

JPM TITLE: RESET A RECIRC MG SCOOP TUBE LOCKUP

JPM NUMBER: 202002-02

REV. 17

TASK NUMBER(S) / TASK TITLE(S): 12.11
RESET SCOOP TUBE LOCKUP

K/A NUMBERS: 202002 A2.05

K/A VALUE: 3.1 / 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: ☒

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

Simulator: ☒ 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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: NONE

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.

[illegible]

SIMULATOR SET-UP:

SIMULATOR SETUP INSTRUCTIONS:

1. Reset to snapshot IC
2. If snapshot IC is not available then perform the following:
 - Reset to IC 20 and place in RUN (other two-loop high power ICs are acceptable, but validate first)
 - Insert Malfunction RR17a as specified in the table, then delete at 10 seconds
 - Allow power and level to stabilize and then insert control rods in reverse sequence to lower load line to approximately 100%
 - The setup may now be saved as an IC or snapshot for repeated use
3. Verify SIC9245A & B to display "S"
4. Clear DEV ALRM by depressing the ACK soft key
5. Clear recorders by pressing the button behind 1C05 OR using the SCHEDULE FILE. (perform for each use of the JPM)
6. Circle slash steps in 1C04A (C-5) including: 2.2, 3.1, 3.3, 3.4 (note positions in turnover), 3.5a,b, 3.6, 4.1. Only circle the following: 3.2, 3.7, 4.2.

SIMULATOR MALFUNCTIONS:

Key	Description	Delay	Inserted	Ramp	Initial	Value	Final
rr17a	RECIRC M-G FLOW CTRLR FAILS, AUTO/MAN MODES- M-G A (VERIFY DELETE IN 10 SECONDS)	00:00:00 Delete in 10 sec.		00:00:00		AS IS	50

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: OI 264, Reactor Recirculation System

General References:

1. OI 264, Rev. 139
2. ARP 1C04A , Rev. 63

Task Standards:

1. Adjust Setpoint S-% to approximately match the Scoop Tube Position P-%
2. Reset scoop tube lock by momentarily placing handswitch B31A-S3A to RESET

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:

The initial conditions that I read may not **exactly** match the simulator setup, assume that the conditions that I read you are **the correct** plant conditions.

- Reactor power is at approximately 95%
- "A" Recirc MG set scoop tube locked up when "A" Recirc pump speed changed due a problem in the positioner controller
- ARP 1C04A (C-5) has been completed
 - The following parameters values have been recorded:
 1. P (Percent Position) 60.0
 2. S (Setpoint) – 78.0
 3. V (Controller Output) – 77.8
 4. X (Percent speed) – 87.0
 5. Pump discharge flow – 25 kgpm
 - The local scoop tube positioner power switch has been verified ON
 - The scoop tube positioner overloads have been verified RESET (they were not tripped)
 - The cause has been determined to be a test lead left loose in the positioner controller. The lead has been removed, the positioner verified satisfactory, and CR written

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to reset the "A" Recirc MG set scoop tube lockout

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: Critical <u>N</u> (SEQ-1) OI 264, Step 10.2, NOTE	<p style="text-align: center;"><u>NOTE</u></p> <p>Any parameter (P, S, V or X) may be selected for digital display; however, controller adjustments using the control knob can only be made when SETPOINT (S) is selected.</p> <p>During a reset from a scoop tube lockout / deviation lockup condition, annunciator (1C08A C-8, [1C08A B-8]) inverter overload alarm may be received.</p>
Standard:	The Operator reviews and placekeeps NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: Critical <u>N</u> (SEQ-2) OI 264, Step 10.2, CRS	<p align="center"><u>CONTINUOUS RECHECK STATEMENT</u></p> <p>IF Recirc MG speed becomes unstable during this procedure, THEN immediately relock the scoop tube by momentarily placing the A[B] SCOOP TUBE CONTROL hand switch on 1C04 to the LOCKED position.</p>
Standard:	The Operator reviews and placekeeps CONTINUOUS RECHECK STATEMENT
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: Critical <u>N</u> (SEQ-3) OI 264, Step 10.2, (1)	<p>If A[B] Recirc MG is running with either a 20% or 45% Runback in effect, then perform ARP 1C04A, D-2 [D-8] prior to resetting the Scoop Tube Lockout.</p>
Standard:	The Operator determines that a Runback signal does not need to be reset (Initial Conditions stated that problem was the Positioner controller), and marks step N/A.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: Critical <u>N</u> (SEQ-4) OI 264, Step 10.2, NOTE	<p style="text-align: center;"><u>NOTE</u></p> <p>If the scoop tube lockout was the result of a deviation alarm, "DEV ALRM" will be flashing on the second display line, and the (L) & (S) led's will be flashing on SIC9245A[B].</p>
Standard:	The Operator reviews and placekeeps NOTE.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: Critical <u>N</u> (SEQ-5) OI 264, Step 10.2, (2) a) – (f)	<p>If a DEV ALRM is flashing on SIC9245A[B], clear the DEV ALRM by performing the following, otherwise N/A:</p> <ul style="list-style-type: none"> (a) Press the Acknowledge button (ACK) on SIC9245A[B]. (b) Verify the DEV ALRM clears on the second display line, and the (L) & (S) led's stop flashing but remain lit. (c) Verify Scoop Tube Position P-%. (d) Adjust Setpoint S-% to be less than P-%. (e) Verify the (L) & (S) led's clear. (f) Proceed to either following step (3) or (5) as applicable to reset the scoop tube lockout.
Standard:	The Operator determines that a DEV ALRM is NOT flashing and N/A's the entire step.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: Critical <u>N</u> (SEQ-6)	<u>NOTE</u>
OI 264, Step 10.2, (3) NOTE	For low core flow or single loop operation conditions (i.e., < 27 Mlbm/hr), Core Plate dP can be obtained from PDR/FR-4528. The Core Flow vs. Core Plate dP graph should be used to determine core flow in Mlbm/hr. (Reference Appendix B in STP 3.4.1-02).
Standard:	The Operator reviews and placekeeps NOTE.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-7)	If A[B] Recirc MG Set is running, reset the Scoop Tube Lockout as follows: (a) Verify Scoop Tube Position P-%.
OI 264, Step 10.2, (3) (a)	
Standard:	The Operator verifies Scoop Tube Position P-%.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>Y</u>(SEQ-8) OI 264, Step 10.2, (3) (b)	(b) Adjust setpoint S-% to approximately match Scoop Tube Position P-%.
Standard:	The Operator adjusts Setpoint S-% to approximately match Scoop Tube Position P-%.
Evaluator Note:	The Operator has to adjust the Setpoint to scoop tube Position within $\pm 4.6\%$ in order to prevent another scoop tube lockout. "S" should be adjusted to exactly match "P" but may be $\pm 0.1\%$.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u>(SEQ-9) OI 264, Step 10.2, (3) (c)	(c) Verify controller output V-% approximately matches Scoop Tube Position P-%.
Standard:	The Operator depresses the "D" key until "V" is displayed and verifies controller output V-% approximately matches Scoop Tube Position P-%.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>Y</u>(SEQ-10) OI 264, Step 10.2, (3) (d)	(d) At 1C04, reset scoop tube lock by momentarily placing handswitch B31A-S3A[B] to RESET and then verify the following:
Standard:	The Operator resets the scoop tube lock by momentarily placing handswitch B31A-S3A to RESET.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u>(SEQ-11) OI 264, Step 10.2, (3) (e)	(e) Annunciator 1C04A, C-5[1C04B, C-2], "A[B] RECIRC MG SCOOP TUBE LOCK" resets.
Standard:	The Operator verifies Annunciator 1C04A, C-5, "A RECIRC MG SCOOP TUBE LOCK" resets.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u>(SEQ-12) OI 264, Step 10.2, (3) (f)	(f) Amber SCOOP TUBE LOCKED Light located at 1C04 (above A[B] Scoop Tube Control handswitch B31A-S3A[B]) is OFF.
Standard:	The Operator verifies Amber SCOOP TUBE LOCKED Light located at 1C04 (above A Scoop Tube Control handswitch B31A-S3A) is OFF.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	<hr/>

Performance Step: Critical <u>N</u> (SEQ-13)	Verify that the Recirc pump speed is stable by observing the following parameters:
OI 264, Step 10.2, (3) (g)	<ul style="list-style-type: none"> • SETPOINT (S) • Percent Position (P) • Percent Speed (X) • Recirc pump discharge flow • Total core flow • Core pressure drop • APRM readings
Standard:	The Operator verifies that the Recirc pump speed is stable by observing the following parameters:
	<ul style="list-style-type: none"> • SETPOINT (S) • Percent Position (P) • Percent Speed (X) • Recirc pump discharge flow • Total core flow • Core pressure drop • APRM readings
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	<hr/>

Performance Step: Critical <u>N</u>(SEQ-14) OI 264, Step 10.2, (3) (h)	Verify that SETPOINT (S) is selected for digital display.
Standard:	The Operator verifies that SETPOINT (S) is selected for digital display.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 15 Critical <u>N</u> OI 264, Step 10.2, (4)	Restore reactor power per CRS/OSM direction.
Standard:	The Operator informs the CRS that the scoop tube lockout is reset and/or requests direction for restoring power.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Terminating Cues: When direction for restoring Reactor power is requested, inform the Operator that 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:

The initial conditions that I read may not **exactly** match the simulator setup, assume that the conditions that I read you are **the correct** plant conditions.

- Reactor power is at approximately 95%
- "A" Recirc MG set scoop tube locked up when "A" Recirc pump speed changed due a problem in the positioner controller
- ARP 1C04A (C-5) has been completed
 - The following parameters values have been recorded:
 1. P (Percent Position) 60.1
 2. S (Setpoint) – 78.1
 3. V (Controller Output) – 78.0
 4. X (Percent speed) – 87.0
 5. Pump discharge flow – 25 kgpm
 - The local scoop tube positioner power switch has been verified ON
 - The scoop tube positioner overloads have been verified RESET (they were not tripped)
 - The cause has been determined to be a test lead left loose in the positioner controller. The lead has been removed, the positioner verified satisfactory, and CR written

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to reset the "A" Recirc MG set scoop tube lockout

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

JOB PERFORMANCE MEASURE

JPM TITLE: INITIATE LPCI FOLLOWING SHUTDOWN COOLING ISOLATION SIGNAL

JPM NUMBER: 205000-02 **REV.** 10

TASK NUMBER(S) / TASK TITLE(S): 2.17
PERFORM LPCI INITIATION WHILE IN SDC

K/A NUMBERS: 205000 **K/A VALUE:** A2.05 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: ☒

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

Time for Completion: 15 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

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REVIEW STATEMENTS	YES	NO	N/A
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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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

{C001}

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[illegible]

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

SIMULATOR SETUP INSTRUCTIONS:

1. Set up in any MODE 4 IC with the "B" RHR Loop in Shutdown Cooling per OI-149.
2. Verify that no LPCI Initiation signal is present.
3. Verify that there is no RPV injection from the Condensate and Feed System.
4. Verify that the following pumps are secured and hang Warning Tags on their handswitches (also override their indicating lights):
 - "A" Core Spray Pump
 - "B" Core Spray Pump
 - Manually drive in the "A" and "B" Core Spray Trip/overload Annunciators to simulate breaker racked down
5. Secure the running CRD pump.
6. Use RWCU (Defeat is needed) and MO-1936 and MO-1937 (which isolate at 170") and RWCU as necessary to drain the RPV to <119.5 inches. Should be about 100 inches on the Yarways at the start of the JPM.
7. Verify that LPCI LOOP Select has occurred.
8. Close RHR Loop "B" Ht Exh Bypass valve MO-1940.
9. Place the SDC tags per the OI 149, Attachment 7, for "B" RHR in SDC injecting to "B" Loop of RR.
 - Components listed in the Shutdown Cooling Tags placed for "B" RHR Loop in SDC, with the exception of 1B4430 and V-19-20.
 - MO-4628 "B" RR pump discharge
10. Shut MSIVs and MSIV drains.

