JPM TITLE: PERFORM ROD EXERCISE TEST

JPM NUMBER: PBN JPM P001.020.COT **REV.** 6

TASK NUMBER(S) / TASK TITLE(S): PBN P001.020.COT / Perform Control Rod Exercises

K/A NUMBERS:	001.K4.02 001.A3.05 001.A4.03	**K/A VALUE:**	3.8 / 3.8 3.5 / 3.5 4.0 / 3.7

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]
Simulator: [X] Other: [ ]
Lab: [ ]

Time for Completion: 20 Minutes Time Critical: No

Alternate Path [NRC]: Yes
Alternate Path [INPO]: Yes

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☒
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR #	PREPARER SUPERVISOR	DATE DATE
Rev. 0-4	See historical records.				
Rev. 5	Updated for the 2014 operational exam.				
Rev. 6	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS:

1. Initialize into IC-2.
2. Load the following codes and insert trigger 1.
3. Verify Rod Counter readings are at 228 (225)* for all banks except CB D which should be set at 220.
4. Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions.
5. Make any necessary adjustments or corrections.
6. Display PPCS page 2121 (Rod Positions) on 1C20 PPCS monitor.
7. Save to an IC for multiple uses (if necessary).

*Consult STPT 5.1 for current Unit 1 Cycle for ARO position.

SIMULATOR MALFUNCTIONS:

- None

SIMULATOR OVERRIDES:

- None

SIMULATOR REMOTE FUNCTIONS:

Setup:

MALFUNCTION No.	MALFUNCTION TITLE	DELAY	RAMP	ET	DELETE IN	INITIAL VALUE	FINAL VALUE	NOTES
LOA1CRF003	1-CR-RESET BANK OVERLAP COUNTER RESET	00:00:00	00:00:00	1	00:00:00	595	594	**PRELOAD**

Required Materials:
1. TS-5, Rod Exercise Test Unit 1
2. REI 7.0, Control Rod Position Determination

General References:
1. TS-5, Rod Exercise Test Unit 1
2. REI 7.0, Control Rod Position Determination

Task Standards: Bank D rods have been exercised, bank overlap counter discrepancy corrected and bank D rods returned to their original position.

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 CO3.
- Unit 1 is at 100% power, steady state Xenon.

INITIATING CUES (IF APPLICABLE):

- The SRO has directed you to perform TS-5, Rod Exercise Test Unit 1.
- The pre-job brief has been completed.
- An AO is standing by in the Unit 1 Rod Drive MG Set Room to assist in the performance of the test.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 **Critical N**	5.1 **RECORD** the following indications: 5.1.1 RDC-LOGIC Cabinet (Key #21): • Bank Overlap Counter reading
Standard:	The examinee contacts Unit 1 Turbine Hall Operator and obtains the Bank Overlap Counter reading.
Evaluator Note:	• Counter reading is in the rod control cabinet in the Rod Drive MG Set Room.
Evaluator Cue:	AO reports that the Bank Overlap Counter is reading 594.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 2 **Critical N**	5.1.2 Status of the Group Select Lights for the following power cabinets: • 1AC – Group Select Light "C" • 2AC – Group Select Light "C" • 1BD – Group Select Light "B"
Standard:	The examinee contacts the U1 TH Operator and obtains the status of the lights.
Evaluator Note:	Light status is found on the power cabinets in the RD MG Set Room.
Evaluator Cue:	AO Reports "C" lights lit for 1AC and 2AC and "B" light lit for 1BD.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 3 **Critical N**	5.1.3 1C04, Rod Bank Group (Demand) counters: • Control Bank A Group 1 • Etc.
Standard:	The examinee correctly records Control and Shutdown Bank Group Demand counter readings.
Evaluator Note:	All Bank Demand counters should indicate 228 (225) steps except Bank D which should indicate 220 steps.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 4 **Critical N**	5.1.4 1C-120A, RPI #1, Bank Position Display • Bank A • Bank B • Bank C • Bank D
Standard:	The examinee correctly records bank positions on 1C-120A.
Evaluator Note:	• Bank Positions are indicated behind the Main Control Boards on 1C-120A.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 5 **Critical N**	5.2 **COMPARE** the Bank Overlap Counter reading to Control Bank position (Step Counters) in REI 7.0, Control Rod Position Determination.
Standard:	The examinee obtains a copy of REI 7.0 and compares the Control Bank position with the Bank Overlap Counter and determines that there is disagreement between the two.
Evaluator Note:	• The examinee should determine that the Control Bank position and Bank Overlap Counter do NOT agree. • With Control Bank D at 220 steps, the Bank Overlap Counter should read 595.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 6 Critical Y	5.3 **IF** the Control Bank Position **AND** Bank Overlap Counter reading do **NOT** agree, **THEN PERFORM** Attachment A.
Standard:	The examinee determines the readings do not agree and goes to Attachment A.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 7 Critical Y	ATTACHMENT A 1.0 **PLACE** Rod control selector to Manual.
Standard:	The examinee places Rod control selector switch to the Manual position.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 8 Critical Y	2.0 **STEP** Control Bank D **OUT** 1 step from its current position.
Standard:	The examinee steps Control Bank D out 1 step.
Evaluator Cue:	
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 9 Critical Y	3.0 **BUMP STEP** Control Bank D **IN** one step.
Standard:	The examinee bumps Control Bank D in one step.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 10 Critical N	4.0 **CHECK** card A105 has BOTTOM LIGHT ILLUMINATED (top row, 3rd card from the left in the Rod Control Logic Cabinet directly above the Bank Overlap Counter).
Standard:	The examinee contacts the Auxiliary Operator in the Rod Drive Room and obtains status of card A105 bottom light.
Evaluator Note:	Based on the report from the AO, steps 5.0 and 6.0 of Attachment A will be N/A
Evaluator Cue:	The AO reports card A105 has the bottom light illuminated.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 11 Critical N	7.0 Compare the Bank D Demand Position (Step Counters) to the Bank Overlap Counter.
Standard:	The examinee contacts the AO for the Bank Overlap Counter reading and compares the Step Counter for Bank D to the obtained Bank Overlap Counter reading.
Evaluator Cue:	AO reports the Bank Overlap Counter reads 595.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 12 Critical N	8.0 **IF** the Control Bank D Position (Step Counters) and the Bank Overlap Counter do not agree, **THEN** adjust the Bank Overlap Counter at RDC Logic Cabinet by depressing the +1 or –1 button as necessary until the proper value correlating to the Control Rod Bank D Position (Step Counters).
Standard:	The examinee determines step is not required to be performed and N/A's the step.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 13 Critical N	9.0 Return the Control Rod selector switch to AUTO.
Standard:	The examinee places Control Rod selector switch to AUTO.
Evaluator Note:	When examinee asks for an Independent Verification of this step, initial the step for IV.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 14 Critical N	5.4 **IF** printed PPCS data is required, **THEN OBTAIN** a screen print of PPCS display page 2121 prior to and following movement of each rod group.
Standard:	The examinee requests whether PPCS printed data is required.
Evaluator Note:	The examinee may wish to print the data, inform him/her that it is not required.
Evaluator Cue:	Printed PPCS data is not required.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 15 Critical Y	5.5 **IF** Control Bank D is **NOT** fully inserted, **THEN PERFORM** the following exercise test: 5.5.1 **PLACE** the Control Rod Bank Selector switch to the CBD position.
Standard:	The examinee places the Control Rod Bank Selector switch to the CBD position.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 16 Critical N	5.5.2 **PERFORM** the following rod step sequence twice: a. **STEP** Control Bank D **OUT** 1 step from its current position.
Standard:	The examinee steps Control Bank D out 1 step.
Evaluator Note:	This step and the next will be repeated.
Evaluator Cue:	
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 17 Critical N	b. **BUMP STEP** Control Bank D **IN** one step.
Standard:	The examinee bumps Control Bank D in one step.
Evaluator Note:	This step and the previous will be repeated.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 18 Critical Y	5.5.3 **INSERT OR WITHDRAW** Control Bank D at least 10 steps but NO more than 20 steps while **OBSERVING** movement on individual Control Bank D rods.
Standard:	The examinee inserts Control Bank D at least 10 but not more than 20 steps.
Evaluator Note:	The examinee must recognize that there is not enough “room” to withdraw the rods 10 steps and must therefore insert the rods the required distance.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 19 Critical Y	5.5.4 **WITHDRAW OR INSERT** Control Bank D to the position recorded in Step 5.1.3
Standard:	The examinee withdraws Control Bank D to its original position recorded in Step 5.1.3.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 20 Critical Y	5.5.5 **WITHDRAW** Control Bank D one step.
Standard:	The examinee withdraws Control Bank D one step.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 21 Critical Y	5.5.6 **INSERT** Control Bank D one step.
Standard:	The examinee inserts Control Bank D one step.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 22 Critical N	5.5.7 Ensure Control Bank D is in the position recorded in Step 5.1.3.
Standard:	The examinee ensures the Control Bank D Group Demand Counter reading matches the number obtained in step 5.1.3.
Evaluator Note:	CB D Demand Counter should read 220.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Terminating Cues: JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- You are CO3.
- Unit 1 is at 100% power, steady state Xenon.

