL cold shutdown, PZR bubble, RCS 195°F, 360 psig.
- Place simulator in RUN.
- Place Wide Range Iconics and RCS Heat up limitations on 1PM05J CRTs.
- Turn on scaler timer and verify audible SR counts.
- Place BOTH SVAG valve 480V bus feed C/S to CLOSE.
- Turn over or remove energized SVAG valve placards.
- Turn over or remove energized RH Loop Suction Valve placards.
- Align 1B RH pump by performing the following at 1PM04J:
 - CLOSE 1RH607 by lowering demand to 0%.
 - Place 1RH619 in MANUAL and lower demand to 0%.
 - START 1B RH pump.
 - PLACE 1RH611 C/S to OPEN.
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- **AT CONCLUSION OF JPM PERFORMANCE(S), PERFORM THE FOLLOWING:**
 - **VERIFY/RESTORE SVAG VALVE PLACARDS**
 - **VERIFY/RESTORE RH LOOP SUCTION VALVE PLACARDS**

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. Unit 1 is in Mode 5.
3. RH Train swap is in progress with both RH trains running.
4. RH letdown is aligned to 1A RH pump.
5. ALL SVAG valves are energized.

INITIATING CUES:

1. The Unit Supervisor directs you to secure the 1B RH pump and align the 1B RH pump for cold leg injection in accordance with BwOP RH-11, SECURING THE RH SYSTEM FROM SHUTDOWN COOLING.
2. BwOP RH-11 steps F.1 thru F.8 are complete.
3. Equipment operators are standing by in the field to assist you.
4. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
5. Inform the Unit Supervisor when the 1B RH pump is aligned for cold leg injection.

TASK TITLE: Drain the Pressurizer Relief Tank

JPM Number: SIM-501

Task No.: R-RY-003

Objective No.: 4C.RY-03

Rev. 20070301

K/A No.: 007000A1.01

K/A Imp.: 2.9/3.1

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

Approx. Completion Time: 25 MINUTES

Critical Elements: (*) 4, 5, 7, 8

Critical Time: N/A

EVALUATION METHOD:

PERFORM

SIMULATE

LOCATION:

IN PLANT

SIMULATOR

GENERAL REFERENCES:

1. BwAR 1-12-A7, PRT LEVEL HIGH/LOW, Rev. 53.
2. BwOP RY-4, DRAINING THE PRESSURIZER RELIEF TANK, Rev. 9.

MATERIALS:

1. Copy of BwAR 1-12-A7, Rev. 53.
2. Copy of BwOP RY-4, Rev. 9.

TASK STANDARDS:

1. Lower PRT level to clear annunciator 1-2-A7.
2. Restores PRT pressure to > 0 psig, if reduced to \leq 0 psig.

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. All systems are properly aligned for the current Unit 1 mode.

INITIATING CUES:

1. Annunciator 1-12-A7, PRT LEVEL HIGH/LOW, alarmed 5 minutes ago.
2. The Unit 1 Unit Supervisor directs you to lower PRT level to clear annunciator 1-12-A7 in accordance with BwOP RY-4, DRAINING THE PRESSURIZER RELIEF TANK.
3. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
4. Inform the Unit 1 Unit Supervisor when you have completed lowering PRT level.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	<p>Refer to 1BwAR 1-12-A7: CUE: When examinee locates 1BwAR 1-12-A7, provide copy. CUE: As Unit Supervisor, acknowledge report of PRT level.</p> <p>CUE: As Unit Supervisor, inform examinee another operator will check RCS leakage.</p>	<p>Refer to 1BwAR 1-12-A7: Perform the following at 1PM05J:</p> <ul style="list-style-type: none"> • Determine PRT level is high on 1LI-470, PRT Level Indicator. • Check PZR PORVs and Safety Valves CLOSED: <ul style="list-style-type: none"> ○ Check 1RY455A & 1RY456, PZR PORVs, CLOSED lights LIT and OPEN lights NOT LIT. ○ Check 1RY8010A, B, & C, PZR Safety Valves, CLOSED light LIT and OPEN lights NOT LIT. ○ Check RCS pressure stable on 1PI-455A, 456, 457, & 458, PZR pressure indicators. ○ Check PRT level & pressure stable on 1LI-470 & 469, PRT Level & Pressure indicators. ○ Check annunciator 1-12-B2, PZR PORV OR SAFETY VLV OPEN, NOT lit. ○ Check annunciator 1-12-C6, PZR PORV DSCH TEMP HIGH, NOT lit. ○ Check annunciator 1-12-C7, PZR SAF RLF DSCH TEMP HIGH, NOT lit. • Inform Unit 1 Unit Supervisor PRT level is high and PRT draining is required. • Check RCS leakage. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
2.	Refer to BwOP RY-4: CUE: When examinee locates BwOP RY-4, provide copy. CUE: All prerequisites, precautions, and Limitations and Actions have been met.	Locate and open BwOP RY-4:	SAT UNSAT N/A <u>Comments:</u>
3.	Verify open 1AOV-RY8033, Nitrogen supply to PRT isolation valve.	Perform the following at 1PM05J: <ul style="list-style-type: none"> Verify 1RY8033, N2 Supply to PRT Isolation Valve, OPEN light LIT. 	SAT UNSAT N/A <u>Comments:</u>
*4.	Verify/Open 1RE1003, RCDT Pumps Discharge CNMT Isolation Valve.	Perform the following at 1PM11J: <ul style="list-style-type: none"> Place 1RE1003, RCDT Pumps Inside Isolation Valve, C/S to OPEN. 	SAT UNSAT N/A <u>Comments:</u>
*5.	Open 1AOV-RY8031, PRT Drain Isolation Valve.	Perform the following at 1PM05J: <ul style="list-style-type: none"> Place 1RY8031, PRT Drain Isolation Valve, C/S to OPEN. 	SAT UNSAT N/A <u>Comments:</u>
6.	Verify/Start 1RE01PA/B, RCDT pump.	Perform the following at 1PM05J: <ul style="list-style-type: none"> Verify 1RE01PB, RCDT Pump 1B, RUN light LIT. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
	EVALUATOR NOTE: The following step is a conditional critical step. If PRT pressure drops to 0 psig, the examinee must stop the RCDT pumps and allow the PRT pressure to rise to approximately 3 psig prior to continuing the PRT drain. If PRT pressure does not drop to 0 psig, mark step N/A.		
*7.	Monitor PRT pressure:	Perform the following at 1PM05J: <ul style="list-style-type: none"> • Verify PRT pressure remains > 0 psig on 1PI-469. • If PRT pressure drops to ≈ 0 psig, perform the following at 1PM05J: <ul style="list-style-type: none"> • Place 1RE01PB, RCDT Pump 1B, C/S to STOP. • When PRT pressure is ≈ 3 psig, perform the following: <ul style="list-style-type: none"> • Place 1RE01PB, RCDT Pump 1B, C/S to AUTO. 	SAT UNSAT N/A Comments:
*8.	Close 1AOV-RY8031, PRT Drain Isolation valve, when desired level is reached. NOTE: When Annunciator 1-12-A7, PRT LEVEL HIGH/LOW is clear, provide the following cue: CUE: The Unit 1 Unit Supervisor directs you to secure drain of the PRT.	When annunciator 1-12-A7, PRT LEVEL HIGH/LOW is clear, perform the following at 1PM05J: <ul style="list-style-type: none"> • Place 1RY8031, PRT Drain Isolation Valve, C/S to CLOSE. 	SAT UNSAT N/A Comments:
9.	Stop running RCDT pump.	Perform the following at 1PM05J: <ul style="list-style-type: none"> • Verify 1RE01PB, RCDT Pump 1B, STOP light LIT. 	SAT UNSAT N/A Comments:

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon.
- OR -
- Other IC if being performed concurrently with other JPMs. (JPM is not IC dependent)
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Verify 1RE1003, RCDT Pumps Inside Isolation Valve, is CLOSED and in LOCAL on 1PM11J.
- Verify 1RE01PA & 1RE01PB, RCDT Pumps 1A & 1B are in AUTO on 1PM05J.
- Open 1RY469, PRT to GW Isolation Valve, to vent PRT while filling.
- Open 1RY8030, PW to PRT Cnmt Isolation Valve, to fill PRT.
 - Fill PRT to 90%
 - Close 1RY469
 - Close 1RY8030 when PRT pressure is ≤ 3 psig.
- If running the JPM repetitively, perform the following prior to each performance:
 - Verify 1RE1003, RCDT Pumps Inside Isolation Valve, is CLOSED and in LOCAL on 1PM11J.
 - Verify 1RE01PA & 1RE01PB, RCDT Pumps 1A & 1B are in AUTO on 1PM05J.
 - Open 1RY469, PRT to GW Isolation Valve, to vent PRT while filling.
 - Open 1RY8030, PW to PRT Cnmt Isolation Valve, to fill PRT.
 - Fill PRT to 90%
 - Close 1RY469
 - Close 1RY8030 when PRT pressure is ≤ 3 psig.
 - Check HMI terminals not displaying PRT parameters.

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. All systems are properly aligned for the current Unit 1 mode.

INITIATING CUES:

1. Annunciator 1-12-A7, PRT LEVEL HIGH/LOW, alarmed 5 minutes ago.
2. The Unit 1 Unit Supervisor directs you to lower PRT level to clear annunciator 1-12-A7 in accordance with BwOP RY-4, DRAINING THE PRESSURIZER RELIEF TANK.
3. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
4. Inform the Unit 1 Unit Supervisor when you have completed lowering PRT level.

TASK TITLE: Perform Low Power Electrical Lineup

JPM Number: SIM-610

Task No: R-AP-011

Objective No: 4C.AP-08

Rev. 20070301

K/A No.: 062000A4.07

K/A Imp.: 3.1/3.1

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
 FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

Approx. Completion Time: 20 MINUTES

Critical Elements: (*) 2, 3, 4, 5

Critical Time: N/A

EVALUATION METHOD:

PERFORM

SIMULATE

LOCATION:

IN PLANT

SIMULATOR

GENERAL REFERENCES:

- 1BwGP 100-4, POWER DESCENSION, Rev. 27.

MATERIALS:

- None

TASK STANDARDS:

- Energize the respective non-ESF Buses from the SAT prior to opening the respective buses UAT feed breaker.

TASK CONDITIONS:

- You are the Unit 1 Assist NSO.
- All conditions are normal for the current power level on Unit 1.
- Unit 1 is preparing for a rapid power reduction in accordance with 1BwGP 100-4, POWER DESCENSION and 1BwGP 100-4T3, RAPID POWER REDUCTION FLOWCHART.

INITIATING CUES:

- The Unit 1 Unit Supervisor directs you establish a shutdown electrical lineup in accordance with 1BwGP 100-4, step F.11.
- Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
- Inform the Unit 1 Unit Supervisor when you have established a shutdown electrical lineup.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	Refer to 1BwGP 100-4, step F.11 CUE: All prerequisites, precautions, and limitations and actions have been met.	Locate and open 1BwGP 100-4.	SAT UNSAT N/A <u>Comments:</u>
EVALUATOR NOTE: JPM steps 2-5 are independent of one another and can be performed in any order. The individual JPM steps must be performed in the order specified.			
*2.	Establish Bus 143 shutdown electrical lineup.	Perform the following at 1PM01J: <ul style="list-style-type: none"> Place SAT 142-1 Feed to Bus 143 Synch C/S to ON. Verify 1SI-AP104, Synchroscope Division 11, indicates approximately 12 o'clock position. Place ACB1432, SAT 142-1 Feed to 4KV Bus 143, C/S to CLOSE. <ul style="list-style-type: none"> Verify ACB 1432 CLOSED light LIT. Place ACB1431, UAT Feed to 4KV Bus 143, C/S to TRIP. Place SAT 142-1 Feed to Bus 143 Synch C/S to OFF. 	SAT UNSAT N/A <u>Comments:</u>
*3.	Establish Bus 144 shutdown electrical lineup.	Perform the following at 1PM01J: <ul style="list-style-type: none"> Place SAT 142-2 Feed to Bus 144 Synch C/S to ON. Verify 1SI-AP107, Synchroscope Division 12, indicates approximately 12 o'clock position. Place ACB1442, SAT 142-2 Feed to 4KV Bus 144, C/S to CLOSE. <ul style="list-style-type: none"> Verify ACB 1442 CLOSED light LIT. Place ACB1441, UAT Feed to 4KV Bus 144, C/S to TRIP. Place SAT 142-2 Feed to Bus 144 Synch C/S to OFF. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*4.	Establish Bus 157 shutdown electrical lineup.	Perform the following at 1PM01J: <ul style="list-style-type: none"> • Place SAT 142-1 Feed to Bus 157 Synch C/S to ON. • Verify 1SI-AP037, Synchroscope Switchyard/6.9 KV Buses, indicates approximately 12 o'clock position. • Place ACB 1572, SAT 142-1 Feed to 6.9 KV Bus 157, C/S to CLOSE. <ul style="list-style-type: none"> ○ Verify ACB 1572 CLOSED light LIT. • Place ACB1571, UAT Feed to 4KV Bus 157, C/S to TRIP. • Place SAT 142-1 Feed to Bus 157 Synch C/S to OFF. 	SAT UNSAT N/A <u>Comments:</u>
*5.	Establish Bus 156 shutdown electrical lineup.	Perform the following at 1PM01J: <ul style="list-style-type: none"> • Place SAT 142-2 Feed to Bus 156 Synch C/S to ON. • Verify 1SI-AP037, Synchroscope Switchyard/6.9 KV Buses, indicates approximately 12 o'clock position. • Place ACB 1562, SAT 142-2 Feed to 6.9 KV Bus 156, C/S to CLOSE. <ul style="list-style-type: none"> ○ Verify ACB 1562 CLOSED light LIT. • Place ACB1561, UAT Feed to 4KV Bus 156, C/S to TRIP. • Place SAT 142-2 Feed to Bus 156 Synch C/S to OFF. 	SAT UNSAT N/A <u>Comments:</u>

