



## JOB PERFORMANCE MEASURE (JPM)

**SITE:** PBNP

**TASK TITLE:** MANUALLY MAKEUP TO THE VCT/RWST

**JPM NUMBER:** P004.027b.COT **REV.** 0

**RELATED PRA INFORMATION:** None

**TASK NUMBERS:** P004.027.COT

**K/A NUMBERS:** 004.A4.12 (3.8/3.3)

**APPLICABLE METHOD OF TESTING:**

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

**EVALUATION LOCATION:** In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 15 Minutes

Time Critical: NO

Alternate Path / Faulted: YES

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
Instructor		Date
<b>Validated by:</b>		
Validation Instructor (See JPM Validation Checklist, Attachment 1)		Date
<b>Approved by:</b>		
Training Supervisor		Date

JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

Start Time \_\_\_\_\_ Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

*Delete this table if not required*

  X   Procedure adequately addresses task elements.

Enter Identifier here: OP 5B, Blender Operation / Dilution / Boration,  
Rev. 22

       Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

       Task elements described as attached.

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the Unit 1 Operator at the Controls.
- Leakage at the Charging Pump seals has resulted in the need to manually blend to the VCT to maintain normal VCT level.
- Several blends have been performed and the CVCS system was left with the blend in the piping.
- The Chemical and Volume Control System is in its normal at-power alignment with a single letdown orifice in service.
- Unit 1 RCS boron concentration is 875 ppm.
- The on-service boric acid storage tank concentration is 3.75%.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to:
  - Raise VCT level by approximately 10% at the current boron concentration in the RCS by use of manual blend, and
  - Realign the makeup system for normal automatic operations. **NOTE: The blend may be left in the CVCS piping since frequent blends are currently required.**

## JPM PERFORMANCE INFORMATION

**Required Materials:** OP 5B, Blender Operation / Dilution / Boration.

**General References:** Blender Data Manual.

**Task Standards:** The Examinee raises VCT level by 10%, determines failure of 1CV-111 to auto-close and manually closes the valve.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b> <b>Critical <u>N</u> (SEQ-1)</b>	Determine the desired blender output concentration, <u>AND</u> the corresponding acid and water flow setpoints from operating experience, <u>OR</u> using the Blender Data Manual.
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<b>Standard:</b>	The Examinee determines that the existing acid and water flow setpoints are adequate for the present boron concentration by referencing: <ul style="list-style-type: none"> <li>○ Operating experience, or</li> <li>○ Using the Blender Data Manual.</li> </ul> <b>NO adjust of controls is necessary.</b>
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<b>Evaluator Note:</b>	The RMW/boric acid ratio for the existing boron concentration is 6.5 gallons of RMW for each gallon of acid.
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<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
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<b>Comments:</b>	_____ _____
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**Performance Step: 2**  
**Critical Y(SEQ-1)**

Place the REACTOR MAKEUP MODE SELECTOR switch in BLEND.

**Standard:**

The Examinee places the REACTOR MAKEUP MODE SELECTOR switch to the BLEND position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 3**  
**Critical N(SEQ-1)**

Set HC-111, RX MAKEUP WATER FLOW CONTROLLER, to the value determined in Step 4.1.1.

**Standard:**

The Examinee determines that no adjustment of controller HC-111 is necessary.

**Evaluator Note:**

The RMW/boric acid ratio for the existing boron concentration is 6.5 gallons of RMW for each gallon of acid.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 4**  
**Critical N(SEQ-1)**

Set HC-110, BORIC ACID FLOW CONTROLLER, to the value determined in Step 4.1.1.

**Standard:**

The Examinee determines that no adjustment of controller HC-110 is necessary.

**Evaluator Note:**

The RMW/boric acid ratio for the existing boron concentration is 6.5 gallons of RMW for each gallon of acid.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 5** IF VCT is NOT bypassed, THEN ensure CV-110B, Z-1 BA BLENDER TO CHG  
**Critical N(SEQ-1)** PUMP SUCT FCV, is in AUTO to supply the VCT outlet from the blender.

**Standard:** The Examinee determines CV-110B control switch is already in AUTO.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 6** IF VCT is bypassed, THEN ensure CV-110B, Z-1 BA BLENDER TO CHG PUMP  
**Critical N(SEQ-1)** SUCT FCV is OPEN.

**Standard:** The Examinee determines step is N/A, proceeds to Step 4.1.7.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 7** Place the REACTOR MAKEUP control switch in START, AND ensure the red light  
**Critical Y(SEQ-2)** is lit.

**Standard:**

- The Examinee places the REACTOR MAKEUP control switch to the Start position and
- Ensures that the red light is lit.

**Evaluator Note:** Verification of red light is NOT critical.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 8**  
**Critical N(SEQ-3)**

Monitor the following as applicable:

- RMW and boric acid flows
- VCT level and pressure
- RCS temperature
- Reactor power

**Standard:**

The Examinee monitors all of the following parameters:

- RMW and boric acid flows
- VCT level and pressure
- RCS temperature
- Reactor power

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 9**  
**Critical Y(SEQ-3)**

WHEN it is desired to secure MANUAL BLEND, THEN:  
Place the REACTOR MAKEUP control switch to STOP.

**Standard:**

The Examinee places the REACTOR MAKEUP control switch to the Stop position after VCT level has risen at least 10%.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 10**  
**Critical Y(SEQ-4)**

Place the REACTOR MAKEUP MODE SELECTOR switch to AUTO.

**Standard:**

The Examinee places the REACTOR MAKEUP MODE SELECTOR switch to the AUTO position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 11**  
**Critical N(SEQ-5)**

Ensure the following:  
CV-110A, BA TO Z-1 BLENDER FLOW CONTROL VALVE, opens.

**Standard:**

The Examinee determines that CV-110A is open (green light off, red light on).

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 12**  
**Critical Y(SEQ-5)**

Ensure the following:  
CV-111, RMW TO Z-1 BLENDER FLOW CONTROL VALVE, closes.

**Standard:**

The Examinee determines that CV-111 is OPEN, and closes the valve by placing the control switch for CV-111 to the Close position.

**Evaluator Cue:**

If Examinee informs the DOS of the failure and requests direction, indicate that the valve should be placed in its required position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 13** IF VCT is NOT bypassed, THEN ensure CV-110B, Z-1 BA BLENDER TO CHG  
**Critical N(SEQ-5)** PUMP SUCT FCV, is CLOSED.

**Standard:** The Examinee determines that CV-110B is Closed (green light on, red light off).

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 14** IF VCT is bypassed, THEN ensure CV-110B, Z-1 BA BLENDER TO CHG PUMP  
**Critical N(SEQ-5)** SUCT FCV, is OPEN.

**Standard:** The Examinee determines step is N/A and proceeds to Step 4.2.4.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 15** Ensure that the blender is set to match the current RCS boron concentration.  
**Critical N(SEQ-5)**

**Standard:** The Examinee determines that the blender controls are adequate for the existing boron concentration.  
**No adjustment of controls is necessary.**

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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<b>Performance Step: 16</b> <b>Critical <u>N</u>(SEQ-6)</b>	Arm the system as follows: <ul style="list-style-type: none"> <li>Place the REACTOR MAKEUP control switch in START</li> <li>ENSURE the red light is lit.</li> </ul>
<b>Standard:</b>	<ul style="list-style-type: none"> <li>The Examinee places the REACTOR MAKEUP control switch to the Start position and</li> <li>Ensures that the red light is lit.</li> </ul>
<b>Evaluator Note:</b>	The Examinee may recommend troubleshooting of the 1CV-111 failure prior to Arming the system. If Examinee suggests this, concur with the recommendation.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

<b>Performance Step: 17</b> <b>Critical <u>N</u>(SEQ-7)</b>	Inform the DOS of plant status.
<b>Standard:</b>	The Examinee informs the DOS that VCT level has been raised approximately 10% using manual blend and that CV-111 failed to automatically re-position when the blend was secured.
<b>Evaluator Cue:</b>	The DOS acknowledges your report.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

**Terminating Cues:** The JPM is complete.

**Stop Time:** \_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Initial Setup:

- Load an IC where conditions support Unit 1 steady-state operations.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Ensure RMW/boric acid flow controllers are set at a 6.5:1 ratio.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use (if necessary).

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.

SIMULATOR INFORMATION:

Initiation Cue	Action or Component Description	Action Tagname	Malfunction Value	Ramp Time	Delay Time	Trigger		Verification Performed	
						Event Criteria	Oper. Init. #	Ready	Inserted
PRELOAD	1-CV-111 RMW TO BLENDER FCV (FAIL OPEN)	VLV1CVC005	1	-	-	X14I161S .EQ. 1 (Trigger 1)	-		
		EVENT TRIGGERS							
		EVENT LINE		COMMAND LINE					
PRELOAD	1-CV-111 RMW TO BLENDER FCV ISOL (CLOSE)	X14I253C .EQ. 1		DMF VLV1CVC005		2	-		

## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the Unit 1 Operator at the Controls.
- Leakage at the Charging Pump seals has resulted in the need to manually blend to the VCT to maintain normal VCT level.
- Several blends have been performed and the CVCS system was left with the blend in the piping.
- The Chemical and Volume Control System is in its normal at-power alignment with a single letdown orifice in service.
- Unit 1 RCS boron concentration is 875 ppm.
- The on-service boric acid storage tank concentration is 3.75%.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to:
  - Raise VCT level by approximately 10% at the current boron concentration in the RCS by use of manual blend, and
  - Realign the makeup system for normal automatic operations. **NOTE: The blend may be left in the CVCS piping since frequent blends are currently required.**

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

\_\_\_\_\_  
Validation Personnel/Date

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Validation Personnel /Date


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Validation Personnel /Date

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Validation Personnel/Date

	JOB PERFORMANCE MEASURE (JPM)
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**SITE:** PBNP

**TASK TITLE:** MANUALLY MAKEUP TO THE VCT/RWST

**JPM NUMBER:** P004.027b.COT **REV.** 0

**RELATED PRA INFORMATION:** None

**TASK NUMBERS:** P004.027.COT

**K/A NUMBERS:** 006.A1.13 (3.5/3.7)

**APPLICABLE METHOD OF TESTING:**

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

**EVALUATION LOCATION:** In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date

JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

Start Time \_\_\_\_\_ Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

*Delete this table if not required*

X  Procedure adequately addresses task elements.

Enter Identifier here: OI 100, Adjusting SI Accumulator Level and Pressure, Rev. 21

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

\_\_\_\_\_ Task elements described as attached.

**COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).**


EVALUATOR'S SIGNATURE: \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

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After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- Unit 1 is at 100% steady-state conditions.
- Annunciator "1T-34A Accumulator Pressure High or Low" has just alarmed.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to raise 1T-34A accumulator pressure to clear the alarm (and maintain pressure in the normal band) in accordance with OI 100, Adjusting SI Accumulator Level and Pressure, Section 5.4.