INITIATING CUES (IF APPLICABLE):

- The SRO has directed you to perform TS-5, Rod Exercise Test Unit 1.
- The pre-job brief has been completed.
- An AO is standing by in the Unit 1 Rod Drive MG Set Room to assist in the performance of the test.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: Manually Makeup to the VCT

JPM NUMBER: PBN JPM P004.027b.COT **REV.** 8

TASK NUMBER(S) / TASK TITLE(S): PBN P004.027.COT / Manually Blend to the VCT / RWST

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

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒ X

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

Simulator: ☒ X Other: ☐

Lab: ☐

Time for Completion: 15 Minutes Time Critical: No

Alternate Path [NRC]: Yes

Alternate Path [INPO]: Yes

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☒	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10. Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☒	☐	☐
13. Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR #	PREPARER SUPERVISOR	DATE DATE
Rev. 0-2	See historical records				
Rev. 3	Updated to current revision of QF-1075-01. Updated RCS boron concentration to match current IC-2 concentration.				
Rev. 4	Updated RCS boron concentration to match current IC-2 concentration. Revised JPM for use during the 2012 ILT NRC Exam to match changes in OP-5B. Added additional malfunction to set RMUW controller to 50 gpm.				
Rev. 5	Changed to Rev. 5 to account for simultaneous development of JPM (Rev. 4) used for 2012 Annual NRC Exam.				
Rev. 6	New Fleet Template. Added SIM setup instructions for 1HC-111 to 50 gpm. Modified the initial conditions and turnover page for the gas stripper to be off-line.				
Rev. ~~7~~	Updated for the 2014 operational exam.				
Pen and ~~Ink~~	Added an evaluator note in step 1 to identify which reference the student would ~~reference~~	Requested by the NRC for the 2015 ILT NRC ~~Exam~~	~~N/A~~	J. Hinze T Larson	1/30/15 ~~1/30/15~~
Rev. 8	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

Simulator Setup Instructions:
- Load IC 2.
- Walk down the control boards to ensure plant conditions accurately reflect the JPM's initial conditions. Make any necessary adjustments.
- Ensure the RMUW Flow controller is set at 0 gpm.
- Ensure the Boric Acid Flow controller is set at 0 ppm
- Place 1CV-112A to DIVERT to establish VCT level at ~30%, THEN return 1CV-112A to AUTO.
- Save IC for multiple uses.
- Provide a copy of OP 5B Attachment G with Initial Conditions signed off.

AFTER the blend is started and STABLE, insert TRIGGER 1 to cause the RMUW controller to fail. DO NOT insert the malfunction until the blend is started and stable.

SIMULATOR MALFUNCTIONS:

MALFUNCTION No.	MALFUNCTION TITLE	DELAY	RAMP	ET	DELETE IN	INITIAL VALUE	FINAL VALUE	NOTES
CNH1CVC009B	1-FIC111 DILUTION FLOW INDICATOR CTLR FIXED OUTPUT	00:00:20	00:00:10	1	00:00:00	-	50	Insert on event X14I161T==1. (Reactor Makeup SW to START)

SIMULATOR OVERRIDES:
- None

SIMULATOR REMOTE FUNCTIONS:
- None

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

General References: Blender Data Manual
ARB 1C04 1C 3-8, Reactor Makeup Water Flow Deviation

Task Standards: The examinee starts to raise VCT level, determines improper operation of the Reactor Makeup Water flow controller and secures the blend to the VCT or takes manual control of 1HC-111 adjusting RMW flow prior to VCT level rise of >15%.

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.
- The CVCS system is in operation with a single letdown orifice in service.
- Unit 1 RCS boron concentration is 866 ppm.
- The on-service boric acid storage tank, T-6A, concentration is 3.75%.
- Unit 1 Letdown Gas Stripper is on-line.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to raise VCT level approximately 15% at the current RCS boron concentration per OP 5B, Blender Operation / Dilution / Boration, Attachment G, Manual Blend to the RCS.

NOTE: The blend may be left in the CVCS piping since frequent blends are currently required.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 Critical N	4.1 DETERMINE the desired blender output concentration.
Standard:	The examinee determines the existing acid and water flow setpoints for the present boron concentration by referencing: ○ Operating experience, or ○ Using the Blender Data Manual
Evaluator Note:	The examinee should reference Table 4 of the Blender Data Manual to determine if the boron concentration is set correctly.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 2 Critical Y	4.2 SET HC-111, RMUW Flow Controller, to desired FLOWRATE.
Standard:	The examinee determines that controller HC-111 is set at 0 gpm and resets to desired flowrate. Acceptable settings result in an acid to water ratio of 1:6 to 1:7.
Evaluator Note:	HC-111 should normally be set to 40 gpm, but may be set to a different value as long as the correct ratio of water-acid for current RCS boron concentration is used.
Evaluator Cue:	If the incorrect controller setting for 1HC-111, RMUW Flow controller, is reported to OS1, then acknowledge the report and direct the examinee to set the controller to the correct setting and continue making up to the VCT.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 3 Critical: Y	4.3 SET HC-110, Boric Acid Flow Hand Controller, to desired FLOWRATE.
Standard:	The examinee determines that controller 1HC-110 is set to 0 gpm and resets to desired flowrate. Acceptable settings result in an acid to water ratio of 1:6 to 1:7.
Evaluator Note:	The boric acid controller should be set at approximately 6.0 gpm (for a 40 gpm RMUW setting).
Evaluator Cue:	If the incorrect controller setting for 1HC-110, BA Flow controller, is reported to OS1, then acknowledge the report and direct the examinee to set the controller to the correct setting and continue making up to the VCT.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 4 Critical N	4.4 ENSURE the following valve control switch positions: • CV-111, RMW to Z-1 BA Blender Flow Control, in AUTO • CV-110A, BA TO Z-1 BA Blender Inlet FCV, in AUTO • CV-110B, Z-1 BA Blender Outlet FCV in AUTO **OR IF** VCT BYPASSED, **THEN** OPEN (circle one). • CV-110C, T-4 VCT Boric Acid Inlet Flow Control in AUTO **OR IF** VCT BYPASSED, **THEN** OPEN (circle one).
Standard:	The examinee determines: • 1CV-111, RMW to Z-1 BA Blender Flow Control is in AUTO • 1CV-110A, BA TO Z-1 BA Blender Inlet FCV is in AUTO • 1CV-110B, Z-1 BA Blender Outlet FCV is in AUTO • 1CV-110C, T-4 VCT Boric Acid Inlet Flow Control is in AUTO
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 5 Critical Y	4.5 PLACE the Reactor Makeup Mode Selector Switch to BLEND.
Standard:	The examinee places the Reactor Makeup Mode Selector Switch to the BLEND position.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 6 Critical Y	4.6 PLACE the Reactor Makeup Control Switch to START.
Standard:	The examinee places the Reactor Makeup Control Switch to the START position and ensures the RED light is LIT.
Evaluator Note:	Verification of the RED light is NOT critical.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 7 Critical N	4.7 **WHEN** required to maintain VCT pressure and level, **THEN PLACE** CV-112A, VCT Level Control Divert, to DIVERT.
Standard:	The examinee acknowledges the guidance of this step and returns to it as it is needed to control VCT pressure and level, and moves on with the procedure.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 8 Critical N	4.8 While CONTINUING with this procedure, CHECK system for proper response **AND MONITOR** the following parameters: • VCT level / pressure • Rx Power / Count Rate • RCP seal leakoff flow • RCS temperature
Standard:	The examinee monitors the listed parameters.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

NOTE: AFTER THE BLEND IS STARTED AND IS STABLE, TRIGGER 1 WILL INSERT TO CAUSE THE RMUW CONTROLLER TO FAIL.

Performance Step: 9 Critical Y	The examinee responds to the RMUW deviation alarm or increased dilution rate and takes action to secure makeup to the VCT or takes manual control of 1HC-111 and adjusts RMW flow to ~40 gpm.
Standard:	The examinee secures makeup to the VCT or takes manual control of 1HC-111 and adjusts RMW flow to ~40 gpm prior to VCT level rise of ≥ 15%. (Initial VCT Level was 30%)
Evaluator Note:	ARB 1C04 1C 3-8, Reactor Makeup Water Flow Deviation, allows either option to respond. The RMW deviation alarm may NOT actuate if makeup is promptly secured.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Terminating Cues: This completes the JPM.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: **ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.**

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.

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.
- The CVCS system is in operation with a single letdown orifice in service.
- Unit 1 RCS boron concentration is 866 ppm.
- The on-service boric acid storage tank, T-6A, concentration is 3.75%.
- Unit 1 Letdown Gas Stripper is on-line.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to raise VCT level approximately 15% at the current RCS boron concentration per OP-5B, Blender Operation / Dilution / Boration, Attachment G, Manual Blend to the RCS.