SIMULATOR MALFUNCTIONS: NONE

SIMULATOR OVERRIDES:

Key	Description	Delay	Inserted	Ramp	Initial	Value	Final
DI-RH-088	HS-2010 CROSS HEADER MOV-2010	00:00:00		00:00:00		OPEN	CLOSE
DO-CS-003	HS-2103(1) PUMP 1P- 211A (WHITE)	00:00:00		00:00:00		ON	OFF
DO-CS-004	HS-2103(2) PUMP 1P- 211A (GREEN)	00:00:00		00:00:00		OFF	OFF
DO-CS-005	HS-2103(3) PUMP 1P- 211A (AMBER)	00:00:00		00:00:00		OFF	OFF
DO-CS-006	HS-2103(4) PUMP 1P- 211A (RED)	00:00:00		00:00:00		ON	OFF
DI-CS-008	HS-2103 PUMP 1P-211A	00:00:00		00:00:00		NASP	NASP
DI-CS-017	HS-2123 PUMP 1P-211B	00:00:00		00:00:00		NASP	NASP
DI-RH-092	HA-2014 RHR PUMP 1P-229A	00:00:00		00:00:00		NASP	NASP
DI-RH-095	HA-2014 RHR PUMP 1P-229C	00:00:00		00:00:00		NASP	NASP
DO-CS-020	HS-2123(1) PUMP 1P- 211B (WHITE)	00:00:00		00:00:00		ON	OFF
DO-CS-021	HS-2123(2) PUMP 1P- 211B (GREEN)	00:00:00		00:00:00		OFF	OFF
DO-CS-022	HS-2123(3) PUMP 1P- 211B (AMBER)	00:00:00		00:00:00		OFF	OFF
DO-CS-023	HS-2123(4) PUMP 1P- 211B (RED)	00:00:00		00:00:00		ON	OFF

SIMULATOR REMOTE FUNCTIONS:

Key	Description	Delay	Inserted	Ramp	Initial	Value	Final
cs03	MANUAL OPER OF "A" CS PUMP (1P-211A BREKER)	00:00:00		00:00:00		NORM	OPEN
cs04	MANUAL OPER OF "B" CS PUMP (1P-211B BREKER)	00:00:00		00:00:00		NORM	OPEN

Required Materials: Keys for keylocked switches

OI 149, Section 5.2.

General References: OI 149, Rev. 161.

Task Standards:

1. MO-1905 isolation signal is reset.
2. MO-1912 and MO-1920 are closed.
3. MO-1913 and MO-1921 are open.
4. RHR pump(s) are started.
5. RPV injection established through the "B" RHR Heat Exchanger Bypass

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:

- The plant is in Mode 4.
- Shutdown cooling was in operation with "B" RHR loop.
- The following systems are unavailable:
 - Both Core Spray pumps
 - Condensate system
 - CRD pumps
- The reactor was inadvertently drained and the drain down has been stopped.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to line up and restore RPV level to greater than 170" with RHR in the LPCI mode of operation.

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 <u>N</u> OI 149, Section 5.2, Subsection 5.2.1, Step (1)	Verify MO-1908 and MO-1909 INBD and OUTBD SHUTDOWN CLG ISOL valves on 1C03, CLOSED.
Standard:	MO-1908 and 1909 are closed (green indicating lights lit).
Evaluator Note:	Student begins at Section 5.2 of OI 149
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2 Critical <u>Y</u> OI 149, Section 5.2, Subsection 5.2.1, Step (2)	When MO-1908 and MO-1909 are fully closed, reset MO-1905 and 2003 isolation signal by depressing MO-1905 and 2003 GROUP 4 ISOL SEALED-IN reset pushbuttons HS-1905B and HS-2003B on 1C03.
Standard:	Depresses HS-1905B and HS-2003B GROUP 4 ISOL SEALED-IN reset pushbuttons.
Evaluator Note:	Student should also verify that the associated amber light is off. Depressing HS-2003 is not critical because the "A" RHR Loop is not being aligned.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 3 Critical <u>Y</u> OI 149, Section 5.2, Subsection 5.2.1, Step (3)	Close RHR Pump Shutdown Cooling Suction Valves on 1C03: <table border="1"> <thead> <tr> <th>Valve</th> <th>Description</th> <th>Position</th> </tr> </thead> <tbody> <tr> <td colspan="3">Loop A:</td> </tr> <tr> <td>MO 2011</td> <td>A PUMP SHUTDOWN CLG SUCTION</td> <td>CLOSE</td> </tr> <tr> <td>MO 2016</td> <td>C PUMP SHUTDOWN CLG SUCTION</td> <td>CLOSE</td> </tr> <tr> <td colspan="3">Loop B:</td> </tr> <tr> <td>MO 1912</td> <td>B PUMP SHUTDOWN CLG SUCTION</td> <td>CLOSE</td> </tr> <tr> <td>MO 1920</td> <td>D PUMP SHUTDOWN CLG SUCTION</td> <td>CLOSE</td> </tr> </tbody> </table>	Valve	Description	Position	Loop A:			MO 2011	A PUMP SHUTDOWN CLG SUCTION	CLOSE	MO 2016	C PUMP SHUTDOWN CLG SUCTION	CLOSE	Loop B:			MO 1912	B PUMP SHUTDOWN CLG SUCTION	CLOSE	MO 1920	D PUMP SHUTDOWN CLG SUCTION	CLOSE
Valve	Description	Position																				
Loop A:																						
MO 2011	A PUMP SHUTDOWN CLG SUCTION	CLOSE																				
MO 2016	C PUMP SHUTDOWN CLG SUCTION	CLOSE																				
Loop B:																						
MO 1912	B PUMP SHUTDOWN CLG SUCTION	CLOSE																				
MO 1920	D PUMP SHUTDOWN CLG SUCTION	CLOSE																				
Standard:	Closes MO-1912 and MO-1920.																					
Evaluator Note:	Student may close these valves one at a time or concurrently. Since the B loop was previously in SDC the MO-1912 and MO-1920 valves would have to be closed.																					
Performance:	SATISFACTORY _____ UNSATISFACTORY _____																					
Comments:	_____																					

Performance Step: 4 Critical <u>Y</u>	Open the RHR Pump Torus suction valves on 1C03 for the loop that was in Shutdown Cooling:		
OI 149, Section 5.2, Subsection 5.2.1, Step (4)	<u>Valve</u>	<u>Description</u>	<u>Position</u>
	Loop A:		
	MO 2012	A PUMP TORUS SUCTION	OPEN
	MO 2015	C PUMP TORUS SUCTION	OPEN
	Loop B:		
	MO 1913	B PUMP TORUS SUCTION	OPEN
	MO 1921	D PUMP TORUS SUCTION	OPEN
Standard:	Opens MO-1913 and MO-1921.		
Evaluator Note:	<p>Applicants may remove the SDC In Service tags for components they manipulate.</p> <p>Since the B loop was previously in SDC the MO-1913 and MO-1921 valves would have to be opened.</p>		
Performance:	SATISFACTORY _____ UNSATISFACTORY _____		
Comments:	_____		

Performance Step: 5 Critical <u>N</u>	<u>CAUTION</u>		
OI 149, Section 5.2, Subsection 5.2.1, CAUTION prior to Step (5)	V-19-48 RHR LOOP CROSSTIE may be difficult to open during LOCA conditions due to environmental and radiological hazards. It should only be opened to ensure adequate core cooling.		
Standard:	Reads and placekeeps the CAUTION		
Performance:	SATISFACTORY _____ UNSATISFACTORY _____		
Comments:	_____		

Performance Step: 6 Critical <u>N</u> OI 149, Section 5.2, Subsection 5.2.1, Step (5)	If necessary to align available RHR pumps with an available injection path, then open the applicable RHR Cross-Tie valve:									
	<table border="1"> <thead> <tr> <th><u>Valve</u></th> <th><u>Description</u></th> <th><u>Position</u></th> </tr> </thead> <tbody> <tr> <td>V-19-48</td> <td>RHR LOOP CROSSTIE</td> <td>OPEN</td> </tr> <tr> <td>MO-2010</td> <td>RHR CROSSTIE</td> <td>OPEN</td> </tr> </tbody> </table>	<u>Valve</u>	<u>Description</u>	<u>Position</u>	V-19-48	RHR LOOP CROSSTIE	OPEN	MO-2010	RHR CROSSTIE	OPEN
<u>Valve</u>	<u>Description</u>	<u>Position</u>								
V-19-48	RHR LOOP CROSSTIE	OPEN								
MO-2010	RHR CROSSTIE	OPEN								
Standard:	The operator can restore level without opening MO-2010.									
Evaluator Note:	MO-2010 is failed closed.									
Comments:										

Performance Step: 7 Critical <u>Y</u> OI 149, Section 5.2, Subsection 5.2.1, Step (6)	Align an injection path to the RPV as follows: If LPCI Loop Select has selected a loop, confirm injection valves have automatically opened. If LPCI Loop Select has NOT selected a loop, manually align the LPCI inject path by opening MO-2003[1905].
Standard:	Confirms inject valves for 'B' RHR are open.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 8 Critical <u>Y</u>	Start A and C [B and D] RHR PUMP 1P 229A and C [B and D] by placing the associated handswitch on 1C03 in STOP and then to the START position:	
OI 149, Section 5.2, Subsection 5.2.1, Step (7)	<u>Handswitch</u>	<u>Description</u>
	HS 2014 [1915]	A[B] RHR PUMP 1P 229A[B]
	HS 2018 [1923]	C[D] RHR PUMP 1P 229C[D]
Standard:	Starts at least 1 RHR pump.	
Evaluator Note:	<p>Since there is no leak, one pump will restore level. The procedure is written to start all 4 pumps.</p> <p>The operator may close MO-1939, "B" RHR HX INLET. If so, then MO-1939 or MO-1940 must be opened once the pump is running in order to establish a flowpath.</p>	
Performance:	SATISFACTORY _____ UNSATISFACTORY _____	
Comments:	_____	

Performance Step: 9 Critical <u>N</u>	Throttle MO-2004[1904] as needed to control RPV level. Place HS-2004C [1904C] LPCI Open Interlock Override to OVERRIDE as needed.	
OI 149, Section 5.2, Subsection 5.2.1, Step (8)		
Standard:	Throttle MO-1904 as needed to control RPV level.	
Performance:	SATISFACTORY _____ UNSATISFACTORY _____	
Comments:	_____	

Terminating Cues: Once applicant recognizes that RPV level is greater than 170" 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:

- The plant is in Mode 4.
- Shutdown cooling was in operation with "B" RHR loop.
- The following systems are unavailable:
 - Both Core Spray pumps
 - Condensate system
 - CRD pumps
- The reactor was inadvertently drained and the drain down has been stopped.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to line up and restore RPV level to greater than 170" with RHR in the LPCI mode of operation.

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

JOB PERFORMANCE MEASURE

JPM TITLE: Install DEFEAT 1, start RCIC using the OI 150 QRC 1, and raise reactor water level greater than 211 inches

JPM NUMBER: 217000-20 **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): 95.11, Perform EOP Defeat 1
3.05, Perform Rapid Start for EOP Use

K/A NUMBERS: 217000 A4.01 **K/A VALUE:** 3.7 / 3.7

Justification (FOR K/A VALUES <3.0): N/A

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]: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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} NONE

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

SIMULATOR SETUP INSTRUCTIONS:

- 1.
- 2.