### JPM PERFORMANCE INFORMATION

**Required Materials:** OI 100, Adjusting SI Accumulator Level and Pressure.

**General References:** None.

**Task Standards:** The Examinee raises pressure in 1T-34A to clear the associated alarm on panel C01.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b> <b>Critical <u>N</u>(SEQ-1)</b>	Perform Attachment A, “Accumulator Level/Pressure Change Data Sheet,” Sections 1.0 and 2.0.
<b>Standard:</b>	The Examinee completes Attachment A, “Accumulator Level/Pressure Change Data Sheet,” Sections 1.0 and 2.0. based on present plant conditions.
<b>Performance:</b>	<b>SATISFACTORY</b> _____ <b>UNSATISFACTORY</b> _____
<b>Comments:</b>	_____ _____

**Performance Step: 2**      IF RCS pressure is less than 760 psig, THEN ensure the following valves Shut:  
**Critical N(SEQ-1)**      (Mark this step N/A if RCS pressure is greater than or equal to 760 psig.)

**Standard:**

- The Examinee marks Step 5.4.2 N/A and
- Proceeds to Step 5.4.3.

**Performance:**      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 3**      Ensure 1SI-957, N2 Supply Line Vent, is SHUT using 1HIC-957 Accumulator Vent  
**Critical N(SEQ-1)**      Controller. (C01R)

**Standard:**      The Examinee determines that 1SI-957 is shut by observing accumulator vent controller, 1HIC-957, setpoint controller at zero and output at zero (closed).

**Performance:**      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 4**      Open the SI accumulator nitrogen inlet valve for the accumulator to be filled:  
**Critical Y(SEQ-1)**      (Mark the valve NOT used N/A.)

- 1SI-834A, T34A Accumulator Nitrogen Inlet AOV
- 1SI-834B, T34B Accumulator Nitrogen Inlet AOV

**Standard:**

- The Examinee places the control switch for 1SI-834A to the Open position. and
- N/As the Step for the valve not used, 1SI-834B (N/A is NOT critical).

**Performance:**      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

<b>Performance Step: 5</b> <b>Critical <u>Y</u>(SEQ-1)</b>	Align a Nitrogen 12 pack to Unit 1 SI accumulators by opening 12 pack isolations.
<b>Standard:</b>	The Examinee dispatches the Primary Auxiliary Building Auxiliary Operator to align a Nitrogen 12 pack to the Unit 1 SI accumulators.
<b>Evaluator Cue:</b>	The Primary Auxiliary Building Auxiliary Operator reports that a nitrogen 12 pack is aligned to the Unit 1 SI accumulators.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

<b>Performance Step: 6</b> <b>Critical <u>Y</u>(SEQ-1)</b>	Open 1SI-846, 1T-34A&B Accumulator Nitrogen Inlet CIV. (C01)
<b>Standard:</b>	The Examinee places the control switch for 1SI-846 to the Open position.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

**Performance Step: 7**  
**Critical Y(SEQ-1)**

Locally open the valve aligned to the Nitrogen 12 pack: (Mark the valve NOT used N/A).

- 1SI-838A, Accumulator Nitrogen Supply
- 1SI-838B, Accumulator Nitrogen Supply

**Standard:**

- The Examinee dispatches the Primary Auxiliary Building Auxiliary Operator to locally open the accumulator nitrogen supply valve for the aligned 12 pack.
- N/As the Step for the valve not used (N/A of step is NOT critical).

**Evaluator Cue:**

- The Primary Auxiliary Building Auxiliary Operator reports that the Accumulator Nitrogen Supply Valve, 1SI-838A, is open and flow can be heard.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 8**  
**Critical N(SEQ-1)**

Pressurize accumulator to desired pressure as indicated on one of the following indicators: (Mark the indicators NOT used N/A).

- 1PI-941, 1T34A Accumulator Pressure (C01R)
- 1PI-940, 1T-34A Accumulator Pressure (C01)
- 1PI-936, 1T-34B Accumulator Pressure (C01)
- 1PI-937, 1T34B Accumulator Pressure (C01R)

**Standard:**

The Examinee monitors pressurization of the accumulator on ONE of the following instruments:

- 1PI-941, 1T34A Accumulator Pressure (C01R)
- 1PI-940, 1T-34A Accumulator Pressure (C01)

And N/As the indicators not used:

- 1PI-936, 1T-34B Accumulator Pressure (C01)
- 1PI-937, 1T34B Accumulator Pressure (C01R).

**Evaluator Cue:**

When Annunciator “1T-34A Accumulator Pressure High or Low” clears, inform the Examinee that the Accumulator is at the desired pressure and the fill may be secured.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 9**  
**Critical Y(SEQ-2)**

WHEN the desired pressure in the accumulator is achieved THEN shut 1SI-846, 1T-34A&B Accumulator Nitrogen Inlet CIV. (C01)

**Standard:**

After Annunciator “1T-34A Accumulator Pressure High or Low” is clear, the Examinee places the control switch for 1SI-846 to the Close position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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<b>Performance Step: 10</b> <b>Critical <u>N</u>(SEQ-2)</b>	Locally isolate Nitrogen 12 pack to Unit 1 SI accumulators by shutting 12 pack isolation.
<b>Standard:</b>	The Examinee dispatches the Primary Auxiliary Building Auxiliary Operator to locally isolate the Nitrogen 12 pack to the Unit 1 SI accumulators by shutting the 12 pack isolation.
<b>Evaluator Cue:</b>	The Primary Auxiliary Building Auxiliary Operator reports that the Nitrogen 12 pack to the Unit 1 SI accumulators has been isolated.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 11</b> <b>Critical <u>N</u>(SEQ-2)</b>	Locally isolate the Nitrogen 12 pack used to fill the accumulator: (Mark the valve <u>NOT</u> used N/A.) <ul style="list-style-type: none"> <li>• 1SI-838A, Accumulator Nitrogen Supply</li> <li>• 1SI-838B, Accumulator Nitrogen Supply</li> </ul>
<b>Standard:</b>	<ul style="list-style-type: none"> <li>• The Examinee dispatches the Primary Auxiliary Building Auxiliary Operator to locally isolate 1SI-838A.</li> <li>• N/As the Step for the valve not used (1SI-838B).</li> </ul>
<b>Evaluator Cue:</b>	The Primary Auxiliary Building Auxiliary Operator primary auxiliary building Auxiliary Operator reports that 1SI-838A is shut.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Performance Step: 12** Shut the accumulator nitrogen inlet valve previously opened: (C01R) (Mark the  
**Critical N(SEQ-2)** valve NOT used N/A.)  
a. 1SI-834A, T34A Accumulator Nitrogen Inlet AOV  
b. 1SI-834B, T34B Accumulator Nitrogen Inlet AOV

**Standard:**

- The Examinee places the control switch for T-34A Accumulator Nitrogen Inlet AOV, 1SI-834A, to the Close position and
- N/As the valve not used (1SI-834B).

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 13** **Perform Attachment A, "Accumulator Level/Pressure Change Data Sheet,"**  
**Critical N(SEQ-3)** **Sections 5.0 and 7.0.**

**Standard:** The Examinee completes Attachment A, "Accumulator Level/Pressure Change Data Sheet," Sections 5.0 and 7.0 using present plant data.

**Evaluator Cue:** The Unit 1 CO will make the appropriate Narrative Log entries.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 14**  
**Critical N(SEQ-3)**

Ensure accumulator level between 15 to 40% as indicated on one of the following indicators: (Mark the indicators NOT used N/A.)

- 1LI-939, 1T-34A Accumulator Level (C01R)
- 1LI-938, 1T-34A Accumulator Level (C01)
- 1LI-934, 1T-34B Accumulator Level (C01)
- 1LI-935, 1T-34B Accumulator Level (C01R)

**Standard:**

The Examinee determines that level is within the required band of 15 to 40% as indicated on one of the following indicators:

- 1LI-939, 1T-34A Accumulator Level (C01R)
- 1LI-938, 1T-34A Accumulator Level (C01)

And N/As the indicators not used:

- 1LI-934, 1T-34B Accumulator Level (C01)
- 1LI-935, 1T-34B Accumulator Level (C01R)

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 15**  
**Critical N(SEQ-3)**

Inform the DOS of plant status.

**Standard:**

The Examinee informs the DOS that Unit 1 SI "A" accumulator, 1T-34A, pressure has been raised and the alarm is clear.

**Evaluator Cue:**

The DOS acknowledges your report.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Terminating Cues:** The JPM is complete.

**Stop Time:** \_\_\_\_\_



SIMULATOR SET UP: (Modify table as necessary)

Simulator Setup Instructions:

Initial Setup:

- Load an IC where conditions support Unit 1 at 100% steady-state conditions
- Vent Unit 1 1T-34A Accumulator until low pressure annunciator alarm is in, then immediately secure vent.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

Additional Simulator Operator Instructions

From the SI Accumulator Simulator drawing, open valve 1SI-838A when requested by Examinee.  
(Trigger may be used for convenience.)

## TURNOVER SHEET

### INITIAL CONDITIONS:

- Unit 1 is at 100% steady-state conditions.
- Annunciator “1T-34A Accumulator Pressure High or Low” has just alarmed.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to raise 1T-34A accumulator pressure to clear the alarm (and maintain pressure in the normal band) in accordance with OI 100, Adjusting SI Accumulator Level and Pressure, Section 5.4.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
14. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

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Validation Personnel/Date

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** PBNP

**TASK TITLE:** PERFORM ACTIONS TO STOP A CONTINUOUS ROD  
WITHDRAWALMANUALLY MAKEUP TO THE VCT/RWST

**JPM NUMBER:** P.000.008b.COTP004.027B. **REV.** 00  
COT

**RELATED PRA  
INFORMATION:** None

**TASK NUMBERS:** P000.008B.COTP004.027.COT

**K/A NUMBERS:** 001.AA1.005194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001 A1.04  
(3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12  
(3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01  
(3.8/3.9) /

**APPLICABLE METHOD OF TESTING:**

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

**EVALUATION LOCATION:** In-Plant: ☐ Control Room: ☐  
Simulator: ☒ Other: ☐  
Lab: ☐

Time for Completion: 1515 Minutes Time Critical: NO

Alternate Path / Faulted: YES

**TASK APPLICABILITY:** SRO/ROSRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>	Instructor	Date
<b>Validated by:</b>	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		

Training Supervisor	Date
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**JPM Number:** P000.008b.COTP004.027b.COT

**JPM Title:** RESPOND TO UNCONTROLLED ROD MOTIONMANUALLY MAKEUP TO THE VCT/RWST

**Examinee:** \_\_\_\_\_

**Evaluator:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Start Time** \_\_\_\_\_

**Finish Time** \_\_\_\_\_

**PERFORMANCE RESULTS:**

**SAT:**

**UNSAT:**

*Delete this table if not required*

☒ Procedure adequately addresses task elements.

Enter Identifier here: **AOP 6C Unit 1, Uncontrolled Motion of RCCA(s), Rev. 11**

☐ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

☒ Task elements described as attached.

**COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).**


**EVALUATOR'S SIGNATURE:** \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the Operator at the Controls for Unit 1.
- Unit 1 is at the 28% chemistry hold following reactor startup.
- Rod Control has been placed in Auto due to the extended chemistry hold.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to insert control rods two (2) steps for flux control.