NOTE: The blend may be left in the CVCS piping since frequent blends are currently required.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: Fill the Accumulators

JPM NUMBER: PBN JPM P006.002.COT **REV.** 10

TASK NUMBER(S) / TASK TITLE(S): PBN P006.002.COT / Fill the Accumulators

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

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒ X

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

Simulator: ☒ X Other: ☐

Lab: ☐

Time for Completion: 30 Minutes Time Critical: No

Alternate Path [NRC]: No

Alternate Path [INPO]: No

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☒
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR#	PREPARER SUPERVISOR	DATE DATE
Rev. 10	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS:

- Load any IC with both units at 100%, steady state
- Drain 1T-34B, Unit 1 'B' SI Accumulator until annunciator C01B 3-8, 1T-34B ACCUMULATOR LEVEL HIGH OR LOW alarms per OI-100 Unit 1, Adjusting SI Accumulator Level and Pressure Unit 1. (LOW alarm setpoint = 9%) Ensure accumulator pressure remains within band after level is lowered.
- Walk down control boards to verify plant conditions match initial conditions described by the JPM.
- Save to an IC for multiple use.

Multiple Uses:

- 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 MALFUNCTIONS:

SIMULATOR OVERRIDES:

SIMULATOR REMOTE FUNCTIONS:

Required Materials:	OI 100 Unit 1, Adjusting SI Accumulator Level and Pressure Unit 1 Stopwatch Calculator
General References:	OI 100 Unit 1, Adjusting SI Accumulator Level and Pressure Unit 1
Task Standards:	The examinee raises the 1T-34B, Unit 1 "B" SI accumulator level to 20% (± 3%) in accordance with OI 100 Unit 1, Adjusting SI Accumulator Level and Pressure Unit 1, Section 5.2.

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 operating at 100% steady-state conditions.
- Annunciator C01B 3-8, 1T-34B ACCUMULATOR LEVEL HIGH OR LOW is lit.
- Unit 1 RWST Boron concentration is 2950 ppm.

INITIATING CUES (IF APPLICABLE):

- You are the 3rd Control Operator.
- The SRO directs you to raise 1T-34B, Unit 1 “B” SI accumulator level to approximately 20% in accordance with OI 100 Unit 1, Adjusting SI Accumulator Level and Pressure Unit 1, Section 5.2, starting at Step 5.2.8.
- Unit 1 Control Operator has been assigned the duties of monitoring accumulator parameters per your request.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 **Critical N**	5.2.8 RECORD the position of 1P-15A-CS, Safety Injection Pump Control Switch. Control Switch position: _____
Standard:	The examinee records the position of 1P-15A-CS, Safety Injection Control Switch.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 2 **Critical Y**	5.2.9 **START** 1P-15A, Safety Injection Pump.
Standard:	The examinee places the control switch for 1P-15A, Safety Injection Pump to the Start position. (The green light is off, the red light is on, 1FI-925, 1P-15A High Head SI Flow, 1P-923, 1P-15A SI Pump Disch Pressure and AC AMPS, 1P-15A SI Pump Current are as read.)
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 3 Critical N	5.2.10 **MONITOR** all available channels for accumulator pressure and level during accumulator fill.
Standard:	The examinee notes which indicators he will be monitoring during accumulator fill.
Evaluator Note:	Initial conditions stated that the Unit 1 Control Operator is available to monitor accumulator parameters per direction of the examinee. The Booth operator may be used for this function.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 4 Critical N	5.2.11 **IF** filling 1T-34A, Safety Injection Accumulator, **THEN PERFORM** the following:
Standard:	Step 5.2.11 is marked N/A. The examinee proceeds to Step 5.2.12.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 5 **Critical Y**	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: a. **OPEN** 1SI-835B, T-34B SI Accumulator Fill AOV, **AND START** stopwatch.
Standard:	• The examinee places the control switch for the 1SI-835B, T-34B SI Accumulator Fill From Cold Leg SI to the Open position (The green light is off and the red light is on.) • And starts the stopwatch.
Evaluator Note:	• **The critical portion of this step is opening 1SI-835B.** • If examinee directs another operator to use the stopwatch, the evaluator will assign the booth operator to this task.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 6 **Critical Y**	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: b. **FILL** SI accumulator to desired level as indicated on the following level indicators: • 1LI-934, 1T-34B Accumulator Level Indicator • 1LI-935, 1T-34B Accumulator Level Indicator
Standard:	**The** examinee monitors level indication for 1T-34B and raises the level to 20% (± 3%).
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 7 **Critical Y**	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: c. **SHUT** 1SI-835B, T-34B SI Accumulator Fill AOV **AND STOP** timing. **RECORD** time below:
Standard:	The examinee: • Places the control switch for the 1SI-835B, 1T-34B accumulator fill AOV to the Close position (The green light is on and the red light is off) • And records the fill time.
Evaluator Note:	• **The critical portion of this step is closing 1SI-835B.** • If examinee directs another operator to use the stopwatch, the evaluator will assign the booth operator to this task.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 8 **Critical N**	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: d. **RECORD** AFT in Step 2.1 of Attachment B, 1T34B Accumulator Level/Pressure Change Data Sheet.
Standard:	The examinee records Accumulator Fill Time on Attachment B.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 9 **Critical N**	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: e. **IF** fill of 1T-34A, Safety Injection Accumulator, is **NOT** required, **THEN STOP** 1P-15A, Safety Injection Pump.
Standard:	The examinee places the control switch for 1P-15A, Safety Injection Pump to the Stop position. (The green light is on, the red light is off, 1FI-925, 1P-15A High Head SI Flow, 1PI-923, 1P-15A SI Pump Disch Pressure and AC AMPS, 1P-15A SI Pump Current are as read.)
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 10 **Critical Y**	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: f. **IF** fill of 1T-34A, SI Accumulator is **NOT** required, **THEN ENSURE** 1P-15A-CS is returned to position recorded at step 5.2.8.
Standard:	The examinee ensures that the control switch for 1P-15A, Safety Injection Pump is in the Auto (after trip) position.
Evaluator Cue:	Another license has performed an independent verification of 1P-15A-CS, Safety Injection Pump Control Switch position.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 11 Critical N	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: g. **DECLARE** 1P-15A OPERABLE
Standard:	The examinee informs the SRO to declare 1P-15A, Safety Injection Pump OPERABLE.
Evaluator Cue:	• The SRO acknowledges your report. • The SRO reports that 1P-15A, safety injection pump is OPERABLE and the Narrative Log has been updated.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 12 Critical N	5.2.12 **IF** filling 1T-34B,Safety Injection Accumulator, **THEN PERFORM** the following: h. Exit Action Condition for TS 3.5.2 for Unit 1.
Standard:	The examinee informs the SRO to exit TS 3.5.2 Action Condition for 1P-15A, Safety Injection pump.
Evaluator Cue:	The SRO informs you that the Technical Specification Action Condition associated with 1P-15A, Safety Injection Pump has been exited and the Narrative Log has been updated.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Terminating Cues: The JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 is operating at 100% steady-state conditions.
- Annunciator C01B 3-8, 1T-34B ACCUMULATOR LEVEL HIGH OR LOW is lit.
- Unit 1 RWST Boron concentration is 2950 ppm.

INITIATING CUES (IF APPLICABLE):

- You are the 3rd Control Operator.
- The SRO directs you to raise 1T-34B, Unit 1 “B” SI accumulator level to approximately 20% in accordance with OI 100 Unit 1, Adjusting SI Accumulator Level and Pressure Unit 1, Section 5.2, starting at Step 5.2.8.
- Unit 1 Control Operator has been assigned the duties of monitoring accumulator parameters per your request.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: **Establish Feed Flow From Condensate System**

JPM NUMBER: **PBN JPM P041.003a.COT** **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): PBN P041.003.COT / Operate the condenser steam dump control system in various modes

K/A NUMBERS: 041 A4.08 **K/A VALUE:** 3.0 / 3.1

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** ____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒ X

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

Time for Completion: 25 Minutes Time Critical: No

Alternate Path [NRC]: Yes
Alternate Path [INPO]: Yes

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☒
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR#	PREPARER SUPERVISOR	DATE DATE
Rev. 0	Developed for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

Simulator Setup Instructions:

- Load a 100% IC
- Load all commands listed in table below
- Start the simulation
- Insert Trigger 1
- Perform EOP set actions through CSP-H.1 Unit 1, Step 13.c.
- Make any necessary adjustments or corrections
- Update documentation if required
- Save to an IC for multiple use

Multiple Use:

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

SIMULATOR MALFUNCTIONS:

MALFUNCTION No.	MALFUNCTION TITLE	DELAY	RAMP	ET	DELETE IN	INITIAL VALUE	FINAL VALUE	NOTES
MAL1AFW001	AUX FWP TURBINE OVERSPEED	00 :00 :00	-	-	00 :00 :00	-	-	PRELOAD
PMP1AFW004	1-P53 AUXILIARY FEEDWATER PUMP	00 :00 :00	-	-	00 :00 :00	-	Shaft Seizure	PRELOAD
BKR1AFW001	1-B5212C P-38A AUX SG FEED PUMP CKTBKR	00 :00 :00	-	-	00 :00 :00	-	Failasis	PRELOAD
BKR1AFW002	2-B5231C P-38B AUX SG FEED PUMP CKTBKR	00 :00 :00	-	-	00 :00 :00	-	Failasis	PRELOAD
LOA2EPS101	2-EP-5268 2P53 SUPPLY BREAKER RACKOUT	00 :00 :00	-	-	00 :00 :00	-	Rackout	PRELOAD
MAL1RCS003A	RTD BYPASS LOOP A HOT LEG LINE LEAK	00 :00 :00	-	1	00 :00 :00	-	75	PLE
CNH1PCS011	1-HC468 LOOP A ATM SD HAND CONTROLLER	00 :00 :00	-	-	00 :00 :00	-	As Is Auto/Man	PRELOAD
CNH1PCS013	1-HC478 LOOP B ATM SD HAND CONTROLLER	00 :00 :00	-	-	00 :00 :00	-	As Is Auto/Man	PRELOAD
MAL1CFW005A	Condenser A Loss of Vacuum	00 :00 :00	-	-	00 :00 :00	-	1000	
MAL1CFW005B	Condenser B Loss of Vacuum	00 :00 :00	-	-	00 :00 :00	-	1000	
LOA1SGN022	1MS-234 SG A Main Steam Bypass	00 :00 :00	-	3	00 :00 :00	-	1-open	

LOA1SGN024	1MS-236 SG B Main Steam Bypass	00 :00 :00	-	5	00 :00 :00	-	1-open	
VLV1CFW015	1CS-2190 FWP 1P-28A Disch Stop Vlv	00 :00 :00	-	7	00 :00 :00	-	Cntrl_Pwr_ Fuse	MFP discharge MOV
VLV1CFW013	1CS-2189 FWP 1P-28B Disch Stop Vlv	00 :00 :00	-	9	00 :00 :00	-	Cntrl_Pwr_ Fuse	MFP discharge MOV

SIMULATOR OVERRIDES:
See above

SIMULATOR REMOTE FUNCTIONS:
See above

Required Materials: CSP-H.1 Unit 1, Response To Loss Of Secondary Heat Sink

General References: CSP-H.1 Unit 1, Response To Loss Of Secondary Heat Sink

Task Standards: Establish feed flow from condensate system /depressurize at least one steam generator to less than 280 psig by dumping steam to the condenser at maximum rate from selected steam generator using the condenser dump valve test switches in accordance with CSP-H.1 Unit 1, Response to Loss of Secondary Heat Sink.

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.
- A RCS leak in excess of charging pump capacity necessitated a manual reactor trip, Safety Injection and Containment Isolation.
- 1P-53, Motor-Driven AFW Pump seized on startup, 1P-29, Turbine-Driven AFW Pump tripped on overspeed and both P-38A and P-38B, SSG Feed Pumps failed to start.
- 2P-53, Motor-Driven AFW Pump is OOS for repairs.
- Upon transitioning from EOP-0, the crew entered CSP-H.1 Unit 1, Response to Loss of Secondary Heat Sink, and has completed up to Step 13.d
- EOP-0, Attachment A, Automatic Action Verification, is complete.
- The third license is working to recover 1P-29, Turbine-Driven AFW Pump.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to perform CSP-H.1 Unit 1, Response to Loss of Secondary Heat Sink, starting at Step 13.d, Depressurize at least one SG to less than 280 psig, using the 'A' steam generator.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 **Critical N**	13.d Depressurize at least one S/G to less than 280 psig: 1) Shut MSIV and MSIV bypass valve for Non-selected S/G
Standard:	The examinee: • Shuts the MSIV for the non-selected (B) SG by taking its associated control switch to the CLOSE position.
Evaluator Note:	'A' SG is the selected SG.
Evaluator Cue:	OS1 confirms that the MSIV bypass valves are administratively closed.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 2 **Critical N**	13.d Depressurize at least one S/G to less than 280 psig: 2) Dump steam to condenser at maximum rate from selected S/G: a) Place Steam Dump Mode Selector switch in Manual b) Shift Condenser Steam Dump Controller to manual: ▪ 1HFC-484 c) Fully open two condenser steam dump control valves:
Standard:	The examinee determines that the CSDs will not operate due to the condenser not available, and goes to Step 13.d 2) RNO.
Evaluator Note:	The examinee may attempt to perform the steps to open the CSD valves, but the valves will not open. The condenser is not available.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 3 **Critical N**	13.d Depressurize at least one S/G to less than 280 psig: 2) RNO Manually or locally dump steam at maximum rate from selected S/G: a. Open atmospheric steam dump ○ **1MS-2016 for S/G A (1HC-468)** ○ 1MS-2015 for S/G B (1HC-478)
Standard:	The examinee attempts to manually dump steam at the maximum rate from the selected S/G by: • Taking the selected S/G atmospheric hand controller to manual **AND** • Rotating the potentiometer in the Open direction
Evaluator Note:	The examinee may recommend or attempt to dump steam using the 'B' SG ADV, if asked the OS/SM would concur with this action.
Evaluator Cue:	**IF** the examinee directs the PAB AO to locally dump steam from the selected steam generator, **THEN** provide the following cue: Both atmospheric steam dump valves will not open locally.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 4 **Critical N**	13.d Depressurize at least one S/G to less than 280 psig: 2) RNO Manually or locally dump steam at maximum rate from selected S/G: b. **IF** atmospheric steam dump is **NOT** available, **THEN** dump steam using alternate means: 1. Open MSIV bypass valve: ○ 1MS-234 for S/G A ○ 1MS-236 for S/G B
Standard:	The examinee: • Directs the PAB AO to open the selected MSIV bypass valve
Evaluator Note:	If the examinee shuts both MSIV's in an earlier step, then opening one bypass valve becomes critical.
Evaluator Cue:	Open MSIV bypass valve as directed: **Insert Trigger 3 for 1MS-234 ('A' SG)** AND / OR **Insert Trigger 5 for 1MS-236 ('B' SG)** AO reports that the selected MSIV bypass valve is open.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 5 **Critical Y**	13.d Depressurize at least one S/G to less than 280 psig: 2) RNO Manually or locally dump steam at maximum rate from selected S/G: b. **IF** atmospheric steam dump is **NOT** available, **THEN** dump steam using alternate means: 2. Place dump valve test switches on 1C03R to test • 1MS-2050 through 1MS-2057 3. Direct plant personnel to stay clear of LP turbine rupture disks.
Standard:	The examinee: • **Rotates the dump valve test switches for 1MS-2050 through 2057 to the test position on 1C03R.** • Directs plant personnel to stay clear of the LP turbine rupture disks
Evaluator Note:	Critical actions are **bolded.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 6 **Critical Y**	13.d Depressurize at least one S/G to less than 280 psig: 2) RNO Manually or locally dump steam at maximum rate from selected S/G: b. **IF** atmospheric steam dump is **NOT** available, **THEN** dump steam using alternate means: 4. Operate steam dump pressure controller in manual: a) **IF** any MSIV is open, **THEN** fully open two condenser steam dumps. b) **IF** both MSIVs are shut, **THEN** open all condenser steam dumps
Standard:	The examinee: • Shifts 1HFC-484, Condenser Steam Dump Controller to MANUAL and adjusts the potentiometer so that two condenser steam dumps are fully open. (all open if both MSIVs are shut)
Evaluator Note:	1HFC-484 may already be in manual if the examinee attempted to use the condenser steam dumps in procedure step 13.d.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 7 **Critical N**	13.d Depressurize at least one S/G to less than 280 psig: 2) RNO Manually or locally dump steam at maximum rate from selected S/G: c. **IF** No S/G can be depressurized, **THEN** go to Step 15.
Standard:	The examinee marks this sub-step N/A and proceeds to sub-step 13.e.1).
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 8 **Critical N**	13.eEstablish condensate flow to depressurized S/G: 1) Ensure main feed AC lube oil pumps running: • 1P-73B • 1P-73A
Standard:	The examinee ensures the main feed AC lube oil pumps are running.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 9 **Critical N**	13.e Establish condensate flow to depressurized S/G: 2) Place MFP control switch to pull-out: • 1P-28A • 1P-28B
Standard:	The examinee places 1P-28A and 1P-28B MFP control switches to pull-out.
Evaluator Note:	
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	

Performance Step: 10 **Critical N**	13.e Establish condensate flow to depressurized S/G: 3) Check MFP Mini Recirc Flow Control Valves - CLOSED • 1CS-2180 • 1CS-2188
Standard:	The examinee checks that 1CS-2180 and 1CS-2188 MFP Mini Recirc Control Valves are closed.
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	