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon.
- OR -
- Other at power IC if being performed concurrently with other JPMs. (JPM must be performed with main generator synched to grid)
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Verify UATs are supplying 6.9KV buses and 4KV non-ESF buses.
- If running the JPM repetitively, perform the following prior to each performance:
 - Align 6.9 KV buses and 4KV non-ESF buses to the UATs.
 - Ensure bus synch switches are OFF.
 - Verify/remove place keeping marks from 1BwGP 100-4.

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. All conditions are normal for the current power level on Unit 1.
3. Unit 1 is preparing for a rapid power reduction in accordance with 1BwGP 100-4, POWER DESCENSION and 1BwGP 100-4T3, RAPID POWER REDUCTION FLOWCHART.

INITIATING CUES:

1. The Unit 1 Unit Supervisor directs you establish a shutdown electrical lineup in accordance with 1BwGP 100-4, step F.11.
2. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
3. Inform the Unit 1 Unit Supervisor when you have established a shutdown electrical lineup.

TASK TITLE: Swap Component Cooling Pumps with Failure of 1B CC Pump.

JPM No.: SIM-800

REV: 20070301

Task No: R-CC-02

K/A No.: 008000A4.01

TASK No.: 4C.CC-05

K/A IMP: 3.3/3.1

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: (*) 3, 4, 5, 10

APPROX COMPLETION TIME: 20 MINUTES

CRITICAL TIME: NA

EVALUATION METHOD:

LOCATION:

___ PERFORM

X IN PLANT

X SIMULATE

___ SIMULATOR

GENERAL REFERENCES:

1. BwOP CC-15, SWITCHING OPERATING AND STANDBY COMPONENT COOLING SYSTEM PUMPS, Rev. 16.
2. BwOP CC-2, COMPONENT COOLING WATER SYSTEM SHUTDOWN, Rev. 11.

MATERIALS:

1. Copy of BwOP CC-15, Rev. 16.
2. Copy of BwOP CC-2, Rev. 11.

TASK STANDARDS:

1. Perform Component Cooling Water Pump Swap.
2. Determine 1B CC pumps amps have not lowered after the pump was started.
3. Secure 1B CC pump.
4. Verify at least one CC pump operating.
5. **SRO ONLY** – Determine Tech Spec required actions for 1B CC pump malfunction

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. All systems are properly aligned for the current Unit 1 mode.
3. The "0" CC pump is mechanically aligned to Unit 1 in accordance with BwOP CC-10, ALIGNMENT OF THE 0 CC PUMP TO A UNIT.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to start the 1B CC Pump and secure the 1A CC Pump in accordance with BwOP CC-15, SWITCHING OPERATING AND STANDBY COMPONENT COOLING SYSTEM PUMPS.

CUE: Hand examinee copy of BwOP CC-15.