### JPM PERFORMANCE INFORMATION

**Required Materials:** None.

**General References:** AOP 6C Unit 1, Uncontrolled Motion of RCCA(s).

**Task Standards:** The Examinee terminates the uncontrolled rod motion by tripping the reactor.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

**Performance Step: 1**      **The Control Rod Bank Selector switch is placed in Manual.**  
**Critical N(SEQ-1)**

**Standard:** The Examinee places the Control Rod Bank Selector switch to the Manual position.

**Performance:**      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_



**Performance Step: 2**  
**Critical N(SEQ-2)**

**Control Bank D rods are withdrawn two (2) steps.**

**Standard:**

The Examinee:

- Positions the IN-HOLD-OUT switch to the IN position until Control Bank D inserts two (2) steps from 172 to 170 and
- Checks Bank Demand, IRPIs, PPCS indications, and RCS temperature response consistent for the rod withdrawal.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 3**  
**Critical N(SEQ-3)**

**The Control Rod Bank Selector switch is returned to Auto.**

**Standard:**

The Examinee places the Control Rod Bank Selector switch to the Auto position.

**Evaluator Cue:**

If Examinee requests direction on whether to leave Rod Control in Manual or Auto, indicate that Rod Control should be returned to Auto.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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<b>Performance Step: 4</b> <b>Critical <u>N</u>(SEQ-4)</b>	<b>Inform the DOS that Control Bank D has been inserted two (2) steps.</b>
<b>Standard:</b>	The Examinee informs the DOS that Control Bank D has been inserted two (2) steps.
<b>Evaluator Note:</b>	After the Control Rod Bank Selector switch is returned to the Auto position, a failure of Power Range Nuclear Instrument N-41 will occur causing automatic rod withdrawal.
<b>Evaluator Cue:</b>	The DOS acknowledges your report.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div>

<b>Performance Step: 5</b> <b>Critical <u>Y</u>(SEQ-5)</b>	<b>Check Rod Motion Required:</b> <ul style="list-style-type: none"> <li>○ Change in turbine load</li> <li style="text-align: center;"><b>OR</b></li> <li>○ Change in steam demand</li> <li style="text-align: center;"><b>OR</b></li> <li>○ Tave/Tref mismatch greater than 1.5 °F</li> </ul>
<b>Standard:</b>	The Operator at the Controls: <ul style="list-style-type: none"> <li>• Identifies automatic rod movement of Control Bank D is not required.</li> </ul>
<b>Evaluator Cue:</b>	If informed, the DOS acknowledges your report.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div>

<b>Performance Step: 6</b> <b>Critical <u>N</u>(SEQ-6)</b>	<b>Place the Control Rod Bank Selector switch to Manual.</b>
<b>Standard:</b>	The Examinee places the Control Rod Bank Selector switch to the Manual position.
<b>Evaluator Note:</b>	Control Bank D will continue to withdraw.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 7</b> <b>Critical <u>Y</u>(SEQ-7)</b>	<b><u>IF</u> any control rod continues to step, <u>THEN</u> perform the following:</b> <ul style="list-style-type: none"> <li>• Trip the reactor</li> </ul>
<b>Standard:</b>	The Examinee depresses either or both Reactor Trip pushbuttons on either 1C04 or C01.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Terminating Cues:** When the Reactor Trip pushbuttons are depressed, the JPM may be terminated.

**Stop Time:** \_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Simulator Setup Instructions:

- 

Initial Setup:

- Load an IC where conditions support a startup with a chemistry hold at 28% with CBD rods at 170.
- Load the preloads.
- Start the simulation.
- Insert CBD four steps to obtain approximately 1 degree Tavg-Tref mismatch.
- Ensure the rod control selector switch is in Automatic.
- Freeze the simulator.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

MORE ON NEXT PAGE

**QF-1030-11 Rev. 1 (FP-T-SAT-30)****SIMULATOR INFORMATION:**

Initiation Cue	Action or Component Description	Action Tagname	Malf. Value	Ramp Time	Delay Time	Trigger		Verification Performed	
						Event Criteria	Oper. Init. #	Ready	Inserted
This JPM is based upon IC-6, where:									
<ul style="list-style-type: none"><li>Unit 1 is at the 28% Chemistry hold</li><li>CBD at 170 steps</li><li>Boron concentration is at 1535 ppm.</li></ul>									
Raise RCS temperature by withdrawing CBD from 170 to 172. Let plant stabilize.									
Activate Trigger 1 <b>AFTER</b> rods are moved two steps <b>AND</b> rod control is returned AUTO.									
PRELOAD	P.R. CHANNEL N41 HIGH VOLTAGE FAILURE	MAL1NIS007A	300	-	-	-	1		
PRELOAD	ROD JOYSTK OUT POSITION CONTROL ROD MOTION IN OUT JOYST (ON)	OVER-CRF010A	ON	-	-	ZT:RPC 7.EQ. 172	2		
PRELOAD	ROD JOYSTK IN POSITION CONTROL ROD MOTION IN OUT JOYST (OFF)	OVER-CRF010B	OFF	-	-	ZT:RPC 7.EQ. 172	2		

## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the Operator at the Controls for Unit 1.
- Unit 1 is at the 28% chemistry hold following reactor startup.
- Rod Control has been placed in Auto due to the extended chemistry hold.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to insert control rods two (2) steps for flux control.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
27. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

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Validation Personnel /Date

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Validation Personnel/Date

	JOB PERFORMANCE MEASURE (JPM)
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SITE: PBNP

TASK TITLE: MANUALLY MAKEUP TO THE VCT/RWST

JPM NUMBER: P004.027B.COT REV. 0

RELATED PRA INFORMATION: AFW issues similar to this JPM have resulted in elevated CDF risk.

TASK NUMBERS: P004.027.COT

K/A NUMBERS: 061.A2.05 (3.1/3.4)194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001 A1.04 (3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12 (3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01 (3.8/3.9) /

## APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐  
 Simulator: ☒ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: YES

TASK APPLICABILITY: SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date





JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

Start Time \_\_\_\_\_ Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

*Delete this table if not required*

X Procedure adequately addresses task elements.

Enter Identifier here:

**OI 62A, Motor-Driven Auxiliary Feedwater System  
(P-38A &P-38B), Rev. 24**

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here:

\_\_\_\_\_ Task elements described as attached.

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the Balance Of Plant Operator.
- Unit 1 is in Mode 5, Cold Shutdown.
- Chemistry requests that Steam Generator 'A' level be raised to support placing the S/G in wet lay-up.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to raise Unit 1 'A' Steam Generator level to 90-95% NR in accordance with OI 62A, Motor-Driven Auxiliary Feedwater System (P-38A & P-38B), Section 5.3.
- All applicable Initial Conditions in Section 4.0 are met.
- Starting duty limitations for P-38A, Motor Driven Auxiliary Feedwater Pump, are met.
- A flow rate of 100 to 200 gpm is desired when raising level.

### JPM PERFORMANCE INFORMATION

**Required Materials:** OI 62A, Motor-Driven Auxiliary Feedwater System (P-38A & P-38B).

**General References:** None.

**Task Standards:** The Examinee establishes a flow rate of 100-200 gpm using Motor Driven AFW Pump P-38A and then secures P-38A when there is no indication of forward flow or recirculation flow due to system failures.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b>	Assign a Level 3 Dedicated Operator in accordance with OM 3.26, Use of Dedicated Operators, to align the applicable AFW control switches per step 5.3.14 if a valid AFW signal occurs for either Unit.
<b>Critical <u>N</u>(SEQ-1)</b>	
<b>Standard:</b>	The Examinee assumes the role of the Level 3 Dedicated Operator or requests Supervision assign another operator as the Level 3 D.O.
<b>Evaluator Cue:</b>	Indicate that the EXAMINEE should assume the role of the Level 3 Dedicated Operator.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	<div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div>

<b>Performance Step: 2 Critical <u>N</u>(SEQ-1)</b>	<u>IF</u> at any time, P-38A AFW Pump Flow is adjusted to less than 50 gpm, <u>THEN</u> the associated AFW Pump must be secured, <u>OR</u> a level 3 dedicated operator must be stationed to continuously monitor recirc flow per Attachment B.
<b>Standard:</b>	Examinee reviews criteria in step for securing P-38A (see Evaluator Note), and proceeds to next step.
<b>Evaluator Note:</b>	<p>A Level 3 Dedicated Operator is NOT required for this evolution. However, if one is requested, inform Examinee that a Level 3 D.O is stationed.</p> <p>This procedural guidance will be utilized later in the JPM when the valve failures result in no AFW forward or recirculation line flow, requiring the pump to be stopped.</p>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

<b>Performance Step: 3 Critical <u>N</u>(SEQ-1)</b>	<u>IF</u> the RCS is greater than 200°F, <u>THEN</u> document feedwater addition on PBF-2027, Feedwater Addition Log.
<b>Standard:</b>	The Examinee determines this step is N/A due to present plant conditions.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

**Performance Step: 4**  
**Critical Y(SEQ-1)**

OPEN AF-4023, P-38A AFP Discharge to 1HX-1A Steam Generator.

**Standard:**

The Examinee places the control switch for AF-4023 to the Open position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 5**  
**Critical N(SEQ-1)**

Verify AF-4022, P-38A AFP Discharge to 2HX-1A Steam Generator, is shut.

**Standard:**

The Examinee verifies AF-4022 is shut by observing its green light on, red light off.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 6**  
**Critical N(SEQ-1)**

Place PC-4012, P-38A AFP Discharge Control valve controller in MANUAL and SHUT.

**Standard:**

- The Examinee places the control switch for controller PC-4012 to the Manual position,  
and
- Then to the Close position until the output indication shows the valve closed.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 7** Station an operator locally to monitor the recirc flow during startup operation.  
**Critical N(SEQ-1)**

**Standard:** The Examinee contacts an Auxiliary Operator and requests that recirc flow be monitored during startup of P-38A.

**Evaluator Cue:** The local operator (Level 3 D.O if previously requested) reports that he is in position to continuously monitor P-38A recirc flow.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 8** Start P-38A, Motor-Driven Aux Feed Pump. (C01).  
**Critical Y(SEQ-2)**

**Standard:** The Examinee places the control switch for P-38A to the Start position.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 9** IMMEDIATELY CHECK the following:  
**Critical N(SEQ-3)**

- AF-4007, P-38A AFP Mini Recirc Control valve OPENS.

**Standard:** The Examinee checks the C01 control board indication for AF-4007 and determines the valve is open (red light on, green light off).