SIMULATOR MALFUNCTIONS:

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: EOP Defeat 1, Current Revision
OI 150 QRC 1, Current Revision

General References: EOP Defeat 1, Rev. 3
OI 150 QRC 1, Rev. 3

Task Standards:

1. Place HS-2437 in OVERRIDE
2. Open MO-2404, RCIC Turbine Steam Supply Valve
3. Open MO-2512, RCIC Inject Valve

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

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

INITIAL CONDITIONS:

- A manual reactor scram has been inserted
- EOP 1, RPV Control, has been entered
- Loss of electrical high pressure injection sources is anticipated

INITIATING CUES (IF APPLICABLE):

The Control Room Supervisor (CRS) has directed you to:

- Insert EOP Defeat 1, RCIC Low RPV Pressure Isolation and 211" Defeat
- Use OI 150 QRC 1, RCIC Rapid Start, to raise reactor water level to maintain a reactor water level of 220 to 258 inches.

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: Critical <u>N</u> (SEQ-1)	NOTE Placing E51A-SA[B] in OVERRIDE/TEST, or HS-2437 or HS-2400A in OVERRIDE will activate annunciator RCIC STEAM LINE ISOLATION OVERRIDE (1C14B, B-5).
Standard:	Placekeeps NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-2)	At 1C33, place MO2400 AUTO OPEN SIGNAL OVERRIDE keylock switch HS-2400A in OVERRIDE position and confirm amber light is ON.
Standard:	MO2400 AUTO OPEN SIGNAL OVERRIDE keylock switch HS-2400A in OVERRIDE position and confirms amber light is ON.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>Y</u>(SEQ-3)	At 1C30, place MO2401 AUTO OPEN SIGNAL AND RPV HI LEVEL OVERRIDE keylock switch HS-2437 in OVERRIDE position and confirm amber light is ON.
Standard:	MO2401 AUTO OPEN SIGNAL AND RPV HI LEVEL OVERRIDE keylock switch HS-2437 in OVERRIDE position and confirms amber light is ON.
Evaluator Note:	APED-E51-009 <2> shows that HS-2437 is required to permit RCIC to raise reactor water level greater than 211 inches. Verification of the amber light is NOT critical.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u>(SEQ-4)	At 1C30, place LO STM PRESS ISOL OVERRIDE keylock switch E51A-SA in OVERRIDE/TEST position.
Standard:	Place LO STM PRESS ISOL OVERRIDE keylock switch E51A-SA in OVERRIDE/TEST position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-5)	At 1C33, place RCIC LO STM PRESS ISOL OVERRIDE keylock switch E51A-SB in OVERRIDE/TEST position.
Standard:	Place RCIC LO STM PRESS ISOL OVERRIDE keylock switch E51A-SB in OVERRIDE/TEST position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-6)	If there is no RCIC initiation signal (1C05A, B-1) REACTOR LO-LO LEVEL TRIP present, operate RCIC per OI 150 as needed for pressure and level control.
Standard:	Verify RCIC initiation signal (1C05A, B-1) REACTOR LO-LO LEVEL TRIP <u>IS NOT</u> present and transition to OI 150 QRC 1.
Evaluator Note:	The student may placekeep the NOTE (or "N/A") and "N/A" Step 6a through 6j prior to transitioning to OI 150 QRC 1.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-7)	(1) If desired to operate RCIC in the CST to CST mode: (a) Open MO-2316 , Redundant Shutoff Valve. (b) Open MO-2515 , RCIC Test Bypass Valve, to 44-46% open.
Standard:	Placekeeps steps with "N/A"
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-8)	Verify MO-2511, RCIC Pump Discharge Valve, is open.
Standard:	Verify MO-2511, RCIC Pump Discharge Valve, is open.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-9)	Open MO-2426, RCIC Lube Oil Cooler Supply Valve.
Standard:	Open MO-2426, RCIC Lube Oil Cooler Supply Valve.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-10)	Start 1P-227, RCIC Vacuum Pump.
Standard:	Start 1P-227, RCIC Vacuum Pump.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-11)	(5) If RCIC was previously tripped manually, perform the following: (a) Close MO-2405 Turbine Stop Valve Motor Control (b) Place & Hold HS-2405 in the open position until full open
Standard:	Placekeeps steps with "N/A"
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>N</u> (SEQ-12)	CAUTION If injection to the RPV is desired, be prepared to open RCIC Inject Valve MO-2512 immediately after MO-2404 is opened to prevent a possible RCIC turbine overspeed trip.
Standard:	Placekeeps CAUTION
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>Y</u> (SEQ-13)	Open MO-2404, RCIC Turbine Steam Supply Valve.
Standard:	Open MO-2404, RCIC Turbine Steam Supply Valve.
Evaluator Note:	Simulator Malfunction STRC01 will prevent an automatic start and injection of RCIC.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: Critical <u>Y</u> (SEQ-14)	For RPV injection, immediately open MO-2512, RCIC Inject Valve.
Standard:	Open MO-2512, RCIC Inject Valve.
Evaluator Note:	The student may use FIC-2509, RCIC Flow Control, and adjust injection rate into the reactor vessel.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Terminating Cues: When RCIC is injecting into the reactor vessel and reactor water level demonstrates a rising vessel level, the task is complete.

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

Stop Time: _____



217000-20, Install DEFEAT 1, start RCIC using the OI 150 QRC 1,
and raise reactor water level greater than 211 inches, Rev. 0

JPM
Page 12 of
13

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:

- A manual reactor scram has been inserted
- EOP 1, RPV Control, has been entered
- Loss of electrical high pressure injection sources is anticipated

INITIATING CUES (IF APPLICABLE):

The Control Room Supervisor (CRS) has directed you to:

- Insert EOP Defeat 1, RCIC Low RPV Pressure Isolation and 211" Defeat
- Use OI 150 QRC 1, RCIC Rapid Start, to raise reactor water level to maintain a reactor water level of 220 to 258 inches.

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



JOB PERFORMANCE MEASURE

JPM
Page 1 of 17

JPM TITLE: Perform Containment Venting with a PCIS Group 3 Signal with less than 2 PSIG DW

JPM NUMBER: 223001-06

REV. 7

TASK NUMBER(S) / TASK TITLE(S): 42.08 / PERFORM CONTAINMENT VENTING WITH A PCIS GROUP 3 SIGNAL WITH LESS THAN 2 PSIG DW

K/A NUMBERS: 223001

K/A VALUE: A1.01 3.5/3.6

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: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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} ACE 001729, Review recommendation 4 of OE 001501.

{C002} CA046394, Improvements needed for Operations Simulator JPMs.

[illegible]

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

SIMULATOR SETUP INSTRUCTIONS:

1. Simulator Setup Instructions:
2. Reset to any at-power IC.
3. Go to RUN.
4. Insert any malfunction that will establish approximately 1.5 psig Drywell pressure.
5. Remove malfunction and allow for Drywell pressure to lower just below 1.5 psig to allow for 1C05B (B-1) to clear along with any other annunciator(s).
6. Insert malfunctions per the table below.

SIMULATOR EVENTS:

Trigger No.	Trigger Logic Statement	Trigger Word Description
1	ZDIPCHS4310(2) == 1	HS-4310 DRYWELL EXH BYP ISO

SIMULATOR MALFUNCTIONS:

TIME	MALFUNCTION #	MALFUNCTION TITLE	ET	DELAY	RAMP	Initial	Final
Setup	RM03RE7606A	RE-7606A REACTOR BLDG MAIN EXHAUST A loss of HV	1	5 SEC		Inactive	Active

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: OI 573
Keys for HS 4303, HS 43410, HS 8100A, HS 8100A, HS 8100B, and keylock switches S430G, S430H, and A710-S34.

General References: OI 573, Rev. 95

- Task Standards:**
1. Start one train of Standby Gas Treatment System per OI 170.
 2. Keylock switches A71B-S430G and A71B-S430H on 1C03 to the BYPASS position.
 3. Handswitch A71B-S34 to the DRYWELL position.
 4. Handswitches for CV-4303 and CV-4310 placed in OVERRIDE 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:

- It was recently noted that a low pressure weather system is moving through Eastern Iowa and Drywell pressure has been slowly rising.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to vent the DRYWELL to maintain 1.0-1.5 psig in accordance with OI-573 Section 6.1, Containment Atmosphere Control System.

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	Monitor drywell and torus pressure indications on 1C03 and pressure trend indications on 1C09 and 1C29.
Standard: OI 573 Section 6.1 (5)	Operator should check indications of drywell and torus pressure
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:2 Critical N	CAUTION Completely depressurizing the Primary Containment when inerted may cause containment oxygen concentrations to increase.
Standard: OI 573 Section 6.1 (Caution)	Operator will note and check the caution
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:3 Critical N	<p>If it is intended to lower drywell pressure below 1 psig or torus pressure below 1" WG, isolate makeup Nitrogen as follows:</p> <p style="text-align: center;"> HS-4311 CONT N₂ MAKEUP SUPPLY ISOL CLOSED HS-4312 DW N₂ MAKEUP INLET ISOL CLOSED HS-4313 TORUS N₂ MAKEUP INLET ISOL CLOSED </p>
Standard: OI 573 Section 6.1 (6)	Operator will N/A the above valve positions due to drywell pressure band given in turnover.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:4 Critical N	<p style="text-align: center;">CAUTION</p> <p>When venting drywell and/or torus, Standby Gas Treatment System inlet pressure of +10" WG as indicated on PI-4303 SBTG INLET PRESSURE on 1C03 should NOT be exceeded. SBTG inlet relief damper will relieve at +10" WG into the Reactor Building 786' level near the SBTG Room.</p>
Standard: OI 573 Section 6.1 (Caution)	Operator will note and check the caution
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:5 Critical N	If time permits, Post warning signs on the outside of the SBTG room doors 256 and 263 alerting personnel of venting.
Standard: OI 573 Section 6.1 (7)	Operator contacts in-plant operator to post these doors or notifies the CRS of this requirement.
Evaluator Cue:	IF contacted as the CRS, role play as CRS and state that another operator will ensure these doors are posted and to continue. IF contacted as an in-plant operator, acknowledge the request and report that the doors are posted.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:6 Critical Y	Line up to vent drywell by positioning the following switch: HS-4303 OUTBD DRYWELL VENT ISOL CV-4303 AUTO/OPEN
Standard: OI 573 Section 6.1 (8)	Operator will take HS-4303 to AUTO OPEN
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:7 Critical Y	Vent the drywell by positioning the following switch: HS-4310 INBD DW VENT BYPASS ISOL CV-4310 AUTO/OPEN