Performance Step: 11 **Critical Y**	13.e Establish condensate flow to depressurized S/G: 4) Open main feed pump discharge MOVs: a) Open main feed pump discharge MOVs and hold switches in OPEN position: • 1CS-2190 • 1CS-2189
Standard:	The examinee opens 1CS-2190 and 1CS-2189, Main Feed Pump Discharge MOVs and holds the switches in the open position.
Evaluator Note:	The examinee may elect to perform Step 13.e.4)a) and b) one train at a time.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 12 **Critical N**	13.e Establish condensate flow to depressurized S/G: 4) Open main feed pump discharge MOVs: b) Open breaker for open MOVs • 1B52-417M for 1CS-2190 • 1B52-417J for 1CS-2189
Standard:	The examinee directs opening for 1B52-417M for 1CS-2190 and 1B52-417J for 1CS-2189.
Evaluator Cue:	When directed: Insert Trigger 7 to open 1B52-417M for 1CS-2190. Insert Trigger 9 to open 1B52-417J for 1CS-2189. Report as AO when actions are complete.
Evaluator Note:	The examinee may elect to perform Step 13.e.4)a) and b) one train at a time.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 13 **Critical N**	13.e Establish condensate flow to depressurized S/G: 5) Manually shut low pressure Feedwater heater bypass valve: • 1CS-2273
Standard:	The examinee takes the hand controller for 1CS-2273, Feedwater Heater Bypass Valve to manual and adjusts the potentiometer in the close direction until it stops.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 14 **Critical N**	13.e Establish condensate flow to depressurized S/G: 6) Ensure Feedwater isolation valves - OPEN: • 1CS-3124 • 1CS-3125
Standard:	The examinee verifies that 1CS-3124 and 1CS-3125, Feedwater Isolation Valves are open.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 15 **Critical N**	13.e Establish condensate flow to depressurized S/G: 7) Reset Feedwater regulating valve bypasses:
Standard:	The examinee depresses the Feedwater Regulating Valve Bypass Reset pushbutton.
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	

Performance Step: 16 **Critical Y**	13.e Establish condensate flow to depressurized S/G: 8) Manually or locally open Feedwater regulating valve bypass on depressurized S/G: ○ **1CS-480 for S/G A** ○ 1CS-481 for S/G B
Standard:	The examinee: • Places the selected Feedwater Regulating Valve Bypass Controller to manual **AND** • Adjusts the potentiometer in the open direction
Evaluator Note:	
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	

Performance Step: 17 **Critical N**	13.f Verify feed flow to depressurized S/G: ○ Core exit thermocouples – LOWERING **OR** ○ Level in depressurized S/G – RISING ○ Wide range ○ Narrow range
Standard:	The examinee verifies feed flow to the depressurized steam generator by observing: ○ Core exit thermocouples – LOWERING **OR** ○ Level in depressurized S/G – RISING ○ Wide range ○ Narrow range
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Terminating Cues: The JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- You are the fourth license.
- A RCS leak in excess of charging pump capacity necessitated a manual reactor trip, Safety Injection and Containment Isolation.
- 1P-53, Motor-Driven AFW Pump seized on startup, 1P-29, Turbine-Driven AFW Pump tripped on overspeed and both P-38A and P-38B, SSG Feed Pumps failed to start.
- 2P-53, Motor-Driven AFW Pump is OOS for repairs.
- Upon transitioning from EOP-0, the crew entered CSP-H.1 Unit 1, Response to Loss of Secondary Heat Sink, and has completed up to Step 13.d
- EOP-0 Attachment A, Automatic Action Verification, is complete.
- The third license is working to recover 1P-29, Turbine-Driven AFW Pump.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to perform CSP-H.1 Unit 1, Response to Loss of Secondary Heat Sink, starting at Step 13.d, Depressurize at least one SG to less than 280 psig, using the 'A' steam generator.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: **Secure Containment Spray**

JPM NUMBER: **PBN JPM P026.005.COT** **REV. 10**

TASK NUMBER(S) / TASK TITLE(S): **PBN P026.005.COT / Secure containment spray**

K/A NUMBERS: **026 A2.08** **K/A VALUE: 3.2 / 3.7**

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

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

Time for Completion: 10 Minutes Time Critical: ☐ Yes ☒ No

Alternate Path [NRC]: ☐ Yes ☒ No
Alternate Path [INPO]: ☐ Yes ☒ No

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☒	☐	☐
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☐	☐	☒

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR #	PREPARER SUPERVISOR	DATE DATE
Rev. 0-5	See historical records.				
Rev. 6	Reformatted to the current revision of QF-1075-01. Revised to Rev. 35 of EOP 1.1, SI Termination.				
Rev. 7	Reformatted to the current revision of QF-1075-01. Added additional evaluator notes, corrected typos.				
Rev. 8	Updated to new template				
Rev. 9	Updated for the 2015 Operational Exam.				
Rev. 10	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

Simulator Setup Instructions:

Initial Setup:
- Load a 100% IC.
- Load all commands listed in table below.
- Start the simulation.
- Insert Trigger 1
- Perform actions of the EOP set through EOP-1.1, SI Termination, Step 6. Ensure 1P-14A is the pump secured in EOP-0, Attachment A. Ensure containment pressure is < 15 psig prior to snapping the IC.
- Walk down the control boards to ensure plant conditions accurately reflect JPM 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 initial conditions.
- Make any necessary adjustments or corrections.
- Update documentation if required.
- Resave if required

SIMULATOR MALFUNCTIONS:

MALFUNCTION No.	MALFUNCTION TITLE	DELAY	RAMP	ET	DELETE IN	INITIAL VALUE	FINAL VALUE	NOTES
MAL1SGN003A	SG A MAIN STEAM LINE BREAK INSIDE CNMT	00:00:00	00:00:00	1	00:00:00	0	5E6	PLE

SIMULATOR OVERRIDES:
None

SIMULATOR REMOTE FUNCTIONS:
None

Required Materials: EOP-1.1 Unit 1, SI Termination

General References: EOP-1.1 Unit 1, SI Termination

Task Standards: Containment spray is secured and in the standby mode.

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 in EOP-1.1 Unit 1, SI Termination following a steam line break inside containment on Unit 1 'A' S/G.
  - EOP-1.1 Unit 1 has been completed through Step 6.
- 1P-14A containment spray pump is in Pullout due to actions taken in EOP-0 Unit 1, Reactor Trip or Safety Injection, Attachment A, Automatic Action Verification, Step A12.

INITIATING CUES (IF APPLICABLE):

- The OS1 directs you to secure containment spray in accordance with EOP-1.1 Unit 1, Step 7.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 **Critical N**	7. Check If Containment Spray Should Be Stopped: a. Check containment spray pumps – ANY RUNNING.
Standard:	The examinee: • Checks spray pumps running by observing breaker positions on C01. • Recognizes 1P-14B, Spray Pump is running and 1P-14A, Spray Pump is secured.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 2 **Critical N**	7. Check If Containment Spray Should Be Stopped: b. Containment pressure – LESS THAN 20 PSIG
Standard:	The examinee: • Checks containment pressure indication on C01. • Recognizes pressure <20 psig.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 3 **Critical Y**	7. Check If Containment Spray Should Be Stopped: c. Reset containment spray signal
Standard:	The examinee resets containment spray on the rear of C01 by depressing Train 'A' and Train 'B' Containment Spray pushbuttons (the examinee should check C01 B2-6 annunciator is cleared but this is not critical to task completion).
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 4 **Critical N**	7. Check If Containment Spray Should Be Stopped: d. Ensure containment spray pump RWST suction MOVs – OPEN • 1SI-870A • 1SI-870B
Standard:	The examinee verifies: • 1SI-870A, Containment Spray Pump RWST Suction MOV red light on, green light off. • 1SI-870B, Containment Spray Pump RWST Suction MOV red light on, green light off.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 5 **Critical Y**	7. Check If Containment Spray Should Be Stopped: e. Stop both containment spray pumps and place in auto: • 1P-14A • 1P-14B
Standard:	The examinee takes: • 1P-14A, Containment Spray Pump Control Switch out of pull-out and places in auto-after-stop position. • 1P-14B, Containment Spray Pump Control Switch to stop and then places in auto-after-stop position.
Evaluator Note:	1P-14A, Containment Spray Pump will be in pull-out due to earlier procedure actions.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 6 **Critical Y**	7. Check If Containment Spray Should Be Stopped: f. Shut containment spray pump discharge valves and place in auto-after shut position: • 1SI-860A • 1SI-860B • 1SI-860C • 1SI-860D
Standard:	The examinee turns1SI-860A, B, C & D, Containment Spray Pump Discharge Valves to the shut position and observes green indicating lights.
Evaluator Note:	Alarm C01B 1-6, Containment Spray Full Flow Discharge Valves Not in Auto will annunciate.
Evaluator Note:	1SI-860 B&D will spring return to the AUTO position, but A&C are maintained so will need to be manually returned to the AUTO position.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 7 **Critical N**	7. Check If Containment Spray Should Be Stopped: g. Ensure both spray additive eductor suction valves - shut • 1SI-836A • 1SI-836B
Standard:	The examinee checks shut 1SI-836A & B, Spray Additive Eductor Suction Valves by noting white lights out on the Unit 1 SI-Spray Active Panel and/or noting close indication on controller.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 8 **Critical N**	Inform OS1 that step 7 of EOP-1.1 Unit 1 is complete.
Standard:	The examinee informs OS1 of completion of step 7 of EOP-1.1 Unit 1.
Evaluator Cue:	OS1 acknowledges report.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Terminating Cues: The JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: **ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.**

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- You are in EOP-1.1 Unit 1, SI Termination following a steam line break inside containment on Unit 1 'A' S/G.
  - EOP-1.1 Unit 1 has been completed through Step 6.
- 1P-14A containment spray pump is in Pullout due to actions taken in EOP-0 Unit 1, Reactor Trip or Safety Injection, Attachment A, Automatic Action Verification, Step A12.