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

<b>Performance Step: 10</b> <b>Critical <u>N</u>(SEQ-3)</b>	<p>IMMEDIATELY CHECK the following:</p> <ul style="list-style-type: none"> <li>Recirc flow greater than 50 gpm.</li> </ul>
<b>Standard:</b>	The Examinee contacts the local operator to check that the P-38A AFP recirc flow is greater than 50 gpm.
<b>Evaluator Cue:</b>	The local operator reports that P-38A recirc flow is 65 gpm.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

<b>Performance Step: 11</b> <b>Critical <u>Y</u>(SEQ-4)</b>	<p>Adjust PC-4012, P-38A AFP Discharge Control valve controller in MANUAL for the proper flow rate.</p>
<b>Standard:</b>	The Examinee places the control switch for PC-4012 to the Open position to establish a flow rate of 100-200 gpm as specified in the Initiating Cue. (flow rate indicated on FI-4007).
<b>Evaluator Note:</b>	The simulator booth operator will monitor the evolution. Upon the closure of AFW Recirc Valve AF-4007, the local operator will report that AF-4007 recirc valve is shut and recirc flow is zero. After the report, the malfunctions for AF-4007 and Pressure Controller PC-4012 will be inserted.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>



<b>Performance Step: 12</b> <b>Critical <u>Y</u>(SEQ-5)</b>	Monitor P-38A, Motor Driven Aux Feed Pump for proper operation: <ul style="list-style-type: none"> <li>FI-4007, P-38A AFP Discharge Flow Indicator.</li> <li>PI-4012, P-38A AFP Discharge Pressure Indicator.</li> <li>Bearing Temperatures on 1TR-2000B. <b>(see Cue)</b></li> <li>Point 25, P-38A Inboard Pump Bearing.</li> <li>Point 26, P-38A Outboard Pump Bearing.</li> </ul>
<b>Standard:</b>	<ul style="list-style-type: none"> <li>The Examinee recognizes that both PC-4012 and AF-4007 have failed closed and</li> <li>Places the control switch for P-38A to the Stop position <b><u>PRIOR</u></b> to the pump tripping.</li> </ul>
<b>Evaluator Note:</b>	Engineering evaluation has determined that unrecoverable pump failure will occur 30 seconds after flow decreases below 6 gpm. This failure is modeled on the simulator as a pump trip and inability to re-start.
<b>Evaluator Cue:</b>	Inform Examinee that another operator will monitor bearing temperatures on 1TR-2000B (recorder is on a backpanel).  If the local operator at P-38A is contacted, indicate that Recirc flow is zero and Recirc valve AF-4007 is shut.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____  _____

<b>Performance Step: 13</b> <b>Critical <u>N</u>(SEQ-6)</b>	Inform the DOS of present plant conditions.
<b>Standard:</b>	The Examinee informs the DOS that: <ul style="list-style-type: none"> <li>P-38A AFP discharge pressure controller, PC-4012 failed shut, and</li> <li>P-38A mini recirc valve, AF-4007 failed to open, and</li> <li>Motor-Driven Auxiliary Feedwater Pump, P-38A, was secured.</li> </ul>
<b>Evaluator Cue:</b>	The DOS acknowledges your report.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:**     The JPM is complete.

**Stop Time:**        \_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Initial Setup:

- Load an IC where conditions support Unit 1 in cold shutdown (IC 18).
- Ensure Steam Generator 'A' level is approximately 80% NR.
- Load the preloads.
- Start the simulation.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

SIMULATOR INFORMATION:

Initiation Cue	Action or Component Description	Action Tagname	Malfunction Value	Ramp Time	Delay Time	Trigger		Verification Performed	
						Event Criteria	Oper. Init. #	Ready	Inserted
PLE	0-PIC4012 P38A DISCH PRESS CONTROLLER FIXED	CNH1AFW001 B	100 (Ensure start value is 91%)	00:01:00 1 minute			1		
PLE	0-AF-4007 AUX FWP 38A RECIRC VALVE (CLOSE)	VLV1AFW010	2				1		

## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the Balance Of Plant Operator.
- Unit 1 is in Mode 5, Cold Shutdown.
- Chemistry requests that Steam Generator 'A' level be raised to support placing the S/G in wet lay-up

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to raise Unit 1 'A' Steam Generator level to 90-95% NR in accordance with OI 62A, Motor-Driven Auxiliary Feedwater System (P-38A & P-38B), Section 5.3.
- All applicable Initial Conditions in Section 4.0 are met.
- Starting duty limitations for P-38A, Motor Driven Auxiliary Feedwater Pump, are met.
- A flow rate of 100 to 200 gpm is desired when raising level.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
40. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

\_\_\_\_\_  
Validation Personnel/Date

\_\_\_\_\_  
Validation Personnel /Date


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Validation Personnel /Date

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Validation Personnel/Date

	JOB PERFORMANCE MEASURE (JPM)
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**SITE:** PBNP  
**TASK TITLE:** MANUALLY MAKEUP TO THE VCT/RWST  
**JPM NUMBER:** P004.027B.COT REV. 0  
**RELATED PRA INFORMATION:** None  
**TASK NUMBERS:** P004.027.COT  
**K/A NUMBERS:** 026.A4.01 (4.5/4.3)

**APPLICABLE METHOD OF TESTING:**

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

**EVALUATION LOCATION:** In-Plant: ☐ Control Room: ☐  
 Simulator: ☒ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date

JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee:

Evaluator:

Job Title:

Date:

Start Time

Finish Time

PERFORMANCE RESULTS:

SAT:

UNSAT:

Delete this table if not required

☒ Procedure adequately addresses task elements.  
Enter Identifier here: EOP-1.1 Unit 1, SI Termination, Rev. 30

☐ Other document adequately describes necessary task elements.  
Enter Identifier here:

☐ Task elements described as attached.

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR’S SIGNATURE:

NOTE: Only this page needs to be retained in examinee’s record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- A Unit 1 steam line break occurred inside containment resulting in a Reactor Trip and initiation of Safety Injection and Containment Spray.
- Actions of EOP-0, EOP-2, and EOP-1 have been successfully performed.
- One train of Containment Spray was previously stopped in EOP-0, Attachment A.
- The procedure currently in effect is EOP-1.1 Unit 1, SI Termination, and step 10 has just been reached.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to secure Containment Spray in accordance with EOP-1.1 Unit 1, SI Termination, Step 10.



## JPM PERFORMANCE INFORMATION

**Required Materials:** EOP-1.1 Unit 1, SI Termination.

**General References:** None.

**Task Standards:** The Examinee secures Containment Spray and realigns the system for standby operation.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b>	Check containment spray pumps – ANY RUNNING
<b>Critical <u>N</u>(SEQ-1)</b>	<ul style="list-style-type: none"> <li>1P-14A, train A</li> <li>1P-14B, train B</li> </ul>
<b>Standard:</b>	The Examinee determines that Containment Spray Pump 1P-14B is running and 1P-14A is stopped.
<b>Evaluator Note:</b>	Containment Spray Pump 1P-14A was previously placed in pullout (with suction valve shut) in EOP-0 Attachment A.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 20px; margin-bottom: 5px;"></div>

**Performance Step: 2**  
**Critical N(SEQ-1)**

Check containment pressure – LESS THAN 15 PSIG.

**Standard:**

The Examinee determines that containment pressure is less than 15 psig via indications on panels C01 and/or 1C20 (multiple indications available).

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 3**  
**Critical Y(SEQ-1)**

Reset Containment Spray signal.

**Standard:**

The Examinee depresses both Unit 1 Containment Spray reset pushbuttons on C01R.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 4**  
**Critical Y(SEQ-2)**

Stop both Containment Spray Pumps and place in auto-after stop

- 1P-14A, train A
- 1P-14B, train B

**Standard:**

The Examinee:

- places the control switch for Containment Spray Pump 1P-14B to the stop position, allowing switch to spring return to auto-after-stop position.
- pushes in the control switch for Containment Spray Pump 1P-14A, allowing the switch to spring return to auto-after-stop position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 5**  
**Critical Y(SEQ-3)**

Shut containment spray pump discharge valves:

- 1SI-860A for 1P-14A
- 1SI-860B for 1P-14A
- 1SI-860C for 1P-14B
- 1SI-860D for 1P-14B

**Standard:**

The Examinee places the control switches to the Close position (spring return to Auto) for Containment Spray Pump Discharge Valves 1SI-860A, B, C, and D.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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<b>Performance Step: 6</b> <b>Critical <u>N</u>(SEQ-3)</b>	Ensure both Spray Additive Tank Discharge Valves - SHUT <ul style="list-style-type: none"> <li>• 1SI-836A, train A</li> <li>• 1SI-836B, train B</li> </ul>
<b>Standard:</b>	The Examinee ensures both 1SI-836A and 1SI-836B are shut by checking the Output indicators on 1YIC-926A and 1YIC-926B. (Status light indication for both valves is also available on Unit 1 SI-Spray Active status panel.)
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

<b>Performance Step: 7</b> <b>Critical <u>Y</u>(SEQ-3)</b>	Ensure Containment Spray Pump RWST Suction MOVs - OPEN <ul style="list-style-type: none"> <li>• 1SI-870A for 1P-14A</li> <li>• 1SI-870B for 1P-14B</li> </ul>
<b>Standard:</b>	The Examinee places the control switch for 1SI-870A to the OPEN position, spring return to Auto. Also, determines 1SI-870B is open by observing red light on, green light off. (Note: verification of 1SI-870B is not critical).
<b>Evaluator Note:</b>	1SI-870A was previously closed during EOP-0 Attachment A.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

**Performance Step: 8**  
**Critical N(SEQ-4)**

Inform the DOS of plant status.

**Standard:**

Examinee informs DOS that step 10 of EOP-1.1 has been completed and the Containment Spray System has been returned to a normal line-up.

**Evaluator Cue:**

The DOS acknowledges your report.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

\_\_\_\_\_

**Terminating Cues:**

The JPM is complete.

**Stop Time:**

\_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Simulator Setup Instructions:

- 
- Initial Setup:
  - Load an IC where conditions support Unit 1 at 100 steady-state conditions
  - Load the preload.
  - Start the simulation.
  - Implement the actions of EOP-0, EOP-2, EOP-1 Unit 1 (first 13 steps) and EOP-1.1 up to and including step 9; then freeze the simulator.
  - Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
  - Make any necessary adjustments or corrections.
  - Update documentation if required.
  - Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

SIMULATOR INFORMATION:

Initiation Cue	Action or Component Description	Action Tagname	Malf. Value	Ramp Time	Delay Time	Trigger		Verification Performed	
						Event Criteria	Oper. Init. #	Ready	Inserted
Preload	SG A MAIN STEAM LINE BREAK INSIDE CNMT	MAL1SGN003 A	5E6		15				

## TURNOVER SHEET

### INITIAL CONDITIONS:

- A Unit 1 steam line break occurred inside containment resulting in a Reactor Trip and initiation of Safety Injection and Containment Spray.
- Actions of EOP-0, EOP-2, and EOP-1 have been successfully performed.
- One train of Containment Spray was previously stopped in EOP-0, Attachment A.
- The procedure currently in effect is EOP-1.1 Unit 1, SI Termination, and step 10 has just been reached.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to secure Containment Spray in accordance with EOP-1.1 Unit 1, SI Termination, Step 10.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
53. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

\_\_\_\_\_  
Validation Personnel/Date

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Validation Personnel /Date

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Validation Personnel /Date

\_\_\_\_\_  
Validation Personnel/Date





## JOB PERFORMANCE MEASURE (JPM)

SITE: **PBNP**

TASK TITLE: MANUALLY MAKEUP TO THE VCT/RWST

JPM NUMBER: P004.027B.COT REV. 0

RELATED PRA INFORMATION: **None**

TASK NUMBERS: P004.027.COT

K/A NUMBERS: 194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001 A1.04 (3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12 (3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01 (3.8/3.9) /

## APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐  
 Simulator: ☒ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

TASK APPLICABILITY: SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date



**JPM Number:** P004.027b.COT

**JPM Title:** MANUALLY MAKEUP TO THE VCT/RWST

**Examinee:** \_\_\_\_\_

**Evaluator:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Start Time** \_\_\_\_\_

**Finish Time** \_\_\_\_\_

**PERFORMANCE RESULTS:**

**SAT:**

**UNSAT:**

*Delete this table if not required*

  X   Procedure adequately addresses task elements.