Standard: OI 573 Section 6.1 (9)	Operator will take HS-4310 to AUTO OPEN
Evaluator Cue:	<p>5 seconds after HS-4310 is taken to AUTO OPEN RE-7606A (Reactor Building Main Plant Exhaust Rad Monitor) will experience a trip causing a Group 3A to occur. This will isolate the established venting flowpath.</p> <p>When contacted as the CRS, role play and tell the operator that upon investigation it has been determined that the Reactor Building Vent Shaft Rad Monitor has an Inoperable signal and another operator will take care of the ARP actions and that venting of the Drywell is the priority and is still required to be maintained between 1.0 to 1.5 psig, per OI 573.</p>
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:8 Critical N	Monitor Drywell and Torus pressure indications on 1C03 and pressure trend indications on 1C09 and 1C29.
Standard: OI 573 Section 6.2 (1)	Operator should check indications of drywell and torus pressure
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:9 Critical N	Verify the Standby Gas Treatment System is in operation per OI 170.
Standard: OI 573 Section 6.2 (2)	Operator will note that SBTG is already running per the turnover, but, may confirm prior to proceeding.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:10 Critical N	If time permits, post warning signs on the outside of the SBT room doors 256 and 263 alerting personnel of venting.
Standard: OI 573 Section 6.2 (3)	Operator will note that this has been recently done, however, may still tell the CRS.
Evaluator Cue:	<p>IF contacted as the CRS, role play as CRS and state that another operator will ensure these doors are posted and to continue.</p> <p>IF contacted as an in-plant operator, acknowledge the request and report that the doors are posted.</p>
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:11 Critical N	<p>After verification of Group 3 Isolation, open CONT H2/O2 AND RAD SAMPLING VALVES by taking the following handswitches on 1C29 to OVERRIDE:</p> <p>HS-8101A OUTBD SAMPLE ISOLATION VALVES HS-8100A INBD SAMPLE ISOLATION VALVES HS-8101B OUTBD SAMPLE ISOLATION VALVES HS-8100B INBD SAMPLE ISOLATION VALVES</p>
Standard: OI 573 Section 6.1 (4)	The operator takes the four handswitches on 1C29, HS 8101A/B and HS 8100A/B to override.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:12 Critical N	<p><u>NOTE</u> AR-4381A/B and AR-4382A/B do not indicate unless H2-O2 Analyzers are in service.</p>

Standard: OI 573 Section 6.2 (NOTE)	Operator will mark the note
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:13 Critical N	Monitor the containment atmosphere on the following instruments: NW DRYWELL AREA HI RANGE RAD MONITOR RR AND RIM-9184A 1C09A S DRYWELL AREA HI RANGE RAD MONITOR RR AND RIM-9184B 1C09B CONTAINMENT H2/O2 CONCENTRATION AR-4381A/B 1C09A CONTAINMENT H2/O2 CONCENTRATION AR-4382A/B 1C09B CONTAINMENT ATMOSPHERE RADIATION RR-4379A 1C29 CONTAINMENT ATMOSPHERE RADIATION RR-4379B 1C29 PRIMARY CONTAINMENT % O2 MONITOR AI-8102 1C219B
Standard: OI 573 Section 6.2 (5)	The operator monitors 1C09 and 1C29 for any increasing trends.
Evaluator Cue:	When the candidate reads Step 5 of OI 573; section 6.2, role play as the CRS and inform the candidate that the STA will monitor the containment for hydrogen and oxygen concentrations.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:14 Critical N	If necessary, place H2-O2 Analyzers in service per OI 873.
Standard: OI 573 Section 6.2 (5a)	Operator will mark step as N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:15 Critical N	If utilizing the 0-25% scale for oxygen as determined by the position of HS9A / HS9B, multiply recorder reading on AR4381B / AR4382B by 10 and utilize Appendix 2 to determine the proper value.
Standard: OI 573 Section 6.2 (6)	Operator will mark step as N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:16 Critical N	If utilizing the 0-20% scale for hydrogen as determined by the position of HS2A / HS2B, multiply recorder reading on AR4381A / AR4382A by 10 and utilize Appendix 3 to determine the proper value.
Standard: OI 573 Section 6.2 (7)	Operator will mark the step as N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:17 Critical N	<p style="text-align: center;"><u>CAUTION</u></p> <p>Torus BYPASS VENT THROTTLE valve MO-4309A should remain open during emergency operations, because these valves are powered from non-essential buses. When SBT is running, the SBT inlet relief should not lift while venting through the bypass lines, even with these throttle valves full open.</p>
Standard: OI 573 Section 6.2 (Caution)	Operator will mark the caution
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:18 Critical N	Monitor SBTG INLET PRESSURE PI-4303 on 1C03 while venting is in progress.
Standard: OI 573 Section 6.2 (8)	Operator will acknowledge and mark the step
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:19 Critical N	<p>To vent EITHER the drywell or torus through the bypass lines, perform the following:</p> <p style="text-align: center;"><u>NOTE</u></p> <p>If a loss of 24 VDC Div I[II] has occurred, RIS-4131A[B] Refuel Floor Exhaust Rad Monitor Trip Auxiliary Unit A[B] will be tripped with no annunciator. To vent containment, A71B-S430A[B] FUEL POOL EXH HI RAD will need to be in BYPASS as well as A71B-S430J[K] OFFGAS VENT PIPE HI-HI RAD.</p>
Standard: OI 573 Section 6.2 (9 NOTE)	Operator will mark the note
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:20 Critical Y	<p>To vent EITHER the drywell or torus through the bypass lines, perform the following:</p> <p>Override INBD [OUTBD] GROUP 3 ISOL SIG BYPASS FOR CONT VENT as necessary by placing the appropriate keylocked switch(es) on 1C03 in BYPASS:</p> <p>A71B-S430A[B] FUEL POOL EXH HI RAD BYPASS</p>

Standard: OI 573 Section 6.2 (9a)	Operator places keylock switches A71B-S430A on 1C03 to the BYPASS position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:21 Critical Y	<p>To vent EITHER the drywell or torus through the bypass lines, perform the following:</p> <p>On 1C05, place CONTAINMENT VENT PATH SELECT A71B-S34 in the desired position, either drywell or torus.</p>
Standard: OI 573 Section 6.1 (9b)	Operator places A71B-S34 to the DRYWELL position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:22 Critical Y	<p>To vent EITHER the drywell or torus through the bypass lines, perform the following:</p> <p>Vent the drywell by placing the following valves in OVERRIDE:</p> <p>CV-4303 OUTBD DRYWELL VENT ISOL CV-4310 INBD DW VENT BYPASS ISOL</p>

Standard: OI 573 Section 6.1 (9c)	HS for CV-4303 and CV-4310 placed in OVERRIDE position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues: After a lowering of Drywell pressure is observed, inform the operator that another operator will take over venting responsibilities and that the JPM is complete.

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

Stop Time: _____



223001-06, Perform Containment Venting with a PCIS Group 3
Signal with less than 2 PSIG DW, Rev. 7

JPM
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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:

- It was recently noted that a low pressure weather system is moving through Eastern Iowa and Drywell pressure has been slowly rising.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to vent the DRYWELL to maintain 1.0-1.5 psig in accordance with OI-573 Section 6.1, Containment Atmosphere Control System.

JPM TITLE: Perform Required Actions for Transferring Essential Bus from the SBDG to the Startup Transformer

JPM NUMBER: 264000-05 **REV. 12**

TASK NUMBER(S) / TASK TITLE(S): 15.08, Transfer Essential Bus from Standby Diesel Generator to Startup Transformer.

K/A NUMBERS: A4.05 **K/A VALUE:** (3.6/3.7)
A2.01 (3.5/3.6)

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: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

[illegible]

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

SIMULATOR SETUP INSTRUCTIONS:

1. Set up in any IC with AC power supplied to either essential bus.
2. Start the appropriate ESW pump.
3. With the UNIT/PARALLEL switch in Simulator or in UNIT, place 1G-21 onto bus 1A4 and trip 1A402.
4. Turn off SYNC switch and remove.
5. Place BUS 1A4 TRANSFER switch to AUTO.
6. Ensure that when sync switch is placed in sync, indications are not matched, with running volts greater than incoming volts.

SIMULATOR MALFUNCTIONS:NONE

SIMULATOR OVERRIDES:NONE

SIMULATOR REMOTE FUNCTIONS:NONE

Required Materials: OI 304.2, Section 7.1

General References: OI 304.2, Rev. 96

Task Standards:

1. 1A4 transfer breaker mode selector switch to manual.
2. Synchroscope energized across breaker 1A402.
3. Synchroscope rotating in a slow clockwise direction.
4. 1A402 breaker closed.
5. 1A411 is open.

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:

- Standby diesel generator 1G-21 is supplying 1A4 due to an earlier loss of power to the 1A4 bus.
- The UNIT/PARALLEL Switch is in UNIT.
- Maintenance is completed on the faulty breakers.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to transfer 1A4 to the startup transformer in accordance with OI 304.2.

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	NOTE Per TS 3.8.1 bases, an Offsite Circuit is considered OPERABLE when either connected to the essential bus or has slow transfer capability to energize the essential bus. One of these conditions must be met for BOTH essential buses to be Operable. (i.e. Operable for both, or Operable for neither).
Standard:OI 304.2 Section 7.1 (NOTE)	Informs CRS to enter appropriate Tech Specs
Evaluator Cue:	If informed to enter appropriate Tech Specs, acknowledge communication
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:2 Critical N	Verify DEGRADED VOLTAGE 1A4 is reset at 1C08.
Standard: OI 304.2 Section 7.1 (1)	The operator verifies that the 1A4 Degraded Voltage Relay is reset.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:3 Critical N	If in Mode 1, 2, or 3, verify the following Tech Spec conditions are entered
Standard: OI 304.2 Section 7.1 (2)	Informs CRS to enter appropriate Tech Specs
Evaluator Cue:	If informed to enter appropriate Tech Specs, acknowledge communication
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:4 Critical N	If in Mode 4 or 5 and the required essential bus is being transferred, verify TS 3.8.2 Condition B is entered.
Standard: OI 304.2 Section 7.1 (3)	This step is N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:5 Critical N	<p align="center">NOTE</p> <p>With IDLE-RATED SWITCH in RATED and GOVERNOR MODE SWITCH (DROOP) in PARALLEL, the SBDG is considered inoperable but available. These switch positions disable the auto swap to UNIT (isochronous) mode of operation.</p>
Standard: OI 304.2 Section 7.1 (NOTE)	Operator placekeeps the NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:6 Critical N	At 1C94, verify HS-3281B, IDLE-RATED SWITCH, in RATED.
Standard: OI 304.2 Section 7.1 (4)	Contact Operator to verify
Evaluator Cue:	When contacted to verify Handswitch positions, inform the operator that HS-3281B IDLE RATED SWITCH is in RATED
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:7 Critical N	<u>NOTE</u> Expect 4KV BUS AUTO TRANSFER INOP (1C08A, D-7) in the next step.
Standard: OI 304.2 Section 7.1 (NOTE)	Operator placekeeps NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:8 Critical Y	Place BUS 1A4 TRANSFER switch in MANUAL.
Standard: OI 304.2 Section 7.1 (5)	The operator places the 1A4 transfer breaker mode switch in the manual positions.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:9 Critical N	Adjust B DIESEL GENERATOR 1G-21 VOLTAGE ADJUST control to maintain B DIESEL GENERATOR 1G-21 VOLTS meter at approximately 4160 volts.
Standard: OI 304.2 Section 7.1 (6)	The operator adjusts the DG voltage adjust knob such that bus voltage is 4160.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:10 Critical N	Adjust B DIESEL GENERATOR 1G-21 SPEED ADJUST control to maintain B DIESEL GENERATOR 1G-21 FREQUENCY meter at 60 hertz.
Standard: OI 304.2 Section 7.1 (7)	The operator adjust 1G-21 speed adjust to obtain bus frequency of 60.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:11 Critical N	<u>NOTE</u> The following step will cause the speed and voltage of the diesel to change slightly.
Standard: OI 304.2 Section 7.1 (NOTE)	Operator placekeeps NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:12 Critical N	Place the GOVERNOR MODE SWITCH (DROOP) HS-3234B on 1C94 in the PARALLEL position.