INITIATING CUES (IF APPLICABLE):

- The OS1 directs you to secure containment spray in accordance with EOP-1.1 Unit 1, Step 7.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: SECURE THE DIESEL GENERATOR

JPM NUMBER: PBN JPM P064.005aCOT **REV.** 3

TASK NUMBER(S) / TASK TITLE(S): P064.005.COT
SECURE THE EMERGENCY DIESEL GENERATOR

K/A NUMBERS:		K/A VALUE:
	064 A1.03	3.2 / 3.3
	064 A3.03	3.4 / 3.3
	064 A3.06	3.3 / 3.4
	064 A4.01	4.0 / 4.3
	064 A4.02	3.3 / 3.4

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** ____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]
Simulator: [X] Other: [ ]
Lab: [ ]

Time for Completion: 20 Minutes Time Critical: No

Alternate Path [NRC]: No
Alternate Path [INPO]: No

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☒
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR#	PREPARER SUPERVISOR	DATE DATE
Rev. 3	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

Initial Setup:

- Load an IC where conditions support 100% steady state conditions.
- Start the simulation.
- Using TS-81 as a guide, start emergency diesel generator G-01 in the Exercise mode.
- Parallel emergency diesel generator G-01 to 1A-05 and increase load to 2600-2700 kW and 300-800 KVAR.
- 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 MALFUNCTIONS:

SIMULATOR OVERRIDES:

SIMULATOR REMOTE FUNCTIONS:

Required Materials: TS 81, Emergency Diesel Generator G-01 Monthly

General References: TS 81, Emergency Diesel Generator G-01 Monthly

Task Standards: The examinee secures G-01, Emergency Diesel Generator in accordance with TS 81, Emergency Diesel Generator G-01 Monthly.

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:

- G-01, Emergency Diesel Generator is running loaded after an exercise start in accordance with TS 81, Emergency Diesel Generator G-01 Monthly.
- TS 81 has been completed through Step 5.50.
- Attachment B, Fuel Oil Transfer System Surveillance, has been completed.
- An Auxiliary Operator is stationed at G-01, Emergency Diesel Generator.

INITIATING CUES (IF APPLICABLE):

- The full-load run time requirements have been met and the OS orders G-01, Emergency Diesel Generator to be secured in accordance with TS 81, Emergency Diesel Generator G-01 Monthly; beginning at Step 5.51.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 **Critical N**	5.51 **WHEN** G-01 has run a minimum of 60 min. at full load, (2600-2700 kW and 300-800 KVARs), **THEN PERFORM** the following: 5.51.1 **ENSURE** G-01 Emergency Diesel Generator Logsheet LOADED PRIOR TO SHUTDOWN Section is **COMPLETE**.
Standard:	The examinee checks with the test Auxiliary Operator(s) to ensure the G-01 Emergency Diesel Generator Log sheet LOADED PRIOR TO SHUTDOWN Section is complete.
Evaluator Cue:	The test Auxiliary Operator(s) reports that the G-01 Emergency Diesel Generator Logsheet LOADED PRIOR TO SHUTDOWN Section is completed.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 2 **Critical N**	5.51 **WHEN** G-01 has run a minimum of 60 min. at full load, (2600-2700 kW and 300-800 KVARs), **THEN PERFORM** the following: 5.51.2 **IF** required, **THEN** ENSURE Attachment E, **G-01EDG Vibration** is **COMPLETE**.
Standard:	The examinee checks to see if test was required.
Evaluator Cue:	Attachment E, G-01 EDG Vibration has been completed.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 3 **Critical Y**	5.51 **WHEN** G-01 has run a minimum of 60 min. at full load, (2600-2700 kW and 300-800 KVARs), **THEN PERFORM** the following: 5.51.3 **REDUCE** load to about 300 kW with G-01 Diesel Generator Governor control switch.
Standard:	The examinee reduces load to about 300 kW (100 – 500 kW) using the G-01 Diesel Generator Governor control switch.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 4 **Critical Y**	5.51 **WHEN** G-01 has run a minimum of 60 min. at full load, (2600-2700 kW and 300-800 KVARs), **THEN PERFORM** the following: 5.51.4 **DRIVE** KVARs to zero with G-01 Generator Voltage Regulator control switch**.**
Standard:	The examinee drives KVARs to zero using the G-01 Generator Voltage Regulator control switch.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 5 **Critical Y**	5.51 **WHEN** G-01 has run a minimum of 60 min. at full load, (2600-2700 kW and 300-800 KVARs), **THEN PERFORM** the following: 5.51.5 **PLACE** 1A52-60-CS, G-01 Diesel Generator to Bus 1A-05 Breaker Control switch to TRIP AND record time.
Standard:	The examinee places the control switch for the G-01 Diesel Generator to Bus 1A-05 breaker, 1A52-60 to the trip position. (critical) Records the time. (not critical)
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 6 **Critical N**	5.52 Record G-01 total time at full load (step 5.51.5 minus step 5.42).
Standard:	The examinee records the G-01 total time at full load.
Evaluator Cue:	Total time is 68 minutes.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 7 **Critical N**	5.53 Perform the following on 1A52-60: 5.53.1 **CLOSE** 1-271X-B03/A05-TS knife switches on 1A52-60: • Knife Switch F • Knife Switch H 5.53.2 **CLOSE** 1-272X-B03/A05-TS knife switches on 1A52-60 • Knife Switch F • Knife Switch H 5.53.3 **INSTALL** and **TIGHTEN** the plastic switch cover for 1-271X-B-3/A-05-TS. 5.53.4 **INSTALL** and **TIGHTEN** the plastic switch cover for 1-272X-B03/A05-TS. 5.53.5 **REMOVE** Danger – Energized Electrical Equipment signs.
Standard:	The examinee directs the test Auxiliary Operator(s) to perform Step 5.53 and to report back when completed.
Evaluator Cue:	The test Auxiliary Operator(s) reports that Step 5.53 has been completed.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 8 **Critical N**	5.54 **VARY** G-01 output voltage approximately +100 and -100 volts from nominal voltage to wipe the voltage regulator potentiometer.
Standard:	The examinee manipulates the G-01 Diesel Generator Voltage Regulator control switch to vary G-01 output voltage approximately +100 and -100 volts from nominal voltage to wipe the voltage regulator potentiometer.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 9 **Critical Y**	5.55 **ADJUST** G-01 frequency to 60 Hz.
Standard:	The examinee positions the G-01 Diesel Generator Governor Control Switch to obtain 60 Hz. (59.7 – 60.3 Hz)
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 10 Critical Y	5.56 **ADJUST** G-01 voltage to 4160 VAC.
Standard:	The examinee Positions the G-01 Diesel Generator Voltage Regulator control switch to obtain 4050 – 4300 volts.
Evaluator Note:	After the examinee adjusts G-01 voltage, initial for Step 5.57 and provide the following cue:
Evaluator Cue:	Step 5.57; Independent verification of G01 EDG settings has been completed.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 11 Critical N	5.58 **ENSURE** Sump Tank level is greater than 400 gallons.
Standard:	The examinee checks with the test Auxiliary Operator(s) to ensure that the G-01 sump tank level is greater than 400 gallons.
Evaluator Cue:	The test Auxiliary Operator(s) report that the G-01 sump tank level is 450 gallons. If asked, sump tank pumps are off.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 12 **Critical Y**	5.59 **PLACE** G-01 Diesel Generator Control Switch to STOP.
Standard:	The examinee places the G-01 Diesel Generator Control Switch to the Stop position
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 13 **Critical Y**	5.60 **IF** required to reset misalignment light, **THEN PLACE** 1A52-60-CS to TRIP, **AND BACK TO** AUTO.
Standard:	The examinee places 1A52-60 G-01 Diesel Generator to Bus 1A-05 breaker control switch to the Trip position and then to the Auto position.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 14 **Critical N**	5.61 **IF** required to reset misalignment light, **THEN PLACE** 2A52-73-CS to TRIP, **AND BACK TO** AUTO.
Standard:	The examinee N/As the step.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 15 Critical Y	5.62 **PLACE** G-01 Diesel Generator Mode selector switch to AUTO to return G-01 to standby status.
Standard:	The examinee places the G-01 Diesel Generator Mode selector switch to the Auto position to return G-01 to a standby status.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

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

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- G-01, Emergency Diesel Generator is running loaded after an exercise start in accordance with TS 81, Emergency Diesel Generator G-01 Monthly.
- TS 81 has been completed through Step 5.50.
- Attachment B, Fuel Oil Transfer System Surveillance, has been completed.
- An Auxiliary Operator is stationed at G-01, Emergency Diesel Generator.