2. The 1B CC pump casing has been vented.
3. Non-licensed operators are standing by in the field to assist you.
4. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
5. Inform the Unit 1 US when the CC pump swap is complete.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	Refer to BwOP CC-15. CUE: All prerequisites, precautions, and limitations and actions are met.	Refer to BwOP CC-15.	SAT UNSAT N/A <u>Comments:</u>
2.	Vent the 1B CC pump casing: NOTE: If examinee asks if 1B CC pump is being run for ASME surveillance, provide the following cue: CUE: 1B CC pump is NOT being run for ASME surveillance.	Vent the 1B CC pump casing: <ul style="list-style-type: none"> Determine 1B CC pump casing was vented (from initiating cue) 	SAT UNSAT N/A <u>Comments:</u>
EVALUATOR NOTE: Alternate path begins here.			
*3.	Start 1B Component Cooling Pump. CUE: As Unit 2, acknowledge report of 1B CC pump start. (due to impact on 2A safety loop with 0 CC HX aligned to Unit 1). CUE: If examinee reports pump amps, provide acknowledgement but do not provide direction. NOTE: If examinee asks for pump preference provide the following cue: CUE: The Unit 1 Unit Supervisor directs you to determine pump alignment.	Perform the following at 1PM06J: <ul style="list-style-type: none"> Make page announcement for pump start Place 1CC01PB, 1B CC Pump, C/S to START. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
	<p>EVALUATOR NOTE: In order to meet JPM critical step 4, the examinee must have the 1A CC pump or 0 CC pump running.</p> <p>During the performance of JPM steps 4 and 5, the examinee may take the following courses of action, depending on when the examinee stops the 1A CC pump and when examinee recognizes the 1B CC pump amps are not lowering:</p> <ol style="list-style-type: none"> 1. The examinee may stop the 1B CC pump prior to securing the 1A CC pump. If the examinee stops the 1B CC pump prior to securing the 1A CC pump, JPM step 4 task is met. 2. If the 1A CC pump is secured when the examinee recognizes 1B CC pump amps are not lowering, the examinee may manually start the 1A CC pump or 0 CC pump prior to securing the 1B CC pump OR the examinee may elect to immediately secure the 1B CC pump. If the examinee elects to immediately secure the 1B CC pump, the examinee must manually start the 1A CC pump or 0 CC pump, as the auto start function is defeated. 		
*4.	<p>Start 1A OR 0 Component Cooling Pump.</p> <p>CUE: Unit Supervisor directs you to start the 1A CC pump. (if 1A CC pump previously secured)</p>	<p>Perform the following at 1PM06J:</p> <ul style="list-style-type: none"> • Place 1CC01PA, 1A CC Pump, C/S to START. <p>OR</p> <ul style="list-style-type: none"> • Place 0CC01P, 0 CC Pump, C/S to START. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
*5.	<p>Stop the 1B CC pump.</p> <p>CUE: As Unit Supervisor, acknowledge report of abnormal amps on 1B CC pump.</p>	<p>Perform the following at 1PM06J:</p> <ul style="list-style-type: none"> • Determines that 1B CC pump motor current has NOT lowered to less than 56 amps within 5 seconds. ○ Informs Unit Sup of problem with 1B CC pump. • Place 1CC01PB, 1B CC Pump, C/S to TRIP until system pressure stabilizes. ○ Place C/S for 1B CC pump in PTL • If examinee continues on without noticing 1B CC pump amps the JPM is complete. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
7.	Verify/Open _1CC685, CC from RCP Thermal Barrier HX Isolation Valve.	Perform the following at 1PM06J: <ul style="list-style-type: none"> Verify 1CC685, CC From RC Pumps Thermal Barrier Isolation Valve, OPEN light is LIT. 	SAT UNSAT N/A <u>Comments:</u>
8.	Verify/Clear any RCP CC annunciators/alarms.	Perform the following at 1PM05J: <ul style="list-style-type: none"> Verify annunciator box 7 columns 4 and 5 are NOT lit. 	SAT UNSAT N/A <u>Comments:</u>
9.	Verify/Clear "CNMT PEN CLG FLOW HIGH/LOW" alarm.	Perform the following at 1PM06J: <ul style="list-style-type: none"> Verify annunciator 1-2-D7, CNMT PEN CLG FLOW HIGH/LOW is NOT lit. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
	EVALUATOR NOTE: The following step is only required to be performed by SRO candidates. Mark step N/A if exam is being administered to RO candidate.		
*10.	<p>Review system lineup and C/S position for CC system Tech Spec compliance.</p> <p>NOTE: If examinee does not refer to Tech Specs, provide the following cue:</p> <p>CUE: US directs you to review Tech Specs for applicability with current system alignment.</p> <p>CUE: As Unit Supervisor, acknowledge report of Tech Spec entry conditions and applicability.</p>	<p>Perform ONE of the following:</p> <ul style="list-style-type: none"> • If the 1B CC pump C/S is in PULL OUT, determine Unit 1 does NOT currently meet Tech Spec entry conditions associated with the Component Cooling System. <ul style="list-style-type: none"> ○ Examinee may state that Unit 1 was briefly in TS 3.7.7. condition A for the 1B CC pump. • If the 1B CC pump C/S is in NORMAL AFTER TRIP, determine Tech Spec 3.7.7 condition B applies for the 1B CC pump. <ul style="list-style-type: none"> ○ Informs Unit Supervisor of Tech Spec entry conditions. ○ Notify Unit Supervisor Tech Spec entry conditions and applicability. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

CUE: THIS COMPLETES THIS JPM.

RECORD STOPT TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon.
- OR -
- Other IC if being performed concurrently with other JPMs. (JPM is not IC dependent)
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Verify 1A CC pump running.
- Verify 1B CC pump and 0 CC pump in normal after trip.
- Place 0 CC Pump C/S for 141 in Pull Out.
- Place 0 CC Pump C/S for 142 in NAT.
- Run **caep SIM-800** from disk and verify the following actuate:
 - IRF CC42 RO
 - IRF CC07 RI
 - TRGSET 1 "ZDI1CC01PB(4)==1"
 - TRG 1 "IOR ZAO1IICC01B (1 2) 80 2"
 - TRGSET 2 "ZDI1CC01PB(1)==1"
 - TRG 2 "IOR ZAO1IICC01B 0"
- If running the JPM repetitively, perform the following:
 - Verify 1A CC pump running.
 - Verify 1B CC pump and 0 CC pump in normal after trip.
 - Reset trigger 1
 - Reset trigger 2.

COMMENTS:

- Provide copy of BwOP CC-15

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. All systems are properly aligned for the current Unit 1 mode.
3. The "0" CC pump is mechanically aligned to Unit 1 in accordance with BwOP CC-10, ALIGNMENT OF THE 0 CC PUMP TO A UNIT.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to start the 1B CC Pump and secure the 1A CC Pump in accordance with BwOP CC-15, SWITCHING OPERATING AND STANDBY COMPONENT COOLING SYSTEM PUMPS.
2. The 1B CC pump casing has been vented.
3. Non-licensed operators are standing by in the field to assist you.
4. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
5. Inform the Unit 1 US when the CC pump swap is complete.

TASK TITLE: Perform Waste Gas Release Channel Checks

JPM No.: SIM-901

REV: 70070301

Task No.: R-GW-001

K/A No.: 071000A4.25

Objective No.: 4C.GW-01

K/A IMP: 3.2/3.2

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: (*) 5, 9

APPROX COMPLETION TIME: 30 MINUTES

CRITICAL TIME: NA

EVALUATION METHOD:

LOCATION:

PERFORM

IN PLANT

SIMULATE

SIMULATOR

GENERAL REFERENCES:

1. BwOP GW-500T1, GAS DECAY TANK RELEASE FORM, Rev. 32, Gas Decay Tank Release Form

MATERIALS:

1. Copy of BwOP GW-500T1, Rev. 32, completed through step 17.

TASK STANDARDS:

1. Perform Gas Decay Tank pre-release channel checks in accordance with BwOP GW-500T1.
2. Adjust RM-11 setpoints to verify proper operation of waste gas discharge valve.
3. Adjust RM-11 setpoints for gas release.