Standard: OI 304.2 Section 7.1 (8)	The operator calls NSPEO to change Droop Switch for the running SBDG.
Evaluator Cue:	When called to change Droop Switch, insert dg11 to PARALLEL and inform operator that the Droop Switch is in PARALLEL
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:13 Critical N	<u>CAUTION</u> Simultaneous use of two Synchronizing Scope Switches may result in significant equipment damage or unintentional breaker trips and lock outs.
Standard: OI 304.2 Section 7.1 (CAUTION)	Operator placekeeps CAUTION
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:14 Critical Y	Insert the handle in the SYNCHRONIZE switch for 4KV BREAKER 1A402 STARTUP TRANSFORMER TO BUS 1A4, place it in the ON position.
Standard: OI 304.2 Section 7.1 (9)	The operator inserts the handle in the synchronizing switch for the 1A402 breaker and places it in the ON position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:15 Critical N	<u>NOTE</u> The Diesel Generator is now the RUNNING (not incoming) supply. The effect on the synchroscope of adjusting the B DIESEL GENERATOR 1G-21 SPEED ADJUST control will be opposite when compared to the effect when the Diesel Generator is the INCOMING supply.
Standard: OI 304.2 Section 7.1 (NOTE)	Operator placekeeps NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:16 Critical N	Using the B DIESEL GENERATOR 1G-21 VOLTAGE ADJUST knob, adjust RUNNING VOLTS SYNCHRONIZE to slightly lower than INCOMING VOLTS SYNCHRONIZE.
Standard: OI 304.2 Section 7.1 (10)	The operator adjusts the DG voltage adjust knob such that running voltage is slightly lower than incoming voltage.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:17 Critical Y	Using the B DIESEL GENERATOR 1G-21 SPEED ADJUST, adjust diesel generator speed to obtain a slow, clockwise synchroscope rotation.
Standard: OI 304.2 Section 7.1 (11)	The operator adjust 1G21 speed adjust to obtain a slow clockwise rotation of the synchroscope.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:18 Critical Y	When the synchroscope is at the 12 o'clock position, momentarily place control switch 4KV BREAKER 1A402 STARTUP TRANSFER TO BUS 1A4 in the CLOSE position. Observe that the red (breaker closed) and white (closing spring charged) indicating lights are ON.
Standard: OI 304.2 Section 7.1 (12)	The operator takes the 1A402 breaker control switch to close such that the breaker closes at the 12 o'clock position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:19 Critical N	Reduce the load on the Diesel Generator to 50 KW by using the B DIESEL GENERATOR 1G-21 SPEED ADJUST control.
Standard: OI 304.2 Section 7.1 (13)	The operator reduces load on the running SBDG to 50 KW.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:20 Critical Y	Place the breaker control switch 4KV BREAKER 1A411 B DIESEL GENERATOR 1G-21 in the TRIP position. Observe that the green (breaker tripped) and white (closing spring charged) indicating lights are ON.
Standard: OI 304.2 Section 7.1 (14)	The operator opens the SBDG output breaker 1A411 by taking the breaker control switch to the trip position, and observing the breaker tripped (green) light is energized.
Evaluator Cue:	
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:21 Critical N	Place the SYNCHRONIZE switch for 4KV BREAKER 1A402 STARTUP TRANSFORMER TO BUS 1A4 in the OFF position, and remove the handle.
Standard: OI 304.2 Section 7.1 (15)	The operator places the 1A402 synchronizing switch in the OFF position, and removes the handle.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:22 Critical N	Place the BUS 1A4 TRANSFER switch in the AUTO position.
Standard: OI 304.2 Section 7.1 (16)	The operator places the 1A4 transfer breaker mode selector switch in the AUTO position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:23 Critical N	Select individual phases with the BUS 1A4 STARTUP XFMR AMPERES meter switch to observe the current load and to verify approximately equal phase currents.
Standard: OI 304.2 Section 7.1 (17)	The operator selects individual phases on the Startup Transformer Amperes meter switch to verify approximate equal loading on all phases of the startup transformer.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:24 Critical N	On the BUS 1A4 VOLTS meter, observe that all three phase-to-phase voltages indicate approximately 4160V by selecting each phase-to- phase position.

Standard: OI 304.2 Section 7.1 (18)	The operator selects each phase of the Startup transformer to verify all phases are approximately 4160 volts.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:25 Critical N	Place the B GOVERNOR MODE SWITCH (DROOP) HS-3234B at 1C94 in UNIT.
Standard: OI 304.2 Section 7.1 (19)	Notify NSPEO to place the Droop switch for the running SBDG to UNIT.
Evaluator Cue:	When contacted to place Droop switch in UNIT, insert dg11 to UNIT and inform operator that the Droop switch is in UNIT.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:26 Critical N	Adjust B DIESEL GENERATOR 1G-21 VOLTAGE ADJUST control to maintain B DIESEL GENERATOR 1G-21 VOLTS meter at approximately 4160 volts.
Standard: OI 304.2 Section 7.1 (20)	Adjusts running SBDG voltage output to 4160 volts
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:27 Critical N	Adjust B DIESEL GENERATOR 1G-21 SPEED ADJUST control to maintain B DIESEL GENERATOR 1G-21 FREQUENCY meter at 60 hertz.

Standard: OI 304.2 Section 7.1 (21)	Adjusts running SBDG frequency to 60 hertz.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues:

1. The startup transformer is supplying 1A4.
2. SBDG 1G-21 is running unloaded.
3. 1A411 is open.

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

Stop Time: _____



**264000-05, PERFORM REQUIRED ACTIONS FOR TRANSFERRING
ESSENTIAL BUS FROM THE SBDG TO THE STARTUP
TRANSFORMER, REV. 12**

JPM
Page 16 of
17

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:

- Standby diesel generator 1G-21 is supplying 1A4 due to an earlier loss of power to the 1A4 bus.
- The UNIT/PARALLEL Switch is in UNIT.
- Maintenance is completed on the faulty breakers.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to transfer 1A4 to the startup transformer in accordance with OI-304.2.

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

JOB PERFORMANCE MEASURE

JPM TITLE: Transfer A RPS from Alternate Power to the A MG-Set (AP)

JPM NUMBER: 212000-18 **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): 22.03
Transfer Power from Alternate Power Supply Source to A(B) Motor Generator Set

K/A NUMBERS: 212000 (A4.14) **K/A VALUE:** RO 3.8 / SRO 3.8

Justification (FOR K/A VALUES <3.0): N/A n b

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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: None

SIMULATOR SETUP INSTRUCTIONS:

1. Reset to any power IC
2. Perform the following steps in order:
 - a. At 1C04, close MO-2700 (allow RWCU pumps to trip)
 - b. At 1C04, throttle MO-2723 until dual indication is received
 - c. At 1C03, verify MO-4423 is closed
 - d. At 1C15, place C71B-S1A, RPS ALTERNATE POWER TRANSFER, switch to the ALT position
 - e. At 1C36, reset RIS-4131A, Fuel Pool Exhaust Radiation Monitor
 - f. At 1C05, press Div 1 and Div 2 Reset Pushbuttons

NOTE: Take a GE75 Key to place A SBT in Standby

 - g. At 1C24, reset L/R-5830A, Inboard Isolation Lockout Relay
 - h. At 1C24, use the GE75 Key to place HS-5814A, A SBT Mode Select, handswitch to MAN and then return to AUTO
 - i. Using REMOTE an13, acknowledge annunciators at 1C82
 - j. At 1C05, place hand switch C71A-S5 to positions Group 1 and then to Group 2 and 3 to reset Half Scram

NOTE: This event trigger must be created after C71B-S1A has been positioned to ALT

 - k. Create Event Trigger as described below
 - l. IF the JPM will be used more than once, save this IC to a SNAPSHOT for re-use.
 - m. Mark OI 358 Appendix 3, RPS Power Supply Transfer Half Scram Preparation Checklist as complete.
 - n. Mark OI 358 Section 6.2 Steps (1), (2) and the note above (1) as complete

SIMULATOR EVENT TRIGGERS:

EVENT ID	Event Code	Description
1	!zdirpc71bs1A == 1	Activate C APRM INOP

SIMULATOR MALFUNCTIONS:

Time	Malf #	Description	ET	Delay	Ramp	Initial	Value	Final
Setup	nm15c	APRM CHANNEL C FAILS INOPERATIVE	1				Inactive	Active

SIMULATOR OVERRIDES: NONE

SIMULATOR REMOTE FUNCTIONS: NONE

Required Materials: 1. OI 358, Reactor Protection System, Rev. 68

2. ARP 1C05A, Reactor Control, Rev. 83

General References: 1. OI 358, Reactor Protection System

2. ARP 1C05A, Reactor Control

Task Standards: 1. At 1C15, place the RPS ALTERNATE POWER TRANSFER switch C71B-S1A in the A-MG position

2. At 1C37, place the MODE switch S1 for the affect flow unit in a position other than OPERATE or STANDBY

3. Reset the half scram

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:

- Electrical maintenance has been completed on EPA A1 and EPA A2
- Transferring "A" RPS from the Alternate Power Supply Source to "A" Motor Generator Set is in progress
- OI 358 Appendix 3, RPS Power Supply Transfer Half Scram Preparation Checklist is complete for this transfer

INITIATING CUES (IF APPLICABLE):

- You are the Balance of Plant Operator
- The Control Room Supervisor directs you to transfer "A" RPS to "A" Motor Generator Set per OI 358, Reactor Protection System continuing at section 6.2, Power Transfer from Alternate Power Supply Source to A[B] Motor Generator Set, Step 3 and reset the half-scram.