Enter Identifier here: OP 4B, Reactor Coolant Pump Operation, Rev. 44

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

\_\_\_\_\_ Task elements described as attached.

**COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).**


**EVALUATOR'S SIGNATURE:** \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the Operator at the Controls for Unit 1.
- Unit 1 is in Mode 3, Hot Standby.
- Reactor Coolant Pump, 1P-1A has been secured for breaker inspection.
- The inspection has since been completed and permission has been granted to restart 1P-1A.
- OP 4B, Reactor Coolant Pump Operations, has been completed up to step 5.0.
- Charging and letdown flow have been balanced.
- No CVCS demineralizers are currently in service.
- All appropriate precautions, limitations, and prerequisites have been met.
- The BOP operator is available to respond to any alarms unrelated to the task.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to start 1P-1A per OP 4B, Reactor Coolant Pump Operations, Section 5.1.

### JPM PERFORMANCE INFORMATION

**Required Materials:** OP 4B, Reactor Coolant Pump Operation.

**General References:** None.

**Task Standards:** The Examinee successfully starts Reactor Coolant Pump, 1P-1A.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

**Performance Step: 1** Check that starting duty limits will not be exceeded.  
**Critical N(SEQ-1)**

**Standard:** The Examinee checks that the starting duty limits of P&L 3.6 will not be exceeded.

**Evaluator Cue:** If asked, 1P-1A was last run 72 hours ago.

**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 2**  
**Critical Y(SEQ-1)**

Start RCP Oil Lift Pump for RCP to be started.

**Standard:**

The Examinee places the control switch for the 1P-1A RCP Oil Lift Pump, 1P-74A to the Start position (spring return to Auto).

**Evaluator Note:**

**Evaluator should make note of the time the lift oil pump was started to ensure a minimum of two minutes elapses before pump start.**

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 3**  
**Critical N(SEQ-1)**

Check that amber P-1A/B RCP Lift Pressure light illuminates.

**Standard:**

The Examinee checks that the amber P-1A/B Lift Pressure light is illuminated.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 4**  
**Critical N(SEQ-1)**

Check No. 1 seal leakoff flow within the normal operating range of Figure 1.

**Standard:**

The Examinee checks that the No. 1 seal leakoff flow and determines that it is within the normal operating range of Figure 1.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 5**      IF RCP seal injection flow and charging/letdown flow have NOT been balanced,  
**Critical N(SEQ-1)**      THEN balance seal injection and charging/letdown flow.

**Standard:**      The Examinee marks step 5.1.5 N/A and proceeds to step 5.1.6.

**Evaluator Cue:**      If necessary, inform Examinee that seal injection and charging/letdown were  
balanced in the Initial Conditions.

**Performance:**      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**      \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 6**      Adjust Charging Pump(s) speed and letdown as necessary to maintain letdown  
**Critical N(SEQ-1)**      flow at 35 to 40 gpm.

**Standard:**      The Examinee adjusts charging pump(s) speed and letdown as necessary to  
maintain letdown flow at 35 to 40 gpm.

**Performance:**      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**      \_\_\_\_\_  
\_\_\_\_\_

<b>Performance Step: 7</b>	<u>IF</u> necessary to preclude excessive flow through demineralizers, <u>THEN</u> bypass
<b>Critical <u>N</u>(SEQ-1)</b>	affected demineralizers.
<b>Standard:</b>	Examinee marks step 5.1.7 N/A and proceeds to Step 5.1.8.
<b>Evaluator Cue:</b>	If necessary, inform Examinee that no demineralizers are in service as part of the Initial Conditions.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____
	_____

<b>Performance Step: 8</b>	<u>AFTER</u> RCP Oil Lift Pump has run a minimum of two minutes, <u>THEN</u> start RCP
<b>Critical <u>Y</u>(SEQ-2)</b>	AND record time. Time: _____
<b>Standard:</b>	After verifying the RCP Lift Oil Pump has been running for at least two minutes: <ul style="list-style-type: none"> <li>• The Examinee places the control switch for Reactor Coolant Pump, 1P-1A to the Start position (spring return to center) and</li> <li>• Records the time.</li> </ul>
<b>Evaluator Note:</b>	<b>Waiting the two minutes and recording the start time are NOT critical.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____
	_____



**Performance Step: 9**  
**Critical N(SEQ-3)**

Check the following:

- RCP running current normal
  - Less than 820 amps with RCS cold
  - Less than 620 amps for normal RCS operating temperature
  - Nominally less than 760 amps for anticipated plant conditions
- Labyrinth seal delta-pressure greater than 15 inches
- No. 1 seal delta-pressure greater than 200 psid
- Seal water inlet/Bearing temp less than 150°F
- Seal water outlet temp less than 170°F
- RCP motor bearing temps (upper and lower) less than 90°C
- VCT pressure greater than 15 psig
- RCS pressure has stabilized
- CC Return temps (TI-612/608) less than 120°F
- Digital Metal Impact Monitoring System (DMIMS) – no alarms

**Standard:**

The Examinee checks RCP conditions and determines they are within the normal limits indicated above.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 10**  
**Critical N(SEQ-3)**

AFTER RCP has run at speed a minimum of one minute, THEN stop RCP Oil Lift Pump.

**Standard:**

The Examinee places the control switch for the 1P-1A RCP Oil Lit Pump, 1P-74A to the Stop position (spring return to Auto) after 1P-1A has run for a minimum of one minute.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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<b>Performance Step: 11</b> <b>Critical <u>N</u>(SEQ-3)</b>	Check that RCP 1A/B (2A/B) Loss of Power bistable is OFF (Reactor Protection/Safeguards status panel).
<b>Standard:</b>	The Examinee checks that the RCP 1A/B (2A/B) Loss of Power bistable is off on the Reactor Protection/Safeguards status panel.
<b>Evaluator Note:</b>	The last two steps of the procedure section (adjust RCS pressure and restore demins) are not applicable due to given plant conditions.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 12</b> <b>Critical <u>N</u>(SEQ-3)</b>	Inform DOS of plant status.
<b>Standard:</b>	DOS is informed that Reactor Coolant Pump 1P-1A has been started and is operating normally.
<b>Evaluator Cue:</b>	The DOS acknowledges your report.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** The JPM is complete.

**Stop Time:** \_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Simulator Setup Instructions:

- 

Initial Setup:

- Load an IC where conditions support HOT STANDBY on Unit 1
- Start the simulation.
- Manually trip the Unit 1 reactor by depressing both reactor trip breakers on either 1C04 or C01.
- Place the control switch for Reactor Coolant Pump, 1P-1A to the Stop position.
- Freeze the simulator.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the Operator at the Controls for Unit 1.
- Unit 1 is in Mode 3, Hot Standby.
- Reactor Coolant Pump, 1P-1A has been secured for breaker inspection.
- The inspection has since been completed and permission has been granted to restart 1P-1A.
- OP 4B, Reactor Coolant Pump Operations, has been completed up to step 5.0.
- Charging and letdown flow have been balanced.
- No CVCS demineralizers are currently in service.
- All appropriate precautions, limitations, and prerequisites have been met.
- The BOP operator is available to respond to any alarms unrelated to the task.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to start 1P-1A per OP 4B, Reactor Coolant Pump Operations, Section 5.1.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
66. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
71. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
72. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
75. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
76. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
77. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

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Validation Personnel/Date

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Validation Personnel /Date

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Validation Personnel/Date

	JOB PERFORMANCE MEASURE (JPM)
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SITE: PBNP

TASK TITLE: MANUALLY MAKEUP TO THE VCT/RWST

JPM NUMBER: P004.027b.COT REV. 0

RELATED PRA INFORMATION: None

TASK NUMBERS: P004.027.COT

K/A NUMBERS: 064.A4.06 (3.9/3.9) 194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001 A1.04 (3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12 (3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01 (3.8/3.9) /

## APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐  
 Simulator: ☒ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: YES

TASK APPLICABILITY: SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date

Retention: Life of policy + 10yrs.  
 Retain in: Training Program File

Disposition: Reviewer and Approver



JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

Start Time \_\_\_\_\_ Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

*Delete this table if not required*

X  Procedure adequately addresses task elements.

Enter Identifier here: AOP 19A Unit 1, Train "A" Safeguards Bus  
Restoration, Rev. 7

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

\_\_\_\_\_ Task elements described as attached.

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*



JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the third license.
- Unit 1 is in Mode 3, Hot Standby.
- 4160 Volt AC Bus 1A-05 has lost power.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to restore power to 4160 Volt Bus 1A-05 in accordance with AOP 19A Unit 1, Train "A" Safeguards Bus Restoration, beginning at Step 6.

### JPM PERFORMANCE INFORMATION

**Required Materials:** AOP 19A Unit 1, Train “A” Safeguards Bus Restoration.

**General References:** None

**Task Standards:** The Examinee restores power to safeguards bus 1A-05 in accordance with AOP 19A Unit 1, Train “A” Safeguards Bus Restoration.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b> <b>Critical <u>N</u>(SEQ-1)</b>	Check annunciator UNIT 1 4.16 kV BUS LOCKOUT – CLEAR • C02 D 3-4
<b>Standard:</b>	The Examinee checks annunciator Unit 1 4.16 kV BUS LOCKOUT (C02 D 3-4) and determines it is clear (not lit).
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Performance Step: 2**  
**Critical N(SEQ-1)**

Check G-01 to bus 1A-05 breaker in AUTO

- 1A52-60

**Standard:**

The Examinee checks breaker 1A62-60 and determines it is in the Auto position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 3**  
**Critical N(SEQ-1)**

Check G-01 - RUNNING

**Standard:**

The Examinee checks G-01 and determines it is **NOT** running, transitions to RNO column. Indications of Diesel **NOT** running are listed below:

- The amber G-01 Diesel Generator Started light is **NOT** lit.
- The Green G-01 Diesel Generator Ready For Load Light is **NOT** lit.
- Diesel Generator G01 Voltmeter indicates zero.
- Diesel Generator Frequency Meter indicates zero.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 4**  
**Critical N(SEQ-1)**

Ensure G-01 diesel mode selector switch is in Auto.

**Standard:**

The Examinee checks G-01 Diesel Mode Selector Switch and determines it is in Auto.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 5**  
**Critical Y(SEQ-1)**

Turn G-01 Diesel Generator Control Switch to START.