TASK CONDITIONS:

1. You are an extra NSO.
2. 0PR02J, Gas Decay Tank Monitor, is operable.
3. A release package is in progress for the 0F Gas Decay Tank.
4. BwOP GW-500T1, GAS DECAY TANK RELEASE FORM, has been completed through step D.17 for the 0F Gas Decay Tank release.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to perform steps D.18 through D.21 of BwOP GW-500T1.
CUE: Hand examinee copy of partially completed BwOP GW-500T1.
2. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
3. Inform the Unit 1 Unit Supervisor when you have completed steps D.18 through D.21 of BwOP GW-500T1.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	Refer to BwOP GW-500T1:	Refer to BwOP GW-500T1	SAT UNSAT N/A Comments:
2.	Select the High Alarm setpoint for OPA202. (steps D.18 - 19.a)	Perform the following at the RM-11 console: <ul style="list-style-type: none"> • Place the RM-11 console key to SUPERVISOR. ○ Depress GRID 3 key. • Key in 0202. • Depress the SEL key. ○ Verify OPA202 selected. • Depress CHAN ITEM key. • Key in 9. • Depress the SEL key. 	SAT UNSAT N/A Comments:
EVALUATOR NOTE: The following procedure step is not required to be performed if OPA202 is NOT in HIGH ALARM.			
3.	Verify/enter High Alarm setpoint for OPA202 suggested by Health Physics is section C.3.c. (step D.19.b) NOTE: If examinee requests independent verification of steps, provide the following cue: CUE: Verification has been provided.	Perform the following at the RM-11 console: <ul style="list-style-type: none"> ○ Refer to step C.3.c. ○ Verify the new High Alarm setpoint from step C.3.c (6.06E-03). ○ Depress the ENTER key. ○ Verify the new HIGH alarm setpoint is displayed. ○ Obtain verification. 	SAT UNSAT N/A Comments:
4.	Select and enter the Alert Alarm setpoint for OPA202. (step D.19.c) NOTE: If examinee requests independent verification of steps, provide the following cue: CUE: Verification has been provided.	Perform the following at the RM-11 console: <ul style="list-style-type: none"> ○ Depress Grid 3 key. ○ Key in 0202. ○ Depress the SEL key. ○ Verify OPA202 selected. ○ Depress CHAN ITEM key. • Key in 10. • Depress the SEL key. ○ Refer to step C.3.c. ○ Verify the new Alert Alarm setpoint 3.03E-03. ○ Depress the ENTER key. • Verify the new ALERT alarm setpoint is displayed. ○ Obtain verification. 	SAT UNSAT N/A Comments:

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*5.	<p>Verify 0RE-PR002B will cause 0GW014 to automatically close. (steps D.19.d-q)</p> <p>CUE: As local operator report 0GW014 C/S is in open</p> <p>CUE: As local operator report 0GW014 controller is at 100%.</p> <p>0PA202 current activity setting: _____</p> <p>0PA202 new Hi Alarm setting: _____</p> <p>CUE: As local operator report 0GW014 Auto Closed</p> <p>CUE: As local operator report 0GW014 control switch is in closed</p> <p>CUE: As local operator report 0GW014 controller is at 0%.</p> <p>NOTE: If examinee requests independent verification of steps, provide the following cue:</p> <p>CUE: Verification has been provided.</p>	<p>Contact the local operator to:</p> <ul style="list-style-type: none"> • Verify/Place 0GW014 C/S in OPEN. • Place 0GW014 controller to 100% open. <p>Perform the following at the RM-11 console:</p> <ul style="list-style-type: none"> ○ Depress Grid 3 key. ○ Key in 0202. ○ Depress the SEL key. ○ Verify 0PA202 selected. ○ Depress CHAN ITEM key. ○ Key in 9. ○ Record the current activity reading. • Enter a new HIGH ALARM setpoint below the current activity value. ○ Record the new HIGH ALARM setpoint that was entered. • Depress the ENTER key. ○ Acknowledge the alarm at the RM-11 console. ○ Contact the local operator to: <ul style="list-style-type: none"> ○ Verify 0GW014 AUTO CLOSED. ○ Place 0GW014 control switch in CLOSED. ○ Place 0GW014 controller at 0% demand. ○ Depress Grid 3 key. ○ Key in 0202. ○ Depress the SEL key. ○ Verify 0PA202 selected. ○ Depress CHAN ITEM key. ○ Key in 9. • Enter the HIGH ALARM setpoint determined in step C.3.c (6.06 E-03). ○ Obtain verification. 	<p>SAT UNSAT N/A</p> <p>Comments:</p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
6.	Select the High Alarm setpoint for 0PB102. (step D.20.a)	Perform the following at the RM-11 console: <ul style="list-style-type: none"> ○ Depress Grid 3 key. ● Key in 0102. ● Depress the SEL key. ○ Verify 0PB102 selected. ● Depress CHAN ITEM key. ● Key in 9. ● Depress the SEL key. 	SAT UNSAT N/A <u>Comments:</u>
EVALUATOR NOTE: The following procedure step is not required to be performed if 0PA202 is NOT in HIGH ALARM, otherwise mark step N/A.			
7.	Verify/enter High Alarm setpoint for 0PB102 suggested by Health Physics is section C.3.c. (step D.20.b) NOTE: If examinee requests independent verification of steps, provide the following cue: CUE: Verification has been provided.	Perform the following at the RM-11 console: <ul style="list-style-type: none"> ○ Refer to step C.3.c. ○ Verify the new High Alarm setpoint from step C.3.c (6.06E-04). ○ Depress the ENTER key. ○ Verify the new HIGH alarm setpoint is displayed. ○ Obtain verification. 	SAT UNSAT N/A <u>Comments:</u>
8.	Select and enter the Alert Alarm setpoint for 0PB102. (step D.20.c) NOTE: If examinee requests independent verification of steps, provide the following cue: CUE: Verification has been provided.	Perform the following at the RM-11 console: <ul style="list-style-type: none"> ○ Depress Grid 3 key. ○ Key in 0102. ○ Depress the SEL key. ○ Verify 0PB102 selected. ○ Depress CHAN ITEM key. ● Key in 10. ● Depress the SEL key. ○ Refer to step C.3.c. ● Verify the new Alert Alarm setpoint (6.06E-05). ○ Depress the ENTER key. ○ Verify the new ALERT alarm setpoint is displayed. ○ Obtain verification. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*9.	<p>Verify 0RE-PR002A will cause 0GW014 to automatically close: (steps D.20.d-q)</p> <p>CUE: As local operator report 0GW014 C/S is in open</p> <p>CUE: As local operator report 0GW014 controller is at 100%.</p> <p>0PB102 current activity setting _____</p> <p>0PB102 new Hi Alarm setting _____</p> <p>CUE: As local operator report 0GW014 Auto Closed</p> <p>CUE: As local operator report 0GW014 control switch is in closed</p> <p>CUE: As local operator report 0GW014 controller is at 0%.</p> <p>NOTE: If examinee requests independent verification of steps, provide the following cue:</p> <p>CUE: Verification has been provided.</p>	<p>Contact the local operator to:</p> <ul style="list-style-type: none"> • Verify/Place 0GW014 C/S in OPEN. • Place 0GW014 controller to 100% open. <p>Perform the following at the RM-11 console:</p> <ul style="list-style-type: none"> ○ Depress Grid 3 key. ○ Key in 0102. ○ Depress the SEL key. ○ Verify 0PB102 selected. ○ Depress CHAN ITEM key. • Key in 9. ○ Record the current activity reading. • Enter a new HIGH ALARM setpoint below the current activity value. ○ Record the new HIGH ALARM setpoint that was entered. • Depress the ENTER key. ○ Acknowledge the alarm at the RM-11 console. ○ Contact the local operator to: <ul style="list-style-type: none"> ○ Verify 0GW014 AUTO CLOSED. ○ Place 0GW014 control switch in CLOSED. ○ Place 0GW014 controller at 0% demand. ○ Depress Grid 3 key. ○ Key in 0102. ○ Depress the SEL key. ○ Verify 0PB102 selected. ○ Depress CHAN ITEM key. ○ Key in 9. • Enter the HIGH ALARM setpoint determined in step C.3.c (6.06 E-04). ○ Obtain verification. 	<p>SAT UNSAT N/A</p> <p>Comments:</p>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
10.	Place RM-11 in NORMAL MODE: (step D.21)	Perform the following at the RM-11 console: <ul style="list-style-type: none"> Place the RM-11 console key to NORMAL. 	SAT UNSAT N/A <u>Comments:</u>
11.	Inform US pre-release channel checks complete CUE: As Unit Supervisor, acknowledge report.	Inform Unit Supervisor BwOP GW-500T1 steps D.18 through D.21 are completed.	