INITIATING CUES (IF APPLICABLE):

- The full-load run time requirements have been met and the OS orders G-01, Emergency Diesel Generator to be secured in accordance with TS 81, Emergency Diesel Generator G-01 Monthly; beginning at Step 5.51.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: Test High Flux at Shutdown Alarm

JPM NUMBER: PBN JPM P015.004a.COT **REV.** 2

TASK NUMBER(S) / TASK TITLE(S): PBN P015.004.COT
Monitor the Nuclear Instrument System for Proper Operation

K/A NUMBERS: 015.A3.02 **K/A VALUE:** 3.7 / 3.9

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]
Simulator: [X] Other: [ ]
Lab: [ ]

Time for Completion: 10 Minutes Time Critical: No

Alternate Path [NRC]: No
Alternate Path [INPO]: No

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☒	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☒
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR#	PREPARER SUPERVISOR	DATE DATE
Rev. 2	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS:
Initial Setup:

- Load IC-14 (both units shutdown and draindown) or similar IC.
- 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.
- Set up Source Range counter as follows:
    - Audio multiplier set to "1K"
    - Display/Preset = Counts/Sec
    - Thunbwheel = 00100
    - Start pushbutton depressed – Gate light is lit
- 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 MALFUNCTIONS:

SIMULATOR OVERRIDES:

SIMULATOR REMOTE FUNCTIONS:

Required Materials: RP-1A, Preparation for Refueling, Attachment D

General References: RP-1A, Preparation for Refueling
RP-1A, Preparation for Refueling, Attachment A, Reactor Vessel Head Lift Check off Data Sheet

Task Standards: High Flux at Shutdown Alarm tested satisfactorily

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 BOP.
- Unit 1 has just been drained down in preparation for removing the Reactor Vessel Head.
- The crew is performing RP-1A, Preparation for Refueling, Attachment A, Reactor Vessel Head Lift Checkoff Data Sheet.
- Both Source Range Detectors N-31 and N-32 are in service.
- There is an Auxiliary Operator stationed in Containment to support RP-1A, Attachment A evolutions.

INITIATING CUES (IF APPLICABLE):

- The SRO has requested that you perform Attachment D, Test the High Flux at Shutdown Alarm, to support the completion of RP-1A, Attachment A, Reactor Vessel Head Lift Checkoff Data Sheet.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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 **Critical Y**	1.0 Test N-31 if in service (otherwise N/A) 1.1 On N-31 **PLACE** the "Level Trip" switch to BYPASS, to enable "Operator Select" switch.
Standard:	The examinee positions the Level Trip switch to BYPASS.
Evaluator Note:	An alarm will come in at 1C04 and N-31 cabinet when this switch is positioned.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 2 **Critical Y**	1.0 Test N-31 if in service (otherwise N/A) 1.2 On N-31 **POSITION** the "Operator Select" switch to the "LEVEL ADJUST" position.
Standard:	The examinee positons the Operator Select switch to the "LEVEL ADJUST" position.
Evaluator Note:	An alarm will come in at 1C04 and N-31 cabinet when this switch is positioned.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 3 **Critical Y**	1.0 Test N-31 if in service (otherwise N/A) 1.3 **UNLOCK** and **INCREASE** level adjust potentiometer to **INCREASE** counts to bring in alarm. **VERIFY** alarm in both control and containment.
Standard:	The examinee: • Adjusts the Level adjust potentiometer up to increase counts **AND** • Verifies alarms in both control and containment.
Evaluator Note:	An alarm will come in at 1C04 and N-31 cabinet when this pot is adjusted.
Evaluator Cue:	When AO is contacted, inform examinee that the audible alarm has been received in containment.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 4 **Critical N**	1.0 Test N-31 if in service (otherwise N/A) 1.4 **REPOSITION** level adjust back to zero and **LOCK**. **VERIFY** alarms **CLEAR**.
Standard:	The examinee: • Adjusts the Level adjust potentiometer back to zero **AND** • Verifies alarms clear.
Evaluator Note:	An alarm will clear on 1C04 and N-31 cabinet when this pot is re-positioned.
Evaluator Cue:	When the AO is contacted, report alarm is clear.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 5 **Critical Y**	1.0 Test N-31 if in service (otherwise N/A) 1.5 **POSITION** "Operator Selector" switch to NORMAL.
Standard:	The examinee re-positions the Operator Selector switch to NORMAL.
Evaluator Note:	An alarm will clear on 1C04 and N-31 cabinet when this switch is re-positioned.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Performance Step: 6 **Critical Y**	1.0 Test N-31 if in service (otherwise N/A) 1.6 **POSITION** "Level Trip" switch to NORMAL.
Standard:	The examinee re-positions the Level Trip switch to NORMAL.
Evaluator Note:	An alarm will clear on 1C04 and N-31 cabinet when this switch is re-positioned.
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	

Terminating Cues: The JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- You are the Unit 1 BOP.
- Unit 1 has just been drained down in preparation for removing the Reactor Vessel Head.
- The crew is performing RP-1A, Preparation for Refueling, Attachment A, Reactor Vessel Head Lift Checkoff Data Sheet.
- Both Source Range Detectors N-31 and N-32 are in service.
- There is an Auxiliary Operator stationed in Containment to support RP-1A, Attachment A evolutions.

INITIATING CUES (IF APPLICABLE):

- The SRO has requested that you perform Attachment D, Test the High Flux at Shutdown Alarm, to support the completion of RP-1A, Attachment A, Reactor Vessel Head Lift Checkoff Data Sheet.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: **Respond to Circulating Water Malfunction**

JPM NUMBER: **PBN JPM P000.052.COT** **REV. 1**

TASK NUMBER(S) / TASK TITLE(S): **PBN P000.052.COT Respond to Circulating Water System Malfunctions**

K/A NUMBERS: **075.A2.02** **K/A VALUE:** **2.5/2.7**

Justification (FOR K/A VALUES <3.0): **JPM to be used for ILT Exam**

TASK APPLICABILITY:
☒ **RO** ☒ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** ☐ **OTHER:** _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

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

Time for Completion: 20 Minutes Time Critical: NO

Alternate Path [NRC]: YES
Alternate Path [INPO]: YES

Developed by:	Instructor/Developer	Date
Reviewed by:	Instructor (Instructional Review)	Date
Validated by:	SME (Technical Review)	Date
Approved by:	Training Supervision	Date
Approved by:	Training Program Owner	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

REVIEW STATEMENTS		YES	NO	N/A
1.	Are all items on the signature page filled in correctly?	☒	☐	☐
2.	Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3.	Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4.	Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	☐
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?	☒	☐	☐
6.	Has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7.	If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8.	Is the job level appropriate for the task being evaluated if required?	☒	☐	☐
9.	Is the K/A appropriate to the task and to the licensee level if required?	☒	☐	☐
10.	Is justification provided for tasks with K/A values less than 3.0?	☐	☐	☒
11.	Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
12.	Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☒	☐	☐
13.	Are all references identified, current, accurate, and available to the trainee?	☒	☐	☐
14.	Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	☐
15.	Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.)	☒	☐	☐
16.	If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge.	☒	☐	☐

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

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR #	PREPARER SUPERVISOR	DATE DATE
Rev. 0	New JPM				
Rev. 1	Updated for the 2017 NRC ILT Exam.				

SIMULATOR SET-UP:

1. Develop an IC with Unit 2 on Ice Melt, (per OI-38)
2. Override lake temperatures and ambient air temperatures to frazzle ice conditions
3. Ensure unit 2 is on full ice melt (CW-1 full open, CW-3 shut)
4. Have PPCS page 2192, Pump House, displayed on PPCS drops 101A and 108A
5. Save IC for multiple uses
6. Prior to starting JPM ensure MET recorder has CW System trends called up

SIMULATOR MALFUNCTIONS:

MALFUNCTION No.	MALFUNCTION TITLE	DELAY	RAMP	ET	DELETE IN	INITIAL VALUE	FINAL VALUE	NOTES
MAL1CWS002A	U1 Traveling Screen plugging		90	1		55	75	PLE
MAL1CWS002A	U1 Traveling Screen plugging						55	PRELOAD
XMT1CWS003A	0-TE3599-2 North Outer Ring H-Pile Fixed Output					39.1	33.3	PRELOAD
XMT1CWS005A	0-TE3599-4 Unit 2 Inlet Temp RTD Fixed Output					39	33.2	PRELOAD
XMT1CWS007A	0-TE3599-6 Unit 2 Inlet Temp RTD Fixed Output					39.4	34.6	PRELOAD
XMT1CWS008A	0-TE3599-7 Forebay Temp RTD Fixed Output					39.32	32.9	PRELOAD

SIMULATOR OVERRIDES:

None

SIMULATOR REMOTE FUNCTIONS:

MALFUNCTION No.	MALFUNCTION TITLE	DELAY	RAMP	ET	DELETE IN	INITIAL VALUE	FINAL VALUE	NOTES
ENV1MET003	Primary Tower 45M Temperature					56	19.5	PRELOAD
ENV1MET007	Primary Tower 10 Temp (M1TL)					55	21	PRELOAD
ENV1MET015	Inside Ambient Air Temperature					21	21	PRELOAD
ENV1MET014	Inland Tower Temp (M3TL)					19.5	19.5	PRELOAD

Required Materials: AOP-13A Circulating Water System Malfunction

General References: AOP-13A Circulating Water System Malfunction
EOP-0 Reactor Trip or Safety Injection
OI 38, Circulating Water System Operations

Task Standards: Respond per AOP-13A to a loss of circulating water: tripping Unit 1 reactor, performing immediate actions, and follow on AOP actions to shut MSIVs and stop Circulating Water Pump.