**Standard:**

The Examinee turns the G-01 Diesel Generator Control Switch to START, observes G-01 start. Available indications of G-01 starting are:

- The amber G-01 Diesel Generator Started light is lit.
- The Green G-01 Diesel Generator Ready For Load Light is lit.
- Diesel Generator G01 Voltmeter indicates approximately 4160 volts.
- Diesel Generator Frequency Meter indicates 60 Hz.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 6**  
**Critical N(SEQ-1)**

**Ensure 1A-03 to 1A-05 bus tie breaker – OPEN**  
• **1A52-57**

**Standard:**

The Examinee checks the 1A-03 to 1A-05 bus tie breaker, 1A52-57, and determines it is open (green light is lit).

**Evaluator Note:**

**The white trip light is also lit. Examinee may place switch in the open position in order to clear white light.**

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 7**  
**Critical N(SEQ-1)**

Check G-01 to bus 1A-05 breaker – CLOSED

- 1A52-60

**Standard:**

The Examinee checks breaker 1A52-60 and determines it is **NOT** closed (green light is lit), transitions to RNO column.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 8**  
**Critical N(SEQ-1)**

Try to auto-close breaker 1A52-60 by placing control switch to trip position and then release.

**Standard:**

Examinee places the control switch for breaker 1A52-60 to the trip position and releases, and determines that 1A52-60 did not auto-close.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 9**  
**Critical Y(SEQ-2)**

IF breaker will NOT auto-close, THEN perform the following:

- a. Place G-01 mode selector switch to EXERCISE.
- b. Turn on synch switch for G-01 to bus 1A-05 breaker.
- c. Manually close G-01 to bus 1A-05 breaker 1A52-60

**Standard:**

The Examinee:

- Places the G-01 mode selector switch to the EXERCISE position,
- Inserts the synchronizing switch handle into the G-01 diesel generator to bus 1A-05 synchroscope switch,
- Places the control switch for the G-01 diesel generator to bus 1A-05 synchroscope to the On position, and
- Places the control switch for the G-01 diesel generator to bus 1A-05 breaker, 1A62-60 to the Close position.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 10**  
**Critical N(SEQ-3)**

Check Bus 1A-05 Energized.

**Standard:**

The Examinee checks bus 1A-05 voltmeter and determines the bus is energized.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 11**  
**Critical N(SEQ-4)**

The DOS is informed of plant status.

**Standard:**

Examinee informs DOS that G-01 EDG was manually started and manually synchronized to Bus 1A-05 per AOP-19A.

**Evaluator Cue:**

The DOS acknowledges your report.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

\_\_\_\_\_

**Terminating Cues:**

The JPM is complete.

**Stop Time:**

\_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Initial Setup:

- Load an IC where conditions support Unit 1 at 100% steady-state conditions.
- Load the preloads.
- Start the simulation.
- Stabilize the plant and then freeze the simulator.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

SIMULATOR INFORMATION:

Initiation Cue	Action or Component Description	Action Tagname	Malf. Value	Ramp Time	Delay Time	Trigger		Verification Performed	
						Event Criteria	Oper. Init. #	Ready	Inserted
Preload	EDG G01(G02 FAILURE TO AUTO START	MAL1DSG007A	-	-	-	-	-		
Preload	1-A5260 DIESEL GEN NO. GO1 TO BUS 1-A05 (FAIL AUTO CLOSE)	BKR1DSG001	4	-	-	-	-		
Preload	1-A5257 4160V BUS TIE 1-A03 TO 1-A05 (TRIP0	BKR1EPS012	1	-	15	-	-		



## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the third license.
- Unit 1 is in Mode 3, Hot Standby.
- 4160 Volt AC Bus 1A-05 has lost power.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to restore power to 4160 Volt Bus 1A-05 in accordance with AOP 19A Unit 1, Train "A" Safeguards Bus Restoration, beginning at Step 6.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
79. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
81. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
87. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
88. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
89. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

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Validation Personnel /Date

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Validation Personnel/Date

	JOB PERFORMANCE MEASURE (JPM)
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SITE: PBNP

TASK TITLE: MANUALLY MAKEUP TO THE VCT/RWST

JPM NUMBER: P004.027B.COT REV. 0

RELATED PRA INFORMATION: None

TASK NUMBERS: P004.027.COT

K/A NUMBERS: 015.A4.03 (3.8/3.9) 194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001 A1.04 (3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12 (3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01 (3.8/3.9) /

## APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐  
 Simulator: ☒ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

TASK APPLICABILITY: SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date

Retention: Life of policy + 10yrs.  
 Retain in: Training Program File

Disposition: Reviewer and Approver



JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

*Delete this table if not required*

X Procedure adequately addresses task elements.

Enter Identifier here: \_\_\_\_\_

**0-SOP-IC-001, Routine Maintenance Procedure  
Removal of Safeguards or Protection Sensor From  
Service, Rev. 4**

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

\_\_\_\_\_ Task elements described as attached.

**COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).**


EVALUATOR'S SIGNATURE: \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the fourth license.
- Unit 1 is operating at 100% steady-state conditions.
- Power Range Nuclear Instrument, N-41, has been out of service for the last eight hours to support troubleshooting and repair of a suspected summing and level amp failure.
- I&C has completed repairs, re-installed the Instrument Power fuses, and requested Operations to return Power Range Nuclear Instrument, N-41, back to service.
- Steps 5.2.1, 5.2.2 and 5.2.3 of 0-SOP-IC-001, Routine Maintenance Procedure Removal of Safeguards or Protection Sensor From Service, have been completed.
- Step 5.2.4 of 0-SOP-IC-001 has just been reached.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to complete Attachment A of 0-SOP-IC-001 for returning Power Range Nuclear Instrument, N-41, to service. Previously completed paperwork that removed the channel from service is provided.

### JPM PERFORMANCE INFORMATION

**Required Materials:** 0-SOP-IC-001, Routine Maintenance Procedure Removal of Safeguards or Protection Sensor From Service.

**General References:** None.

**Task Standards:** The Examinee returns Power Range Nuclear Instrument, N-41 to an operable status.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b> <b>Critical <u>N</u>(SEQ-1)</b>	Verify instrument power fuses are installed.
<b>Standard:</b>	The Examinee visually observes that the Instrument Power fuses are installed for N-41.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Performance Step: 2**  
**Critical Y(SEQ-1)**

**In the RED protection channel, place the following bistable trip switches in “NORMAL”: (C-111)**

- Overtemperature Trip
- Overtemperature Rod Stop

**Standard:**

The Examinee places the bistable trip switches for Overtemperature Trip and Overtemperature Rod Stop to the NORMAL position in C-111.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 3**  
**Critical N(SEQ-1)**

Perform Section 3.0 of Attachment B. IF Section 2.0 was NOT completed, THEN NA steps NOT required in Section 3.0 on Attachment B. Remove all operator aids placed per Attachment B Section 1.0 or 2.0.

**Standard:**

- The Examinee determines from previously completed paperwork that only the Operator Aid on 1C03 needs to be removed per step 3.5 of Attachment B. All other steps are N/A.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 4**  
**Critical Y(SEQ-1)**

**Place the power mismatch bypass, rod stop bypass, and comparator channel defeat switches in “NORMAL”. (1C-130)**

**Standard:**

The Examinee places the following switches in the NORMAL (Operate) position on panel C-130:

- power mismatch (Operate position)
- rod-stop bypass (Operate position)
- comparator channel defeat (Normal position)

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Performance Step: 5**  
**Critical Y(SEQ-1)**

**Ensure the dropped rod alarm indicator is NOT illuminated and return the dropped mode switch to “NORMAL”. (1C-133)**

**Standard:**

- The Examinee ensures the dropped rod alarm indicator is not lit and
- Places the dropped rod mode switch to the NORMAL position (1C-133).

**Evaluator Note:**

Only the switch manipulation is critical.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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<b>Performance Step: 6</b> <b>Critical <u>N</u>(SEQ-6)</b>	<b>Place the rod control selector switch in “AUTO”, unless directed otherwise by the DSS.</b>
<b>Standard:</b>	The Examinee places the Rod Control Selector Switch to the AUTO position.
<b>Evaluator Cue:</b>	Inform Examinee that the DSS directs that rod control be returned to AUTO. After the Rod Control Selector Switch is in AUTO, inform the Examinee that another CO will return the PPCS point to service. The JPM may be terminated.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

**Terminating Cues:** The JPM may be terminated when the Rod Control Selector Switch is returned to AUTO.

**Stop Time:** \_\_\_\_\_

SIMULATOR SET UP: (Modify table as necessary)

Initial Setup:

- Load an IC where conditions support Unit 1 at 100% steady-state conditions
- Start the simulation.
- Remove power range nuclear instrument, N-41 from service in accordance with 0-SOP-IC-001, Routine Maintenance Procedure Removal of Safeguards or Protection Sensor From Service with the exception of removing the instrument power fuses.
- Place appropriate Operator Aid on C-03.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Place appropriate Operator Aid on C-03.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the fourth license.
- Unit 1 is operating at 100% steady-state conditions.
- Power Range Nuclear Instrument, N-41, has been out of service for the last eight hours to support troubleshooting and repair of a suspected summing and level amp failure.
- I&C has completed repairs, re-installed the Instrument Power fuses, and requested Operations to return Power Range Nuclear Instrument, N-41, back to service.
- Steps 5.2.1, 5.2.2 and 5.2.3 of 0-SOP-IC-001, Routine Maintenance Procedure Removal of Safeguards or Protection Sensor From Service, have been completed.
- Step 5.2.4 of 0-SOP-IC-001 has just been reached.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to complete Attachment A of 0-SOP-IC-001 for returning Power Range Nuclear Instrument, N-41, to service. Previously completed paperwork that removed the channel from service is provided.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
92. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
97. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
104. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

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Validation Personnel /Date

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Validation Personnel/Date

	JOB PERFORMANCE MEASURE (JPM)
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SITE: PBNP

TASK TITLE: MANUALLY MAKEUP TO THE VCT/RWST

JPM NUMBER: P004.027b.COT REV. 0

RELATED PRA INFORMATION: None

TASK NUMBERS: P004.027.COT

K/A NUMBERS: 062.K4.07 (2.7/3.1)194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001 A1.04 (3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12 (3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01 (3.8/3.9) /

## APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☒ Perform: ☐

EVALUATION LOCATION: In-Plant: ☒ Control Room: ☐  
 Simulator: ☐ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

TASK APPLICABILITY: SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date

Retention: Life of policy + 10yrs.  
 Retain in: Training Program File

Disposition: Reviewer and Approver



JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

Start Time \_\_\_\_\_ Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

*Delete this table if not required*

X Procedure adequately addresses task elements.

Enter Identifier here: OI 112, Aligning Equipment To Appendix R Power Supply, Rev. 2

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

\_\_\_\_\_ Task elements described as attached.

**COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).**


EVALUATOR'S SIGNATURE: \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*



JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are an extra Auxiliary Operator.
- Unit 1 is in cold shutdown.
- Unit 2 is at 100% steady-state conditions.
- A number of equipment malfunctions necessitates aligning and starting the Residual Heat Removal Pump, 1P-10A, from its Appendix R power supply.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to align and start 1P-10A from its Appendix R power supply in accordance with OI 112, Aligning Equipment To Appendix R Power Supply, Section 5.1.