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME: _____

COMMENTS:

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC 21, 100% power, steady state, equilibrium xenon.
- OR -
- Other IC if being performed concurrently with other JPMs. (JPM is not IC dependent)
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Adjust 0PR02J radiation level as follows:
 - Record as found values of monitored item **RMK0PR02ABKD** _____.
 - Set monitor item **RMK0PR02ABKD = 1.31 E-8**
 - Record as found values of monitored item **RMK0PR02BBKD** _____.
 - Set monitor item **RMK0PR02BBKD = 1.31 E-8**
- Adjust 0PR02J setpoints as follows.
 - Record 0PB102 High Alarm current setpoint _____.
 - Set 0PB102 High Alarm Setpoint = **6.06 E-04** (channel item #9).
 - Record 0PB102 Alert Alarm current setpoint _____.
 - Set 0PB102 Alert Alarm Setpoint = **6.06 E-05** (channel item #10).
 - Record 0PA202 High Alarm current setpoint _____.
 - Set 0PA202 High Alarm Setpoint = **6.06 E-03** (channel item #9).
 - Record 0PA202 Alert Alarm current setpoint _____.
 - Set 0PA202 Alert Alarm Setpoint = **3.03 E-03** (channel item #10).
- Select grid 1 on the RM-11 console.
- Place RM-11 keys switch to NORMAL.
- If running the JPM repetitively, perform the following:
 - Verify/Set 0PB102 High Alarm Setpoint = **6.06 E-04** (channel item #9).
 - Verify/Set 0PB102 Alert Alarm Setpoint = **6.06 E-05** (channel item #10).
 - Verify/Set 0PA202 High Alarm Setpoint = **6.06 E-03** (channel item #9).
 - Verify/Set 0PA202 Alert Alarm Setpoint = **3.03 E-03** (channel item #10).
 - Verify/Select grid 1 on the RM-11 console.
 - Verify/Place RM-11 keys switch to NORMAL.
- **AT CONCLUSION OF JPM(S), RESTORE 0PR02J MONITORED ITEMS ALARM SETPOINTS TO ORIGINAL AS FOUND VALUES**

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are an extra NSO.
2. OPR02J, Gas Decay Tank Monitor, is operable.
3. A release package is in progress for the 0F Gas Decay Tank.
4. BwOP GW-500T1, GAS DECAY TANK RELEASE FORM, has been completed through step D.17 for the 0F Gas Decay Tank release.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to perform steps D.18 through D.21 of BwOP GW-500T1.
2. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
3. Inform the Unit 1 Unit Supervisor when you have completed steps D.18 through D.21 of BwOP GW-500T1.

TASK TITLE: Align Ventilation Systems for Emergency Operations

JPM No.: SIM-222
Task No: R-EF-013
Objective No.: 4C.EF-13

REV: 20070301
K/A No 013000A4.01
K/A Imp: 4.5/4.8

EXAMINEE: _____

RO SRO (Circle One)

EVALUATOR: _____

DATE: _____

The Examinee: PASSED _____ this JPM.
FAILED _____

TIME STARTED: _____

TIME FINISHED: _____

JPM TIME: _____ MINUTES

CRITICAL ELEMENTS: (*) 3, 4, 6, 8

APPROX COMPLETION TIME: 25 MINUTES

CRITICAL TIME: NA

EVALUATION METHOD:

LOCATION:

PERFORM

IN PLANT

SIMULATE

SIMULATOR

GENERAL REFERENCES:

- 1BwEP-0, Reactor Trip or Safety Injection, Rev. 104 WOG 1C.
- BwOP VA-5, Aux Building Charcoal Booster Fan Operation, Rev. 18.
- BwOP VA-6, Fuel Handling Building Charcoal Booster Fan Operation, Rev 16.

MATERIALS:

- BwOP VA-5, Aux Building Charcoal Booster Fan Operation, Rev. 18.
- BwOP VA-6, Fuel Handling Building Charcoal Booster Fan Operation, Rev 16.

TASK STANDARDS:

- Determine HVAC components have failed to actuate.
- Manually start one MCR Makeup Filter Fan.
- Manually align one MCR Charcoal Absorber.
- Manually start two Aux Building Charcoal Booster Fans in two separate plenums.
- Manually start one FHB Charcoal Booster Fan.

TASK CONDITIONS:

- You are the Unit 1 Assist NSO.
- Unit 1 has experienced an RCS LOCA
- 1BwEP-0, REACTOR TRIP OR SAFETY INJECTION, is in progress.