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 2 is on Ice Melt per OI 38, Circulating Water System Operations
- 2CW-1 Ice Melt Valve is 100% Open
- 2CW-3 Seal Well Outlet Valve is Closed
- C01A 4-5, Traveling Screen Differential Level High, alarm is in.
- Due to lowering circulating water temperatures and traveling screen alarm, AOP-13A Circulating Water System Malfunction was entered by OS1.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to start implementing AOP-13A, starting with Step 1, while he starts making notifications.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

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.

Evaluator Note: To account for variations in examinee pace, Steps 1 through 12 of AOP-13A are included as non-critical steps (JPM steps 1 through 13). Once forebay level drops to -11.5 ft, the examinee should go to AOP Step 2 per Foldout Page (JPM Step 14).

Performance Step: 1 **Critical N**	1. Circulating Water System - INTACT
Standard:	The examinee verifies that the Circ Water system is intact by no turbine hall alarms lit in control room.
Evaluator Cue:	**There are no reports from the field of pipe ruptures.**
Evaluator Note:	**Booth Operator**: enter **Trigger 1** as the examinee starts the JPM.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 2
Critical N
	2. Check Circulating Water Pumps – ONLY ONE RUNNING PER UNIT
	• Unit 1
	  ○ 1P-30A
	  ○ 1P-30B
	• Unit 2
	  ○ 2P-30A
	  ○ 2P-30B

Standard:	The examinee verifies only one circulating pump running per unit.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 3 **Critical N**	3. Check Forebay Level - GREATER THAN -11.5 FEET • PPCS point 1LT-3586B • PPCS point 2LT-3586B • YR-5832
Standard:	The examinee verifies Forebay level > -11.5 ft.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 4 **Critical N**	4. Check Forebay Level - GREATER THAN -13 FEET • PPCS point 1LT-3586B • PPCS point 2LT-3586B • YR-5832
Standard:	The examinee verifies Forebay level > -13 ft.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 5 **Critical N**	5. Check South Pumpbay Level - GREATER THAN -11.5 FEET • PPCS point 1LT-3586A • YR-5832
Standard:	The examinee verifies South Pumpbay level > -11.5 ft.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 6 **Critical N**	6. Check North Pumpbay Level - GREATER THAN -11.5 FEET • PPCS point 2LT-3586A • YR-5832
Standard:	The examinee verifies North Pumpbay level > -11.5 ft.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 7 **Critical N**	7. Check Level in Both Pumpbays - GREATER THAN -11.5 FEET • PPCS point 1LT-3586A • PPCS point 2LT-3586A • YR-5832
Standard:	The examinee verifies Both Pumpbay levels > -11.5 ft.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 8 **Critical N**	8. Check Forebay AND BOTH Pumpbay Level's - GREATER THAN -11.5 FEET • PPCS point 1LT-3586A • PPCS point 2LT-3586A • PPCS point 1LT-3586B • PPCS point 2LT-3586B • YR-5832
Standard:	The examinee verifies Forebay and both Pumpbay levels > -11.5 ft.
Performance:	**SATISFACTORY** ____ **UNSATISFACTORY** ___
Comments:	_____

Performance Step: 9 **Critical N**	9. Check at Least One Unit At Power
Standard:	The examinee verifies both units are at power.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 10 **Critical N**	10. Stop Liquid Discharges
Standard:	The examinee determines no discharges need to be stopped.
Evaluator Cue:	**When asked, there are no discharges currently in progress.**
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 11 **Critical N**	11. Check Any Unit Aligned For Ice Melt Operation
Standard:	The examinee determines Unit 2 is aligned for ice melt operations.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 12 **Critical N**	12. Check Circulating Water Inlet Temperature – Greater Than 38ºF • YR-5832
Standard:	The examinee determines temperature is below 38ºF and transitions to the RNO.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 13 **Critical N**	12. RNO Raise intake crib temperature a. Fully open ice melt valve • CW-1. b. Throttle seal well outlet valve to establish intake temperature greater than 38ºF. • CW-3
Standard:	The examinee notes CW-1 is fully open and CW-3 is fully closed.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 14 **Critical N**	Foldout Page monitored to determine Forebay or Pump Bay levels less than -11.5 feet
Standard:	The examinee determines Forebay and/or Pump Bay level < -11.5 feet and returns back to Step 2.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 15
Critical N
	2. Check Circulating Water Pumps – ONLY ONE RUNNING PER UNIT
	• Unit 1
	  ○ 1P-30A
	  ○ 1P-30B
	• Unit 2
	  ○ 2P-30A
	  ○ 2P-30B

Standard:	The examinee verifies only one Circulating Pump running per unit.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 16 **Critical N**	3. Check Forebay Level - GREATER THAN -11.5 FEET • PPCS point 1LT-3586B • PPCS point 2LT-3586B • YR-5832
Standard:	The examinee verifies Forebay level > -11.5 ft.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 17 **Critical N**	4. Check Forebay Level - GREATER THAN -13 FEET • PPCS point 1LT-3586B • PPCS point 2LT-3586B • YR-5832
Standard:	The examinee verifies Forebay level > -13 ft.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 18 **Critical N**	5. Check South Pumpbay Level – GREATER THAN -11.5 FEET • PPCS point 1LT-3586A • YR-5832
Standard:	The examinee verifies Forebay level is less than -11.5 ft and goes to the RNO.
Evaluator Note:	**Only RNO steps requiring actions are contained in the following steps.**
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 19 **Critical N**	Step 5 RNO Perform the following: a. Enter TRM TLCO 3.7.7 action condition B for both units. b. Enter TS LCO 3.6.6 action condition C for both units.
Standard:	The examinee informs the OS of the need to enter TRM TLCO 3.7.7 action condition B for both units and, TS LCO 3.6.6 action condition C for both units.
Evaluator Cue:	**IF directed, THEN acknowledge the need to enter TRM TLCO 3.7.7 action condition B for both units and, TS LCO 3.6.6 action condition C for both units.**
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 20 **Critical Y**	Step 5 RNO Perform the following: e. Trip Unit 1 reactor
Standard:	The examinee trips Unit 1 reactor by depressing the Reactor Trip Pushbuttons.
Evaluator Cue:	**IF asked, THEN direct the examinee to carry out the RNO Actions.**
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 21 **Critical Y**	Step 5 RNO Perform the following: f. Stabilize plant using EOP's while continuing with this procedure
Standard:	The examinee performs immediate actions of EOP 0 for Unit 1. • Reactor Tripped (yes) • Turbine Tripped (yes) • Safeguards Buses Energized (yes from offsite) • Check if SI is required (not required)
Evaluator Cue:	**Cue examinee after completion of immediate actions, that they have been verified so continue with AOP-13A actions.**
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 22 **Critical Y**	Step 5 RNO Perform the following: g. Shut both Unit 1 MSIVs • MS-2018 • MS-2017
Standard:	The examinee shuts Unit 1 MSIV's by positioning 1MS-2017-CS and 1MS-2018-CS to CLOSE after immediate actions completed.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Performance Step: 23 **Critical Y**	Step 5 RNO Perform the following: i. Stop both Unit 1 circulating water pumps: • **1P-30A** • 1P-30B
Standard:	The examinee takes the control switch for the operating circulating water pump (1P-30A) to STOP.
Performance:	**SATISFACTORY ____ UNSATISFACTORY ___**
Comments:	_____

Terminating Cues: **This completes the JPM**

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____ **Evaluator:** _____

☐ **RO** ☐ **SRO** ☐ **STA** ☐ **Non-Lic** ☐ **SRO CERT** **Date:** _____

☐ **LOIT RO** ☐ **LOIT SRO**

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

Remediation required: **YES** ☐ **NO** ☐

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

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

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.

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 2 is on Ice Melt per OI 38, Circulating Water System Operations
- 2CW-1 Ice Melt Valve is 100% Open
- 2CW-3 Seal Well Outlet Valve is Closed
- C01A 4-5, Traveling Screen Differential Level High, alarm is in.
- Due to lowering circulating water temperatures and traveling screen alarm, AOP-13A Circulating Water System Malfunction was entered by OS1.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to start implementing AOP-13A, starting with Step 1, while he starts making notifications.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.