## JPM PERFORMANCE INFORMATION

**Required Materials:** OI 112, Aligning Equipment To Appendix R Power Supply.

**General References:** None.

**Task Standards:** The Examinee aligns and starts 1P-10A in accordance with OI 112.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b>	Verify 1P-10A control switch is in pullout on 1C03.
<b>Critical <u>N</u>(SEQ-1)</b>	
<b>Standard:</b>	The Examinee verifies that the control switch for the Residual Heat Removal Pump, 1P-10A is in pullout on 1C-03 by either: <ul style="list-style-type: none"> <li>Going to the Control Room and verifying or</li> <li>Contacting the Unit 1 Control Operator.</li> </ul>
<b>Evaluator Cue:</b>	After going to the Control Room or contacting the Unit 1 CO, inform the Examinee that the control switch for 1P-10A is in the pullout position.
<b>Performance:</b>	<b>SATISFACTORY</b> _____ <b>UNSATISFACTORY</b> _____
<b>Comments:</b>	_____ _____

<b>Performance Step: 2</b> <b>Critical <u>N</u>(SEQ-1)</b>	Verify the control switch for breaker B52-55B, 1P-10A/B alternate power supply, is in pullout on C-45.
<b>Standard:</b>	The Examinee verifies that the control switch for breaker B52-55B, 1P-10A/B alternate power supply is in pullout on C-45.
<b>Evaluator Cue:</b>	The control switch for 1P-10A/B alternate power supply breaker, B52-55B is in the pullout position.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 3</b> <b>Critical <u>Y</u>(SEQ-1)</b>	Align transfer switch 1B312A-B855B, 1P-10A power supply, to B08. (located in P-5, P-9 area).
<b>Standard:</b>	The Examinee aligns the 1P-10A power supply transfer switch, 1B312A-B855B to the B-08 position.
<b>Evaluator Cue:</b>	<ul style="list-style-type: none"> <li>The 1P-10A power supply transfer switch, 1B312A-B855B is aligned to the B-08 position.</li> <li>The Control Room indicates that the "ALTERNATE SHUTDOWN SYSTEM ENABLED" alarm has been received.</li> </ul>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 4</b> <b>Critical <u>Y</u>(SEQ-2)</b>	Align transfer switch B855B, 1P-10A/B alternate power supply to the 1P-10A position. (located in U-2 façade)
<b>Standard:</b>	The Examinee aligns the 1P-10A/B alternate power supply transfer switch, B855B to the 1P-10A position.
<b>Evaluator Cue:</b>	The 1P-10A/B alternate power supply transfer switch, B855B is in the 1P-10A position.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 5</b> <b>Critical <u>Y</u>(SEQ-3)</b>	At C-045, communicate with Control, and with the U1 Control Operators concurrence, CLOSE breaker B52-55B, 1P-10A/B alternate power supply.
<b>Standard:</b>	<ul style="list-style-type: none"> <li>The Examinee obtains concurrence from the Unit 1 Control Operator prior to closing breaker B52-55B and</li> <li>Places the control switch for the 1P-10A/B alternate power supply breaker, B52-55B to the Close position (spring-return-to-auto).</li> </ul>
<b>Evaluator Cue:</b>	<ul style="list-style-type: none"> <li>When the Unit 1 CO is contacted, inform Examinee that breaker B52-55B may be closed.</li> <li>After correctly manipulating the control switch for B52-55B, inform Examinee that the green light is off and the red light is on for breaker B52-55B. Also, the Unit 1 CO reports that discharge pressure and flow is indicated for 1P-10A RHR Pump.</li> </ul>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Performance Step: 6**  
**Critical N(SEQ-4)**

Inform the DOS of plant status.

**Standard:**

Examinee informs the DOS that 1P-10A RHR Pump has been aligned to its Appendix R power supply and is currently running.

**Evaluator Cue:**

The DOS acknowledges your report. If requested, inform Examinee that the Unit 1 CO will hang the temporary information tag.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

\_\_\_\_\_

**Terminating Cues:** The JPM is complete.

**Stop Time:** \_\_\_\_\_

## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are an extra Auxiliary Operator.
- Unit 1 is in cold shutdown.
- Unit 2 is at 100% steady-state conditions.
- A number of equipment malfunctions necessitates aligning and starting the Residual Heat Removal Pump, 1P-10A, from its Appendix R power supply.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to align and start 1P-10A from its Appendix R power supply in accordance with OI 112, Aligning Equipment To Appendix R Power Supply, Section 5.1.

**ATTACHMENT 1****JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
105. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
106. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
109. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
111. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
112. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
113. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
114. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
115. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
116. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
117. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

\_\_\_\_\_  
Validation Personnel /Date

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Validation Personnel/Date



## JOB PERFORMANCE MEASURE (JPM)

SITE: PBNP

TASK TITLE: MANUALLY MAKEUP TO THE VCT/RWST

JPM NUMBER: P004.027B.COT REV. 0

RELATED PRA  
INFORMATION: None

TASK NUMBERS: P004.027.COT

K/A NUMBERS: 011.A2.02 (3.2/3.2)194 001 A1.01 (3.3/3.4) / 194 001 A1.02 (4.1/3.9) / 194 001  
A1.04 (3.0/3.2) / 194 001 A1.05 (3.6/3.8) / 194 001 A1.10 (2.9/3.9) / 194 001 A1.12  
(3.1/4.1) / 194 001 A1.13 (4.3/4.1) / 194 001 A1.14 (2.5/2.9) / 004 000 A4.01  
(3.8/3.9) /

## APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☒ Control Room: ☐  
Simulator: ☒ Other: ☐  
Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

TASK APPLICABILITY: SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>		
	Instructor	Date
<b>Validated by:</b>		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>		
	Training Supervisor	Date

Retention: Life of policy + 10yrs.  
Retain in: Training Program File

Disposition: Reviewer and Approver





JPM Number: P004.027b.COTJPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

**PERFORMANCE RESULTS:****SAT:** **UNSAT:** *Delete this table if not required*  X   Procedure adequately addresses task elements.Enter Identifier here:   OI 15, Locally Operate A Charging Pump, Rev. 9  

\_\_\_\_\_ Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

\_\_\_\_\_ Task elements described as attached.

**COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).**

**NOTE: This JPM is written to be performed using the available simulator equipment on the 6<sup>th</sup> floor of the North Service Building. It is considered an "In-plant" JPM for exam purposes. Examiner may request that the actual location of equipment in the plant be identified.**

**EVALUATOR'S SIGNATURE:** \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

## JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the PAB Auxiliary Operator.
- Unit 1 is in Mode 3, Hot Standby.
- Letdown has been secured due to a suspected leak on the Letdown Line.
- While attempting to reduce charging to minimum, 1P-2B Charging Pump would not respond from the Control Room.
- 1P-2B is currently the only Charging Pump running and Charging Line flow is approximately 30 gpm.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to take local control of 1P-2B Charging Pump in accordance with OI 15, Charging Pump Local Control Station Operation, and reduce charging to minimum per Section 5.1. The Unit 1 CO will close 1HC-142 as charging is lowered.

**NOTE: This activity shall be performed using available simulator equipment located on the 6<sup>th</sup> floor of the North Service Building.**

**JPM PERFORMANCE INFORMATION**

**Required Materials:** OI 15, Charging Pump Local Control Station Operation.

**General References:** None.

**Task Standards:** The Examinee takes local control of Charging Pump 1P-2B and reduces Charging Flow to minimum.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b> <b>Critical <u>N</u>(SEQ-1)</b>	Match the local load regulator (red pointer) with the remote load regulator (black pointer) by adjusting the manual load regulator or by adjusting pump speed with the C-04 controller.
<b>Standard:</b>	The Examinee matches the local load regulator (red pointer) with the remote load regulator (black pointer) by adjusting the manual load regulator for Charging Pump 1P-2B.
<b>Evaluator Cue:</b>	If Examinee requests that the Control Room manipulate the C-04 controller, inform Examinee that the controller will not respond.

**Performance:**                      **SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Performance Step: 2**  
**Critical Y(SEQ-1)**

Close vent valve (V-1) for the selected pump.

**Standard:**

The Examinee shuts vent valve (V-1) for Charging Pump 1P-2B by rotating the valve knob clockwise until the valve knob/stem is inserted and there is no further knob movement.

**Evaluator Note:**

Actual plant location of valves V-1, V-2, and the local load regulators are located on panel 1RK-24, (1P-2A, B, &amp; C Charging Pumps Instrumentation Rack) located just outside the Unit 1 Charging Pump cubicles.

**Performance:****SATISFACTORY** ☐ **UNSATISFACTORY** ☐**Comments:**

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**Performance Step: 3**  
**Critical Y(SEQ-1)**

Open valve (V-2) to connect manual (local) load regulator.

**Standard:**

The Examinee opens valve (V-2) for Charging Pump 1P-2B by rotating the valve knob counter-clockwise until the valve knob/stem is extended and there is no further knob movement.

**Performance:****SATISFACTORY** ☐ **UNSATISFACTORY** ☐**Comments:**

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<b>Performance Step: 4</b> <b>Critical <u>Y</u>(SEQ-1)</b>	Place the transfer switch to LOCAL to de-energize the (V-3) solenoid and complete the manual load regulator connection.
<b>Standard:</b>	The Examinee places the transfer switch for Charging Pump, 1P-2B to LOCAL.
<b>Evaluator Note:</b>	The actual plant location of the 1P-2A & B transfer switches are located <b><u>inside</u></b> panel 1N-04, between 1P-2A & B Charging Pumps.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 5</b> <b>Critical <u>Y</u>(SEQ-2)</b>	Control charging flow as required using the manual load regulator but maintain RCP Labyrinth Seal DP on scale (local indication in pipe way 1) and throttle charging flow as necessary.
<b>Standard:</b>	The Examinee rotates the knob on the manual load regulator counter-clockwise until there is no further movement, reducing Charging Flow to minimum.
<b>Evaluator Note:</b>	Indication of Charging Line Flow is available locally on panel RK-24.
<b>Evaluator Cue:</b>	Inform Examinee that the Unit 1 CO will close 1HC-142 to maintain RCP Labyrinth Seal DP as Charging Flow is lowered.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Performance Step: 6**  
**Critical N(SEQ-3)**

Inform the DOS of plant status.

**Standard:**

The Examinee informs Control Room personnel that Charging Pump 1P-2B has been transferred to local control and reduced to minimum.

**Evaluator Cue:**

The Control Room acknowledges your report.

**Performance:****SATISFACTORY** ☐ **UNSATISFACTORY** ☐**Comments:**

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**Terminating Cues:** The JPM is complete.**Stop Time:** 

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## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the PAB Auxiliary Operator.
- Unit 1 is in Mode 3, Hot Standby.
- Letdown has been secured due to a suspected leak on the Letdown Line.
- While attempting to reduce charging to minimum, 1P-2B Charging Pump would not respond from the Control Room.
- 1P-2B is currently the only Charging Pump running and Charging Line flow is approximately 30 gpm.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to take local control of 1P-2B Charging Pump in accordance with OI 15, Charging Pump Local Control Station Operation, and reduce charging to minimum. The Unit 1 CO will close 1HC-142 as charging is lowered.
- **NOTE: This activity shall be performed using available simulator equipment located on the 6<sup>th</sup> floor of the North Service Building.**



SIMULATOR SET UP: (Modify table as necessary)

Initial Setup:

- Load an IC where conditions support Unit 1 at 100% steady-state conditions.
- Start the simulation.
- Secure Charging Pumps as necessary to ensure only 1P-2B is running.
- Balance Charging/Letdown and ensure Pressurizer level is at program (46%).
- Freeze the simulator.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Save to an IC for multiple use.