INITIATING CUES:

- The Unit 1 Unit Supervisor has directed you to perform steps 21, 22, and 23 of 1BwEP-0.
- Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
- Inform the Unit 1 Unit Supervisor when you have completed steps 21, 22, and 23 of 1BwEP-0.

RECORD START TIME: _____

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
1.	Refer to 1BwEP-0. REACTOR TRIP OR SAFETY INJECTION.	Locate and open 1BwEP-0:	SAT UNSAT N/A <u>Comments:</u>
2.	Verify Control Room outside air intake monitors are less than high alarm setpoint.	Perform the following at the RM-11 console: <ul style="list-style-type: none"> ○ Depress Grid 2 button. ● Verify 0PR31J & 0PR32J cursors are GREEN. ● Verify 0PR33J & 0PR34J cursors are GREEN. 	SAT UNSAT N/A <u>Comments:</u>
EVALUATOR NOTE: Alternate path begins here.			
*3.	Check operating VC train equipment alignment.	Perform the following at OPM02J: <ul style="list-style-type: none"> ● Determine 0B VC train is running. ○ Verify 0VC01CB, MCR Supply Fan 0B, RUN light LIT. ○ Verify 0VC02CB, MCR Return Fan 0B, RUN light LIT. ● Determine 0VC03CB did not automatically start. <ul style="list-style-type: none"> ● Place 0VC03CB control switch to START. ○ Determine 0VC03CB RUN light LIT. ○ Verify 0WO01PB, MCR Chilled Water Pump 0B, RUN light LIT. ○ Verify 0WO01CB, MCR Chiller 0B, RUN light LIT. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*4.	Verify 0B VC Train Damper Alignment	Perform the following at 1PM06J: <ul style="list-style-type: none"> ○ Verify 0VC08Y, M/U Air Filter 0B Outlet Damper 0B, OPEN and CLOSED lights LIT. ○ Verify 0VC16Y/282Y/09Y/313Y, M/U Air Source Normal/M/U Air Filter, FILTER light LIT. ○ Verify 0VC09Y, Turbine Building Air to M/U Filter Isolation Damper, OPEN light LIT. ○ Verify 0VC313Y, Outside Air to M/U Filter Isolation Damper, CLOSED light LIT. ● Determine Recirc Charcoal Absorber is not aligned. ● Place Recirc Charcoal Absorber Select Switch 0VC44Y/05Y/06Y to ABSORB. ○ Verify 0VC44Y, Recirc Charcoal Absorber Bypass Damper, CLOSED light LIT. ○ Verify 0VC05Y, Recirc Charcoal Absorber Inlet Damper, OPEN light LIT. ○ Verify 0VC06Y, Recirc Charcoal Absorber Outlet Damper, OPEN light LIT. ○ Verify MCR pressure > +0.125" H2O on 0PDI-VC038. 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
5.	Verify Aux Building Ventilation Aligned for Emergency Operation.	Perform the following at OPM02J: <ul style="list-style-type: none"> Determines NO Inaccessible Plenum Charcoal Booster Fans operating. 	SAT UNSAT N/A <u>Comments:</u>
<p>EVALUATOR NOTE: The examinee may elect to immediately start the Aux Building Charcoal Booster Fans rather than starting the fans per BwOP VA-5. OP-AA-101-111, ROLES AND RESPONSIBILITIES OF ON SHIFT PERSONNEL, step 4.6.2.5, directs Reactor Operators to manually initiate safety systems automatic actions when operating parameters exceed the system's automatic initiation setpoints and the initiation does not occur.</p> <p>If the examinee elects to immediately start the Aux Building Charcoal Booster Fans, refer to JPM step 6 actions listed on this page.</p> <p>If the examinee elects to start the Aux Building Charcoal Booster Fans per BwOP VA-5, refer to JPM step 6 actions listed on JPM pages 6 – 7.</p>			
*6.	Start Aux Building Charcoal Booster Fans (1BwEP-0 step 22 Action Expected Response column)	Perform the following at OPM02J: <ul style="list-style-type: none"> Start ONE fan in plenum A as follows: <ul style="list-style-type: none"> Place 0VA03CA C/S to start: Verify 0VA022Y OPEN Verify 0VA020Y CLOSED - OR - Place 0VA03CB C/S to start: Verify 0VA023Y OPEN Verify 0VA436Y CLOSED <ul style="list-style-type: none"> Start ONE fan in plenum C as follows: <ul style="list-style-type: none"> Place 0VA03CE C/S to start: Verify 0VA067Y OPEN Verify 0VA052Y CLOSED - OR - Place 0VA03CF C/S to start: Verify 0VA072Y OPEN Verify 0VA438Y CLOSED 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*6.	<p>Start Aux Building Charcoal Booster Fans. (BwOP VA-5)</p> <p>CUE: After examinee locates procedure, provide copy.</p> <p>CUE: All prerequisites, precautions, and limitations and actions are met.</p> <p>CUE: 0VA03CA transfer switch is in remote.</p> <p>CUE: 0VA03CB transfer switch is in remote.</p>	<p>Locate and open BwOP VA-5. Refer to BwOP VA-5. Perform the following at OPM02J:</p> <ul style="list-style-type: none"> • Verify NO Inaccessible Plenum Charcoal Booster Fans operating. • Verify two inaccessible plenums aligned: <ul style="list-style-type: none"> • 0VA084Y OPEN. ○ 0VA085Y CLOSED • 0VA086Y OPEN. • Verify fan control dampers CLOSED. <ul style="list-style-type: none"> • 0VA023Y (if starting 0VA03CA) • 0VA022Y (if starting 0VA03CB) • 0VA072Y (if starting 0VA03CE) • 0VA067Y (if starting 0VA03CF) • Start ONE fan in plenum A as follows: <ul style="list-style-type: none"> ○ Verify 0VA03CA transfer switch in remote • Place 0VA03CA C/S to start: • Verify 0VA022Y OPEN OR THROTTLED • Verify 0VA020Y CLOSED <p>- OR -</p> <ul style="list-style-type: none"> ○ Verify 0VA03CB transfer switch in remote • Place 0VA03CB C/S to start: • Verify 0VA023Y OPEN OR THROTTLED • Verify 0VA436Y CLOSED 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>
<p>EVALUATOR NOTE: JPM step 6 actions for starting 0C Plenum Charcoal Booster Fans per BwOP VA-5 are continued on the next page.</p>			