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 <u>N</u> OI 358, 6.2(3) NOTE	<p style="text-align: center;"><u>NOTE</u></p> It is possible that the transfer of power may not result in Refuel Pool Radiation Monitor RIS-4141A/B alarm as expected due to the time delay in voltage decay of E/S4131A or E/S4131B.
Standard:	Operator reads and placekeeps NOTE
Evaluator Cue:	
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2 Critical <u>N</u> OI 358, 6.2(3) CAUTION	<p style="text-align: center;"><u>CAUTION</u></p> The RPS ALTERNATE POWER TRANSFER switches at 1C15 and 1C17 contain “break-before-make” contacts. The next step will result in a PCIS Groups 1 through 5 isolation (except MSIVs) signal and reactor half scram.
Standard:	Operator reads and placekeeps CAUTION
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 3 Critical <u>Y</u> OI 358, 6.2(3)	At 1C15, place the RPS ALTERNATE POWER TRANSFER switch C71B-S1A in the A-MG position
Standard:	The Operator places C71B-S1A in the A-MG position
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 4 Critical <u>N</u> OI 358, 6.2(4)	At 1C17 [1C15], verify the white ALT XFMR indicating light above the RPS ALTERNATE POWER TRANSFER switch turns ON.
Standard:	The Operator verifies at 1C17 and 1C15, that the white ALT XFMR indicating light above the RPS ALTERNATE POWER TRANSFER switch turns ON.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 5 Critical <u>N</u> OI 358, 6.2(5)	Complete RPS Power Supply Transfer Half Scram Recovery Checklist (Appendix 4)
Standard:	The Operator reads 6.2(5) and proceeds to Appendix 4, RPS Power Supply Transfer Half Scram Recovery Checklist
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 6 Critical <u>N</u> OI 358 Appendix 4 Caution	CAUTION When CV-4371A is overridden open, its PCIS function is inoperable. Enter the appropriate LCO action Statement.
Standard:	The Operator reads and placekeepsthe CAUTION
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 7 Critical <u>N</u> OI 358, Appendix 4 (1)	IF B RPS was deenergized AND PCIS Group 3 is not promptly restored, THEN complete substeps (1)(a) and (1)(b), otherwise, mark substeps (1)(a) and (1)(b) NA.
Standard:	The Operator reads and marks NA for substeps (1)(a) and (1)(b).
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 8 Critical <u>N</u> OI 358, Appendix 4 (2)	At 1C05, position REACTOR SCRAM RESET hand switch C71A-S5 to Group 1 and 4 [Group 2 and 3] and then to Group 2 and 3 [Group 1 and 4] to reset Half Scram.
Standard:	The Operator positions REACTOR SCRAM RESET hand switch C71A-S5 to Group 1 and 4 [Group 2 and 3] and then to Group 2 and 3 [Group 1 and 4] to reset Half Scram.
Evaluator Note:	<p>The Operator will identify that a APRM Upscale Trip or Inop is present or will identify that the A side half scram will not reset.</p> <p>Operator investigation should identify that 1C05A (B-2), APRM A, C, E UPSCALE TRIP OR INOP, or 1C05A (A-5), NEUTRON MONITORING SYSTEM TRIP is in and will take action in accordance with the ARP actions.</p> <p>The following performance steps are written for actions in 1C05A (B-2). If the operator takes actions per 1C05A (A-5) slight differences in the steps between the ARPs will not affect the operator need to bypass the affected APRM and reset the half scram.</p>
Evaluator Cue:	IF the operator states that the half scram cannot be reset OR IF asked for guidance: Cue the Operator: "Perform necessary ARP actions to allow the re-energization checklist to be completed."
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 9 Critical <u>N</u> ARP 1C05A (B-2) 3.1	Check the SCRAM GROUP A and B lights on 1C05 to determine if a full Reactor scram has occurred.
Standard:	The Operator checks SCRAM GROUP A and B lights on 1C05 and will determine that the half scram did not reset.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 10 Critical <u>N</u> ARP 1C05A (B-2) 3.2	If a full Reactor scram occurs, perform <u>IPOI 5 (Reactor Scram)</u>
Standard:	The Operator determines a full Reactor scram has not occurred and marks 3.2 N/A.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 11 Critical <u>N</u> ARP 1C05A (B-2) 3.3	Monitor APRM indications on Panels 1C05 and/or 1C37
Standard:	The Operator checks APRM indications and identifies 'C' APRM failed upscale. The Operator may inform the CRS of the upscale APRM.
Evaluator Note:	If informed, acknowledge the report.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 12 Critical <u>N</u> ARP 1C05A (B-2) 3.4 (a)	<u>If</u> only A RPS half scram has occurred: a. <u>If</u> any B RPS channel APRM is rapidly approaching or has exceeded its trip setpoint, manually scram the Reactor and perform <u>IPOI 5 (Reactor Scram)</u>
Standard:	The Operator determines no B RPS has or is approaching or exceeding its trip setpoint at 1C05 and marks 3.4 (a) N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 13 Critical <u>N</u> ARP 1C05A (B-2) 3.5	Suspend testing in progress on other RPS instrumentation.
Standard:	The Operator determines no testing is in progress and marks 3.5 N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 14 Critical <u>N</u> ARP 1C05A (B-2) 3.6	If the trip is due to a loss of power, perform <u>AOP 358 (Loss of RPS AC Power)</u> and comply with Technical Specification requirements for Reactor Protection System (RPS) Instrumentation.
Standard:	The Operator determines that power is still available by checking indications at 1C05 and/or 1C37 and marks 3.6 N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 15 Critical <u>N</u> ARP 1C05A (B-2) 3.7 (a)	If it is determined that an APRM has failed: a. Comply with Technical Specification requirements for Reactor Protection System (RPS) Instrumentation and the Technical Requirements Manual requirements for Control Rod Block Instrumentation.
Standard:	The Operator informs the CRS to comply with the TS and TRM requirements.
Evaluator Cue:	If asked, cue the Operator that the Technical Specification requirements for Reactor Protection System (RPS) Instrumentation and Technical Requirements Manual requirements for Control Rod Block Instrumentation are being complied with.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 16 Critical <u>Y</u> ARP 1C05A (B-2) 3.7 (b)	If it is determined that an APRM has failed: b. With permission from the CRS, bypass the affected APRM.
Standard:	The Operator requests permission and bypasses the 'C' APRM.
Evaluator Cue:	When asked, cue the Operator to the bypass the 'C' APRM.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 17 Critical <u>Y</u> ARP 1C05A (B-2) 3.8	Reset the half scram.
Standard:	The Operator positions REACTOR SCRAM RESET hand switch C71A-S5 to Group 1 and 4 [Group 2 and 3] and then to Group 2 and 3 [Group 1 and 4] to reset Half Scram.
Evaluator Note:	If ARP 1C05A (B-2) was used to bypass the
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 9 Critical <u>N</u> ARP 1C05A (B-2) 3.1	Check the SCRAM GROUP A and B lights on 1C05 to determine if a full Reactor scram has occurred.
Standard:	The Operator checks SCRAM GROUP A and B lights on 1C05 and will determine that the half scram did not reset.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 10 Critical <u>N</u> ARP 1C05A (B-2) 3.2	If a full Reactor scram occurs, perform <u>IPOI 5 (Reactor Scram)</u>
Standard:	The Operator determines a full Reactor scram has not occurred and marks 3.2 N/A.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 11 Critical <u>N</u> ARP 1C05A (B-2) 3.3	Monitor APRM indications on Panels 1C05 and/or 1C37
Standard:	The Operator checks APRM indications and identifies 'C' APRM failed upscale. The Operator may inform the CRS of the upscale APRM.
Evaluator Note:	If informed, acknowledge the report.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 12 Critical <u>N</u> ARP 1C05A (B-2) 3.4 (a)	<u>If</u> only A RPS half scram has occurred: a. <u>If</u> any B RPS channel APRM is rapidly approaching or has exceeded its trip setpoint, manually scram the Reactor and perform <u>IPOI 5 (Reactor Scram)</u>
Standard:	The Operator determines no B RPS has or is approaching or exceeding its trip setpoint at 1C05 and marks 3.4 (a) N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 13 Critical <u>N</u> ARP 1C05A (B-2) 3.5	Suspend testing in progress on other RPS instrumentation.
Standard:	The Operator determines no testing is in progress and marks 3.5 N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 14 Critical <u>N</u> ARP 1C05A (B-2) 3.6	If the trip is due to a loss of power, perform <u>AOP 358 (Loss of RPS AC Power)</u> and comply with Technical Specification requirements for Reactor Protection System (RPS) Instrumentation.
Standard:	The Operator determines that power is still available by checking indications at 1C05 and/or 1C37 and marks 3.6 N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 15 Critical <u>N</u> ARP 1C05A (B-2) 3.7 (a)	If it is determined that an APRM has failed: a. Comply with Technical Specification requirements for Reactor Protection System (RPS) Instrumentation and the Technical Requirements Manual requirements for Control Rod Block Instrumentation.
Standard:	The Operator informs the CRS to comply with the TS and TRM requirements.
Evaluator Cue:	If asked, cue the Operator that the Technical Specification requirements for Reactor Protection System (RPS) Instrumentation and Technical Requirements Manual requirements for Control Rod Block Instrumentation are being complied with.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 16 Critical <u>N</u> ARP 1C05A (B-2) 3.7 (b)	If it is determined that an APRM has failed: c. With permission from the CRS, bypass the affected APRM.
Standard:	The Operator requests permission and bypasses the 'C' APRM.
Evaluator Cue:	When asked, cue the Operator to the bypass the 'C' APRM.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 17 Critical <u>N</u> OI 878.4 Section 6.1 (NOTE)	<p style="text-align: center;">NOTE</p> <p>Unbypassed inoperable APRM channels may affect RBM operability. One APRM channel per RPS trip system is normally bypassed to prevent a full scram due to a single shared LPRM failure. During normal operation the preferred APRM channel bypass combinations are A & D or C & B. To maximize the number of LPRM channels in service E & F should not be simultaneously bypassed</p> <p>Bypassing an APRM channel does not remove the channel input to SPDS. Testing or malfunction of the bypassed channel may result in an erroneous display of reactor power level if the scan status is not inactivated for the associated ID point(s).</p>
Standard:	The Operator placekeeps NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 18 Critical <u>Y</u> OI 878.4 Section 6.1 (1a)	<p>If an APRM is currently bypassed, perform the following for the bypassed APRM, otherwise N/A this step: (a) Verify the APRM channel Mode Selector Switch on Panel 1C37 is in OPERATE.</p>
Standard:	Verifies 'A' APRM Mode Selector Switch in OPERATE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 19 Critical <u>N</u> OI 878.4 Section 6.1 (1b)	<p>If an APRM is currently bypassed, perform the following for the bypassed APRM, otherwise N/A this step: (b) Verify the APRM upscale, inoperative, and if greater than 5% reactor power, downscale trips on Panel 1C37 are reset.</p>
Standard:	The Operator verifies no such trips exist for 'A' APRM
Performance:	SATISFACTORY _____ UNSATISFACTORY _____

Comments:	
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Performance Step: 20 Critical <u>N</u> OI 878.4 Section 6.1 (1c)	If an APRM is currently bypassed, perform the following for the bypassed APRM, otherwise N/A this step: (c) Verify the IRM/APRM recorders on Panel 1C05 indicate approximately the same average power for the bypassed APRM as they do for the other APRM channels in operation.
Standard:	The Operator verifies that APRM recorders are reading approximately the same power.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 21 Critical <u>N</u> OI 878.4 Section 6.1 (1d)	If an APRM is currently bypassed, perform the following for the bypassed APRM, otherwise N/A this step: (d) Place the APRM BYPASS switch C51B-S3 or C51B-S6 on Panel 1C05 in the neutral (unbypassed) position.
Standard:	The Operator positions the APRM BYPASS switch C51B-S3 to the neutral position
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 22 Critical <u>N</u> OI 878.4 Section 6.1 (1e)	If an APRM is currently bypassed, perform the following for the bypassed APRM, otherwise N/A this step: Observe that the bypass light on Panel 1C05 and/or that the bypass light on Panel 1C37 is/are OFF.
Standard:	The Operator observe that the bypass light on Panel 1C05 is OFF.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 23 Critical <u>N</u> OI 878.4 Section 6.1 (2)	Verify the two APRM channels in the RPS trip system which are to remain UNBYPASSED are OPERABLE, otherwise comply with Technical Specifications and TRM for inoperable RPS instrumentation.
Standard:	The Operator informs the CRS to comply with Tech Specs
Evaluator Cue:	Acknowledge communication.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 24 Critical <u>Y</u> OI 878.4 Section 6.1 (3)	Place the APRM BYPASS switch C51B-S3 (C51B-S6) on Panel 1C05 in the A, C, or E (B, D, or F) position for the channel to be bypassed.
Standard:	The Operator positions the APRM BYPASS switch C51B-S3 to the 'A' position
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 25 Critical <u>Y</u> OI 878.4 Section 6.1 (4)	Observe that the bypass lights for the bypassed channel on Panel 1C37 and/or Panel 1C05 is/are ON.
Standard:	The Operator observe that the bypass lights for the bypassed channel on Panel 1C37 and/or Panel 1C05 is/are ON.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 26 Critical <u>Y</u> ARP 1C05A (B-2) 3.8	Reset the half scram.
Standard:	The Operator positions REACTOR SCRAM RESET hand switch C71A-S5 to Group 1 and 4 [Group 2 and 3] and then to Group 2 and 3 [Group 1 and 4] to reset Half Scram.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cue: When the half scram is reset, inform the examinee that another Operator will finish Appendix 4 and the ARP actions.