Multiple Use:

- Load the saved IC for this JPM.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
118. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
119. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
121. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
122. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
123. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
124. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
125. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
126. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
127. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
128. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
129. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
130. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

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Validation Personnel /Date

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Validation Personnel /Date

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Validation Personnel/Date

Retention: Life of policy + 10yrs.  
Retain in: Training Program File

Disposition: Reviewer and Approver



## JOB PERFORMANCE MEASURE (JPM)

**SITE:** PBNP

**TASK TITLE:** MANUALLY MAKEUP TO THE VCT/RWST

**JPM NUMBER:** P004.027b.COT **REV.** 0

**RELATED PRA INFORMATION:** None

**TASK NUMBERS:** P004.027.COT

**K/A NUMBERS:** 033.K1.02 (2.5/2.7)

**APPLICABLE METHOD OF TESTING:**

Discussion: ☐ Simulate/walkthrough: ☒ Perform: ☐

**EVALUATION LOCATION:** In-Plant: ☒ Control Room: ☐  
 Simulator: ☐ Other: ☐  
 Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

<b>Developed by:</b>	<b>Michael J. Vana</b>	<b>06/13/2003</b>
	Instructor	Date
<b>Validated by:</b>	Validation Instructor	Date
	(See JPM Validation Checklist, Attachment 1)	
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: P004.027b.COT

JPM Title: MANUALLY MAKEUP TO THE VCT/RWST

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

**PERFORMANCE RESULTS:**

**SAT:**

**UNSAT:**

*Delete this table if not required*

  X   Procedure adequately addresses task elements.

Enter Identifier here: SEP-1 Unit 2, Degraded RHR System Capability,  
Rev. 3

       Other document adequately describes necessary task elements.

Enter Identifier here: \_\_\_\_\_

       Task elements described as attached.

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EVALUATOR'S SIGNATURE:** \_\_\_\_\_

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

JPM BRIEFING/TURNOVER

**THIS SECTION IS READ ONCE FOR THE ENTIRE PACKAGE OF JPMS. IT IS NOT REQUIRED TO REVIEW THIS SECTION FOR EVERY JPM BEING PERFORMED IN THE PACKAGE. THE INITIAL CONDITIONS AND INITIATING CUE(S)/TASKS TO BE PERFORMED SHOULD BE READ AND THEN PROVIDED TO THE EXAMINEE.**

After I read you the initial conditions and initiating cue(s)/task to be performed for this JPM and provide you a copy of the same, you may review and begin. Once you have completed the task, indicate completion by handing back this form to the evaluator unless otherwise told.

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate actions steps without using the procedure, you may then use any approved reference materials.

For all two and three-way communications, make your report to me, the JPM evaluator. I will reply to your reports with the statement, "acknowledge." All actions in the plant are to be simulated and all actions in the simulator will be performed. Ensure you make it clear to me, the evaluator, of all actions you are taking so that credit may be given for completing each step of the task.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**INITIAL CONDITIONS:**

- You are the PAB Auxiliary Operator.
- **Unit 2** is at reduced inventory.
- Both RHR pumps have been secured due to erratic hydraulic operation.
- Refueling Water Circulating Pump, P-33, is tagged out for motor replacement.
- Neither the RWST nor the SFP is on purification.
- The Spent Fuel Pool Cooling system is in operation.

**INITIATING CUES (IF APPLICABLE):**

- The DOS directs you to align the Spent Fuel Pool Cooling system to reflood the RHR pump suction per **SEP-1 Unit 2**, Degraded RHR System Capability, Attachment A, RHR Suction Line Reflood.

**NOTE:** To avoid un-necessary risk, do **NOT** access any scaffolding. All identification of components and required actions may be done at floor level.

### JPM PERFORMANCE INFORMATION

**Required Materials:** SEP-1 Unit 2, Degraded RHR System Capability

**General References:** None.

**Task Standards:** The Examinee establishes reflood alignment of the Spent Fuel Pool Cooling system to the RHR system.

**Start Time:** \_\_\_\_\_

**NOTE:** When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

**NOTE:** Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

<b>Performance Step: 1</b>	Check RWST Or SFP On Purification
<b>Critical <u>Y</u>(SEQ-1)</b>	<ul style="list-style-type: none"> <li>FI-636</li> </ul>
<b>Standard:</b>	The Examinee determines from the Initial Conditions or by checking F-6 SFP Filter Outlet Flow Indicator, FI-636 that neither the RWST nor the SFP is on purification.
<b>Evaluator Cue:</b>	If checked, F-6 SFP Filter Outlet Flow Indicator, FI-636 indicates zero.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	<hr/> <hr/>

<b>Performance Step: 2</b> <b>Critical <u>Y</u>(SEQ-2)</b>	<u>IF</u> refueling water circulating pump P-33 is secured AND operable, <u>THEN</u> locally perform the following:
<b>Standard:</b>	The Examinee determines from the Initial Conditions that the steps to align P-33 should not be performed since it is not operable, proceeds to step dealing with aligning the Spent Fuel Pool Cooling system.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 3</b> <b>Critical <u>Y</u>(SEQ-3)</b>	<u>IF</u> spent fuel pool cooling pump P-12A/B is available, <u>THEN</u> locally perform the following: <ul style="list-style-type: none"> <li>• Ensure P-12A/B SFP cooling pumps to U6 SFP demineralizer open, SF-27.</li> </ul>
<b>Standard:</b>	The Examinee ensures that valve SF-27 is open by operating the chain to obtain rotation of the valve hand-wheel in the counter-clockwise direction until the valve stem is extended and there is no hand-wheel (chain) movement.
<b>Evaluator Cue:</b>	SF-27 valve stem is extended and there is no further counter-clockwise hand-wheel (chain) movement.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 4</b> <b>Critical <u>Y</u>(SEQ-3)</b>	AT PAB 26' elevation outside U6 SFP demineralizer cubicle, shut U6 SFP demineralizer inlet valve, SF-804B.
<b>Standard:</b>	The Examinee shuts valve SF-804B by rotating the valve hand-wheel clockwise until the valve stem is inserted and there is no further hand-wheel movement.
<b>Evaluator Cue:</b>	SF-804B valve stem is inserted and there is no further hand-wheel movement in the clockwise direction.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 5</b> <b>Critical <u>Y</u>(SEQ-3)</b>	AT PAB 46' elevation outside waste gas compressor, open U6 SFP demineralizer bypass valve, SF-804A.
<b>Standard:</b>	The Examinee opens valve SF-804A by rotating the valve hand-wheel counter-clockwise until the valve stem is extended and there is no further hand-wheel movement.
<b>Evaluator Cue:</b>	SF-804A valve stem is extended and there is no further hand-wheel movement in the counter-clockwise direction.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____



<b>Performance Step: 6</b> <b>Critical <u>Y</u>(SEQ-3)</b>	Locally Fill RHR Pump Suction Line: At PAB 46' elevation above SFP HXs West end, open SFP to RHR valve 2SF-819.
<b>Standard:</b>	The Examinee opens valve 2SF-819 by rotating the valve hand-wheel in the counter-clockwise direction until the valve stem is extended and there is no hand-wheel movement.
<b>Evaluator Cue:</b>	2SF-819 valve stem is fully extended and there is no further counter-clockwise hand-wheel movement.  If flow indicator FI-636 is checked <b>ANY TIME</b> after opening 2SF-819, it should be cued that FI-636 reads 30 gpm.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____  _____

<b>Performance Step: 7</b> <b>Critical <u>N</u>(SEQ-3)</b>	At PAB 46' elevation above HX-13B East end, shut F-6 SFP filter return to SFP, SF-812A.
<b>Standard:</b>	The Examinee shuts valve SF-812A by operating the chain to obtain rotation of the valve hand-wheel in a clockwise direction until the valve stem is inserted and there is no further hand-wheel (chain) movement.
<b>Evaluator Cue:</b>	SF-812A valve stem is inserted and there is no further clockwise hand-wheel (chain) movement.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____  _____

<b>Performance Step: 8</b> <b>Critical <u>N</u>(SEQ-3)</b>	At PAB 46' elevation above HX-13A West end, shut SFP to 2T-13 RWST valve, 2SF-811.
<b>Standard:</b>	The Examinee shuts valve 2SF-811 by operating the chain to obtain rotation of the valve hand-wheel in a clockwise direction until the valve stem is inserted and there is no further hand-wheel (chain) movement.
<b>Evaluator Cue:</b>	2SF-811 valve stem is inserted and there is no further clockwise hand-wheel (chain) movement.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

<b>Performance Step: 9</b> <b>Critical <u>N</u>(SEQ-3)</b>	At PAB 46' elevation above HX-13A West end, shut SFP to 1T-13 RWST valve, 1SF-811.
<b>Standard:</b>	The Examinee shuts valve 1SF-811 by operating the chain to obtain rotation of the valve hand-wheel in a clockwise direction until the valve stem is inserted and there is no further hand-wheel (chain) movement.
<b>Evaluator Cue:</b>	1SF-811 valve stem is inserted and there is no further clockwise hand-wheel (chain) movement.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____ _____

**Performance Step: 10**  
**Critical N(SEQ-4)**

Inform Control Room Suction Line Reflood Has Begun.

**Standard:**

The Examinee contacts the control room and informs them that RHR suction line reflood has begun in accordance with SEP-1 Unit 2.

**Evaluator Cue:**

The Control Room acknowledges your report.

**Performance:**

**SATISFACTORY** ☐ **UNSATISFACTORY** ☐

**Comments:**

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**Terminating Cues:**

After the Control Room is notified that RHR suction reflood has begun, the JPM may be terminated.

**Stop Time:**

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## TURNOVER SHEET

### INITIAL CONDITIONS:

- You are the PAB Auxiliary Operator.
- **Unit 2** is at reduced inventory.
- Both RHR pumps have been secured due to erratic hydraulic operation.
- Refueling Water Circulating Pump, P-33, is tagged out for motor replacement.
- Neither the RWST nor the SFP is on purification.
- The Spent Fuel Pool Cooling system is in operation.

### INITIATING CUES (IF APPLICABLE):

- The DOS directs you to align the Spent Fuel Pool Cooling system to reflood the RHR pump suction per **SEP-1 Unit 2**, Degraded RHR System Capability, Attachment A, RHR Suction Line Reflood.

**NOTE:** To avoid un-necessary risk, do **NOT** access any scaffolding. All identification of components and required actions may be done at floor level.

## ATTACHMENT 1

## JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
131. Are all items on the signature page filled in correctly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
132. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
133. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
134. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
135. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
136. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
137. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
138. Is the Licensee level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
139. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
141. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
142. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
143. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

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Validation Personnel /Date

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