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*6.	<p>Start Aux Building Charcoal Booster Fans. (BwOP VA-5)</p> <p>CUE: 0VA03CE transfer switch is in remote.</p> <p>CUE: 0VA03CF transfer switch is in remote.</p>	<ul style="list-style-type: none"> • Start ONE fan in plenum C as follows: <ul style="list-style-type: none"> ○ Verify 0VA03CE transfer switch in remote • Place 0VA03CE C/S to start: • Verify 0VA067Y OPEN OR THROTTLED • Verify 0VA052Y CLOSED - OR - <ul style="list-style-type: none"> ○ Verify 0VA03CF transfer switch in remote • Place 0VA03CF C/S to start: • Verify 0VA072Y OPEN OR THROTTLED • Verify 0VA438Y CLOSED 	

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
7.	Verify FHB Ventilation Aligned for Emergency Operation	Perform the following at OPM02J: <ul style="list-style-type: none"> Determines NO FHB Charcoal Absorber aligned. 	SAT UNSAT N/A <u>Comments:</u>
<p>EVALUATOR NOTE: The examinee may elect to immediately start the FHB Charcoal Booster Fans rather than starting the fans per BwOP VA-6. OP-AA-101-111, ROLES AND RESPONSIBILITIES OF ON SHIFT PERSONNEL, step 4.6.2.5, directs Reactor Operators to manually initiate safety systems automatic actions when operating parameters exceed the system's automatic initiation setpoints and the initiation does not occur.</p> <p>If the examinee elects to immediately start the FHB Charcoal Booster Fans, refer to JPM step 9 actions listed on this page.</p> <p>If the examinee elects to start the FHB Charcoal Booster Fans per BwOP VA-6, refer to JPM step 8 actions listed on JPM page 9.</p>			
*8.	Start Fuel Handling Building Charcoal Booster Fans. (1BwEP-0 step 23 Action Expected Response column)	Perform the following at OPM02J: <ul style="list-style-type: none"> Start ONE FHB Charcoal Booster Fan as follows: <ul style="list-style-type: none"> Place 0VA04CA C/S to start: Verify 0VA060Y OPEN Verify 0VA057Y OPEN Verify 0VA051Y CLOSED - OR - Place 0VA04CB C/S to start: Verify 0VA055Y OPEN Verify 0VA062Y OPEN Verify 0VA435Y CLOSED 	SAT UNSAT N/A <u>Comments:</u>

	PERFORMANCE STEP	STANDARD	CIRCLE APPLICABLE
*8.	<p>Start Fuel Handling Building Charcoal Booster Fans. (BwOP VA-6)</p> <p>CUE: After examinee locates procedure, provide copy.</p> <p>CUE: All prerequisites, precautions, and limitations and actions are met.</p> <p>NOTE: If examinee stops after aligning FHB Exhaust Plenum Pre-Filter, provide the following cue:</p> <p>CUE: Unit 1 Unit Supervisor directs you to start one FHB Charcoal Booster Fan.</p> <p>CUE: As US, acknowledge report.</p>	<p>Locate and open BwOP VA-6. Refer to BwOP VA-6. Perform the following at OPM02J:</p> <ul style="list-style-type: none"> • Align ONE FHB Exhaust Plenum Pre-Filter as follows: <ul style="list-style-type: none"> • Plenum A: <ul style="list-style-type: none"> • Verify 0VA058Y & 0VA059Y OPEN. • Verify 0VA053Y & 0VA054Y CLOSED • Plenum B: <ul style="list-style-type: none"> • Verify 0VA053Y & 0VA054Y OPEN. • Verify 0VA058Y & 0VA059Y CLOSED • Start 0VA04CA as follows: <ul style="list-style-type: none"> • Verify 0VA062Y CLOSED. • Place 0VA04CA C/S to start: • Verify 0VA057Y OPEN • Verify 0VA060Y OPEN • Verify 0VA051Y CLOSED <p>- OR -</p> <ul style="list-style-type: none"> • Start 0VA04CB as follows: <ul style="list-style-type: none"> • Verify 0VA057Y CLOSED. • Place 0VA04CB C/S to start: • Verify 0VA062Y OPEN • Verify 0VA055Y OPEN • Verify 0VA435Y CLOSED ○ Inform Unit Supervisor 1BwEP-0 steps 21-23 are complete. 	<p>SAT UNSAT N/A</p> <p><u>Comments:</u></p>

CUE: THIS COMPLETES THIS JPM.

RECORD STOP TIME: _____

SIMULATOR SETUP INSTRUCTIONS

- Verify/perform TQ-BR-201-0113, BRAIDWOOD TRAINING DEPARTMENT SIMULATOR EXAMINATION SECURITY ACTIONS CHECKLIST.
- Establish the conditions of IC-21, BOL 100% Power, Steady State, Equilibrium Xenon.
- Complete items on Simulator Ready for Training Checklist.
- Place simulator in RUN.
- Insert **IOR ZDISIL04A129S1 SILENCE** to silence MCB main panel alarms.
- Insert **IOR ZDISIL04A123S1 SILENCE** to silence MCB bypass permissive panel alarms.
- Insert **IRF RP44 OUT** to disable Train A Slave Relay K602
- Insert **IRF RP70 OUT** to disable Train B Slave Relay K602.
- Insert **IMF TH06A 1000 0** to initiate an RCS LOCA.
- Manually actuate SI at 1PM05J or 1PM06J.
- Take snapshot to 0 (if desired).
- If running JPM repetitively, perform the following (or reset to IC-0 if snapshot used) before each performance:
 - Verify/Secure BOTH VC M/U Fans
 - Verify/Align BOTH VC Charcoal Absorbers to NORMAL
 - Verify/Secure ALL Aux Building Charcoal Booster Fans
 - Verify/Secure BOTH Fuel Handling Building Charcoal Booster Fan
 - Remove ALL place keeping marks from 1BwEP-0.

COMMENTS:

JOB PERFORMANCE MEASURE

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. Unit 1 has experienced an RCS LOCA
3. 1BwEP-0, REACTOR TRIP OR SAFETY INJECTION, is in progress.

INITIATING CUES:

1. The Unit 1 Unit Supervisor has directed you to perform steps 21, 22, and 23 of 1BwEP-0.
2. Another NSO will monitor the remainder of the Main Control Board panels and address alarms as necessary.
3. Inform the Unit 1 Unit Supervisor when you have completed steps 21, 22, and 23 of 1BwEP-0.