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

Stop Time: _____



212000-18
Transfer A RPS from Alternate Power to the A MG-Set (AP)
Rev. 0

JPM
Page 22 of 23

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:

- Electrical maintenance has been completed on EPA A1 and EPA A2
- Transferring "A" RPS from the Alternate Power Supply Source to "A" Motor Generator Set is in progress
- OI 358 Appendix 3, RPS Power Supply Transfer Half Scram Preparation Checklist is complete for this transfer

INITIATING CUES (IF APPLICABLE):

- You are the Balance of Plant Operator
- The Control Room Supervisor directs you to transfer "A" RPS to "A" Motor Generator Set per OI 358, Reactor Protection System continuing at section 6.2, Power Transfer from Alternate Power Supply Source to A[B] Motor Generator Set, Step 2 and reset the half-scram.

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

JPM TITLE: ESTABLISH A LEAKAGE PATH TO THE MAIN CONDENSER IAW AOP 672.2, OFFGAS RADIATION/REACTOR COOLANT HIGH ACTIVITY.

JPM NUMBER: 272000-04 **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): 94.21/
Respond to Off-Gas Radiation/Reactor Coolant High Activity Condition.

K/A NUMBERS: 2.2.12 **K/A VALUE:** A2.11 3.4/3.7

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: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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}

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

SIMULATOR SETUP INSTRUCTIONS:

1. Reset the IC snapshot from the "Thumb Drive" that it is stored on.
 - a. Verify Malfunction and Override per tables below
2. If the snapshot is not available, then reset to IC 20 and perform the following:
 - a. Insert a manual scram and stabilize the plant.
 - b. Bypass the Main Condenser High Back pressure trip on 1C15 and 1C17 by taking handswitches A71BS31A/C and A71BS31B/D to BYPASS.
 - c. Close the MSIVs and MSL Drains.
 - d. Open the Main Condenser vacuum breakers V-03-67 and V-03-73.
 - e. Insert the Malfunctions and overrides per tables below.
3. Mark AOP 672.2 marked to Step 12.
4. Place the simulator in RUN.

SIMULATOR OVERRIDES:

Key	Description	ET	Delay	Inserted	Ramp	Initial	Value	Final
DI-MS-031	HS-1043 MSL HEADER DRAINS BYPASS		00:00:00		00:00:00		NORM	NORM
DO-MS-079	HS-1043(1) MSL HEADER DRAINS BYPASS MO-1043 (GREEN)		00:00:00		00:00:00		ON	OFF
DO-MS-080	HS-1043(2) MSL HEADER DRAINS BYPASS MO-1043 (RED)		00:00:00		00:00:00		OFF	OFF
DI-MS-032	HS-1044 MSL DRAIN ORFICE BYPASS		00:00:00		00:00:00		NORM	NORM
DO-MS-081	HS-1044(1) MSL DRAIN ORFICE BYPASS MO-1044 (GREEN)		00:00:00		00:00:00		ON	OFF
DO-MS-082	HS-1044(2) MSL DRAIN ORFICE BYPASS MO-1044 (RED)		00:00:00		00:00:00		OFF	OFF

Required Materials: AOP 672.2

General References: AOP 672.2, Rev. 38

Task Standards:

1. MO-1362A Closed
2. MO-1362B Closed
3. MO-1169 Closed
4. MO-1170 Closed
5. MO-1054 Closed
6. MO-1055 Closed
7. CV-1064 Open (Alternate Path)

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:

The initial conditions that I read may not **exactly** match the simulator setup, assume that the conditions that I read you are **the correct** plant conditions.

- A plant transient has occurred which has resulted in a reactor scram.
- AOP 672.2, Offgas Radiation/Reactor Coolant High Activity, has been entered due to fuel failure.
- The MSIVs have isolated.
- HP has been notified that rad levels in the Torus room and areas of the Reactor Building may rise significantly.
- Other Operators are monitoring RB and TB Kaman's for abnormal rad trends.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to establish a leakage path to the main condenser in accordance with AOP 672.2, Follow-up Action, Step 12.

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 <u>N</u> AOP 672.2, FOLLOW-UP ACTIONS, Step 12.	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:
Standard:	Obtains CRS permission to perform Step 12 of the AOP 672.2, Follow-up Actions.
Evaluator Note:	Initial Conditions and Initial Cues provide direction and gives permission.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2 Critical <u>Y</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:				
AOP 672.2, FOLLOW-UP ACTIONS 12. a.	At 1C04, isolate the main steam supply to Offgas and SJAES by placing the following handswitches in the CLOSE position, allowing the switches to return to their normal position, and verifying the following valves CLOSED:				
	<table border="0"> <thead> <tr> <th><u>Switch</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1362A</td> <td>SJAE & OFFGAS MSL A STEAM SUPPLY MO-1362A</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1362A	SJAE & OFFGAS MSL A STEAM SUPPLY MO-1362A
<u>Switch</u>	<u>Description</u>				
HS-1362A	SJAE & OFFGAS MSL A STEAM SUPPLY MO-1362A				
Standard:	Isolates the main steam supply to "A" Offgas and SJAES.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Performance Step: 2 Critical <u>Y</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:				
AOP 672.2, FOLLOW-UP ACTIONS 12. a.	At 1C04, isolate the main steam supply to Offgas and SJAES by placing the following handswitches in the CLOSE position, allowing the switches to return to their normal position, and verifying the following valves CLOSED:				
	<table border="0"> <thead> <tr> <th><u>Switch</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1362B</td> <td>SJAE & OFFGAS MSL B STEAM SUPPLY MO-1362B</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1362B	SJAE & OFFGAS MSL B STEAM SUPPLY MO-1362B
<u>Switch</u>	<u>Description</u>				
HS-1362B	SJAE & OFFGAS MSL B STEAM SUPPLY MO-1362B				
Standard:	Isolates the main steam supply to "B" Offgas and SJAES.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Performance Step: 3 Critical <u>Y</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:				
AOP 672.2, FOLLOW-UP ACTIONS 12. b.	At 1C07, isolate the main steam supply to the Turbine Steam Seal System by placing the following handswitches in the CLOSE position, allowing the switches to return to their normal position, and verifying the following valves CLOSED:				
	<table border="0"> <thead> <tr> <th style="text-align: left;"><u>Switch</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1169</td> <td>MAIN STEAM SUPPLY MO-1169</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1169	MAIN STEAM SUPPLY MO-1169
<u>Switch</u>	<u>Description</u>				
HS-1169	MAIN STEAM SUPPLY MO-1169				
Standard:	Isolates the main steam supply valves to the Turbine Steam Seal System.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Performance Step: 4 Critical <u>Y</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:				
AOP 672.2, FOLLOW-UP ACTIONS 12. b.	At 1C07, isolate the main steam supply to the Turbine Steam Seal System by placing the following handswitches in the CLOSE position, allowing the switches to return to their normal position, and verifying the following valves CLOSED:				
	<table border="0"> <thead> <tr> <th style="text-align: left;"><u>Switch</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1170</td> <td>REGULATOR BYPASS MO-1170</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1170	REGULATOR BYPASS MO-1170
<u>Switch</u>	<u>Description</u>				
HS-1170	REGULATOR BYPASS MO-1170				
Standard:	Isolates the main steam supply valves to the Turbine Steam Seal System.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Performance Step: 5 Critical <u>Y</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:				
AOP 672.2, FOLLOW-UP ACTIONS 12. c.	At 1C07, verify that the main steam supply to MSR 2 nd Stage Reheat is isolated by verifying the following handswitch is in the CLOSE position, allowing the switches to return to their normal position, and verifying the following valves CLOSED:				
	<table border="0"> <thead> <tr> <th style="text-align: left;"><u>Switch</u></th> <th style="text-align: left;"><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1054</td> <td>MAIN STEAM TO MSR SECOND STAGE MO-1054 & MO-1055</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1054	MAIN STEAM TO MSR SECOND STAGE MO-1054 & MO-1055
<u>Switch</u>	<u>Description</u>				
HS-1054	MAIN STEAM TO MSR SECOND STAGE MO-1054 & MO-1055				
Standard:	Verifies that the main steam supply to MSR 2 nd Stage Reheat is isolated.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Performance Step: 6 Critical <u>N</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:
AOP 672.2, FOLLOW-UP ACTIONS 12. d.	At 1C07, verify that Mechanical Vacuum Pump 1P-32 is secured by placing HS-1377 to the STOP position, allowing the switch to return to the normal position, and verifying the Mechanical Vacuum Pump 1P-32 is secured.
Standard:	Verifies that the Mechanical Vacuum Pump is secured by placing handswitch to the STOP position
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 7 Critical <u>N</u> AOP 672.2, FOLLOW-UP ACTIONS 12. e.	<p>IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:</p> <p>At 1C04, establish the preferred MSIV leakage path by placing the following handswitches in the OPEN position, allowing the switches to return to their normal position, and verifying the following valves OPEN:</p> <table border="0"> <thead> <tr> <th><u>Switch</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1043</td> <td>MSL HEADER DRAINS BYPASS MO-1043</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1043	MSL HEADER DRAINS BYPASS MO-1043
<u>Switch</u>	<u>Description</u>				
HS-1043	MSL HEADER DRAINS BYPASS MO-1043				
Standard:	Establishes the preferred MSIV leakage.				
Evaluator Cue:	Acknowledge the report and if asked, inform the student to continue with the AOP.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	<hr/>				

Performance Step: 8 Critical <u>N</u>	IF the MSIVs are closed and fuel failure is suspected, THEN obtain permission from the CRS and establish a leakage path to the main condenser as follows:				
AOP 672.2, FOLLOW-UP ACTIONS 12. e.	At 1C04, establish the preferred MSIV leakage path by placing the following handswitches in the OPEN position, allowing the switches to return to their normal position, and verifying the following valves OPEN:				
	<table border="0"> <thead> <tr> <th><u>Switch</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1044</td> <td>MSL DRAIN ORIFICE BYPASS MO-1044</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1044	MSL DRAIN ORIFICE BYPASS MO-1044
<u>Switch</u>	<u>Description</u>				
HS-1044	MSL DRAIN ORIFICE BYPASS MO-1044				
Standard:	Establishes the preferred MSIV leakage.				
Evaluator Cue:	Acknowledge the report and if asked inform the student to continue with the AOP.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Performance Step: 9 Critical <u>Y</u> AOP 672.2, FOLLOW-UP ACTIONS 12. f.	IF the preferred MSIV leakage path cannot be established, (i.e. MO-1043 or MO-1044 cannot be opened), THEN establish the Alternate MSIV Leakage Path by placing the following handswitch at 1C04 in the OPEN position, and verifying the following valve OPEN: <table border="0"> <thead> <tr> <th><u>Switch</u></th> <th><u>Description</u></th> </tr> </thead> <tbody> <tr> <td>HS-1064</td> <td>MSL HEADER DRAIN CV-1064</td> </tr> </tbody> </table>	<u>Switch</u>	<u>Description</u>	HS-1064	MSL HEADER DRAIN CV-1064
<u>Switch</u>	<u>Description</u>				
HS-1064	MSL HEADER DRAIN CV-1064				
Standard:	Establishes Alternate leakage path.				
Evaluator Cue:	As the CRS, acknowledge the report.				
Performance:	SATISFACTORY _____ UNSATISFACTORY _____				
Comments:	_____				

Terminating Cues: WHEN the student reports the alternate path has been established, inform him 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:

The initial conditions that I read may not **exactly** match the simulator setup, assume that the conditions that I read you are **the correct** plant conditions.

- A plant transient has occurred which has resulted in a reactor scram.
- AOP 672.2, Offgas Radiation/Reactor Coolant High Activity, has been entered due to fuel failure.
- The MSIVs have isolated.
- HP has been notified that rad levels in the Torus room and areas of the Reactor Building may significantly rise.
- Other operators are monitoring RB and TB Kaman's for abnormal rad trends.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to establish a leakage path to the main condenser in accordance with AOP 672.2, Follow-up Action, Step 12.

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

JPM TITLE:

JPM NUMBER:

REV. 9

**TASK NUMBER(S) /
TASK TITLE(S):**

K/A NUMBERS: A2.03

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:

☐

EVALUATION LOCATION:

In-Plant:

☐

Control Room:

☐

Simulator:

☒

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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}

[illegible]

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

SIMULATOR SETUP INSTRUCTIONS:

1. Reset to any IC
2. Insert the malfunction per below
3. Place the simulator in RUN
4. Push PB7606A on 1C36 to start 'A' SBTG and initiate a Group 3A
5. Perform OI 170 Section 9.1.

SIMULATOR MALFUNCTIONS:

TIME	MALFUNCTION No.	MALFUNCTION TITLE	ET	DELAY	F. SEV.	RAMP	I. SEV.
Set up	PC12A	SBTG "A" Carbon Bed Temperature			75%		

SIMULATOR OVERRIDES: NONE

SIMULATOR REMOTE FUNCTIONS: NONE

Required Materials: OI 170
(1) GE 75 Key for SBTG mode switch

General References: OI 170, Rev. 65

Task Standards:

1. "A" SBTG fire protection system initiated.
2. V-33-88 open

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:

Note: Actual conditions in the simulator may be different.

- A reactor scram occurred.
- After the reactor scram, appropriate IPOI-5 immediate actions were taken to stabilize the plant.
- The 'A' SBTG train was placed in standby, then in manual cooldown due to increasing carbon bed temperature.
- 'A' SBTG train carbon bed temperature is still rising.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to perform the Control Room actions necessary to cool the 'A' SBTG carbon bed using deluge spray in accordance with OI 170, Section 9.2.

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	<u>NOTE</u> At carbon adsorber temperatures of 255°F or more, the operator has the option of manually starting the fire deluge sprays to prevent excessive temperatures and possible hot spots which could cause combustion of the activated charcoal. V-33-88 has to be manually opened to initiate deluge flow.
Standard:OI 170 Section 9.2 (NOTE)	Operator will acknowledge and mark NOTE
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:2 Critical N	<u>CAUTION</u> Do not manually initiate the Charcoal Filter Bed Fire Protection Deluge System unless absolutely necessary because the SBTG train will be inoperable and it will be necessary to replace the activated charcoal in the unit.
Standard: OI 170 Section 9.2 (CAUTION)	Operator will acknowledge and mark CAUTION
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:3 Critical N	<p align="center"><u>CONTINUOUS RECHECK STATEMENT</u></p> <p>IF fire deluge sprays are automatically activated at 310F, THEN proceed to Step (4) immediately.</p>
Standard: OI 170 Section 9.2 (CRS)	Operator will acknowledge and mark the CONTINUOUS RECHECK STATEMENT
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:4 Critical N	Confirm the "A" SBTG CARBON BED HI TEMP DELUGE PERMISSIVE (1C24A, B-3) annunciator.
Standard: OI 170 Section 9.2 (1)	Operator verifies annunciator
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:5 Critical N	On 1C24A, perform the following: Verify CARBON BED TEMP TI-5838A indicates above 255°F
Standard: OI 170 Section 9.2 (1a)	Observes TI-5838A on 1C24, ensures that it reads > 255°F.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:6 Critical N	On 1C24A, perform the following: As directed by the CRS, depress CARBON BED DELUGE pushbutton PB-5838A for the affected SBTG Train.
Standard: OI 170 Section 9.2 (2a)	Depresses carbon bed pushbutton (PB-5838A) on 1C24. Monitors carbon bed temperature.
Evaluator Cue:	If asked as the CRS if operator should push pushbutton, state that cooling the 'A' SBTG carbon bed using deluge spray is still required.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:7 Critical N	If a LOCA is in progress, have the CRS consider swapping to the off service SBTG bed. After the bed swap, continue on with this section, as resources become available.
Standard: OI 170 Section 9.2 (3)	Operator notes that LOCA is not in progress and marks step as N/A
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:8 Critical Y	If the Fire Protection System is initiated, perform the following: Near North Recirc MG air lock door OPEN V-33-88 SBTG DELUGE SYSTEM 19 & 20 SHUTOFF.

Standard: OI 170 Section 9.2 (4a)	Direct outside operator to open V-33-88.
Evaluator Cue:	After contacted to open deluge valve V-33-88, delete malfunction PC12A to lower temperature. Inform trainee that time compression has been used and V-33-88 is open (Located: Reactor Building 786' level, NE Corner by MG Room Door).
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:9 Critical N	If the Fire Protection System is initiated, perform the following: Verify that Deluge Valves CV-5837A[B] open as indicated by lower bed temperatures on 1C24A[B].
Standard: OI 170 Section 9.2 (4b)	Operator observes TI-5838A on 1C24 for lowering Carbon Bed Temperature.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:10 Critical N	If the Fire Protection System is initiated, perform the following: Verify that the emergency stop signal sent to the controls of A[B] SBTG TRAIN has performed the following on 1C24A[B]: <ul style="list-style-type: none"> • Closed COOLDOWN/OUTSIDE AIR VLV AV-5801A[B] • Opened INTAKE VALVE AV-5825A[B] • Closed FAN INLET VALVE AV-5815A[B] • Stopped EXHAUST FAN 1V-EF-15A[B]

Standard: OI 170 Section 9.2 (4c-1-4)	Observes the valves listed go to correct positions
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:11 Critical N	Verify SBTG LCO has been entered, if applicable.
Standard: OI 170 Section 9.2 (5)	Informs CRS about entering SBTG LCO
Evaluator Cue:	When told to enter SBTG LCO, acknowledge the communication.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:12 Critical N	Verify A SBTG MODE SELECT HS-5814A in MAN position on 1C24A.
Standard: OI 170 Section 9.2 (6)	At 1C24, places HS-5814A in MANUAL
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:13 Critical N	Place HS-5801A COOLDOWN/OUTSIDE AIR VLV AV-5801A to CLOSE.
Standard: OI 170 Section 9.2 (7)	HS-5801A taken to CLOSE.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:14 Critical N	Momentarily place HS-5816A EXHAUST FAN 1V-EF-15 A to STOP.
Standard: OI 170 Section 9.2 (8)	HS-5816A taken to STOP momentarily.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step:15 Critical N	Place Fan Inlet valve AV-5815A handswitch, HS-5815A, in CLOSE.

Standard: OI 170 Section 9.2 (9)	HS-5815A placed in CLOSE position.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues: When HS-5815A is taken to CLOSE, inform the student that another operator will complete the remaining steps of OI 170, Section 9.2.

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

Stop Time: _____



261000-05, PERFORM REQUIRED ACTIONS FOR SBTG FILTER
OVERHEATING/EMERGENCY OVERHEATING, REV. 9

JPM
Page 13 of
14

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:

- A reactor scram occurred.
- After the reactor scram, appropriate IPOI-5 immediate actions were taken to stabilize the plant.
- The 'A' SBGT train was placed in standby, then in manual cooldown due to increasing carbon bed temperature.
- 'A' SBGT train carbon bed temperature is still rising.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to perform the Control Room actions necessary to cool the 'A' SBGT carbon bed using deluge spray in accordance with OI 170, Section 9.2.

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

JOB PERFORMANCE MEASURE

JPM TITLE: RESET THE RCIC OVERSPEED TRIP

JPM NUMBER: 217000-14

REV. 5

TASK NUMBER(S) / TASK TITLE(S): NSPEO 150-01.03 / Reset the RCIC turbine trip

K/A NUMBERS: 217000 EA1.05

K/A VALUE: 3.9/4.0

Justification (FOR K/A VALUES <3.0): N/A

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:

15

Minutes

Time Critical:

NO

Alternate Path [NRC]:

NO

Alternate Path [INPO]:

NO

Developed by:

Instructor/Developer: Mark Walter

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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}

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

SIMULATOR SETUP INSTRUCTIONS:

Mark the Cautions and Steps (1)(a)-(c) completed. These are the control room steps that are given as completed in the initial conditions.

Include Appendix 2 in marked up copy.

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: 1. OI 150 Section 3.3 and Appendix 2

General References: 1. OI 150, Rev. 85

Task Standards:

1. Move the spring loaded emergency connecting rod against the spring force, moving the emergency head lever away from the emergency tappet and tappet nut.
2. Ensure the emergency tappet moves in the downward direction and the tappet nut locates in the "trip reset" position on the head bracket to hold the emergency connecting rod in position under spring tension.

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

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

INITIAL CONDITIONS:

- A reactor scram occurred due to the loss of feedwater.
- HPCI was tagged out for an aux oil pump replacement and is still unavailable.
- RCIC was in operation when it tripped on overspeed.
- MO2404, Turbine Steam Supply Valve is closed.
- MO2405 will not reopen and MO2405 Motor Control indicates full closed.
- Steps 1.a-c are completed.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to reset the RCIC overspeed trip in accordance with OI 150 Section 3.3, RCIC system.

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 <u>Y</u>	(1) Reset the turbine trip as follows: (d) 1. Move the spring loaded emergency connecting rod against the spring force, moving the emergency head lever away from the emergency tappet and tappet nut.
Standard:	Simulate moving the connecting rod against spring pressure while the next step is being performed.
Evaluator Cue:	The connecting rod moves as described (to the left).
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2 Critical <u>Y</u>	(1) Reset the turbine trip as follows: (d) 2. Ensure the emergency tappet moves in the downward direction and the tappet nut locates in the "trip reset" position on the head bracket to hold the emergency connecting rod in position under spring tension.
Standard:	Simulate moving the Emergency tappet in the downward direction, or discuss that it should move down on its own, and that the tappet nut locates in the "trip reset" position.
Evaluator Note:	Operator may also discuss lifting the trip lever and/or pushing down the tappet nut.
Evaluator Cue:	The emergency tappet moves as described.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 3 Critical <u>N</u>	(1) Reset the turbine trip as follows: (d) 3. Place and hold HS-2405 in the OPEN position until the Motor Operator Control indicates full open.
Standard:	Candidate calls the control room and informs the control room operator that the mechanical overspeed trip mechanism has been reset and the next step is to "Place and hold HS-2405 in the OPEN position until the Motor Operator Control indicates full open."
Evaluator Cue:	The Motor Operator and MO2405 indicate full open.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 4 Critical <u>N</u>	(1) Reset the turbine trip as follows: (e) Verify Turbine Stop Valve MO-2405 indicates full open.
Standard:	Candidate place keeps the step as complete.
Evaluator Note:	This was cued in the previous step.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 5 Critical <u>N</u>	(1) Reset the turbine trip as follows: (f) Verify RCIC MO-2405 TURBINE TRIP (1C04C, A-5) annunciator is clear
Standard:	Candidate calls the control room and verifies the annunciator is reset.
Evaluator Cue:	Annunciator 1C04C, A-5 is reset.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues: When operator reads the Note and then step to proceed to section 3.4, inform the operator that 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:

- A reactor scram occurred due to the loss of feedwater.
- HPCI was tagged out for an aux oil pump replacement and is still unavailable.
- RCIC was in operation when it tripped on overspeed.
- MO2404, Turbine Steam Supply Valve is closed.
- MO2405 will not reopen and MO2405 Motor Control indicates full closed.
- Steps 1.a-c are completed.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to reset the RCIC overspeed trip in accordance with OI 150, RCIC system.

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

Usage Level
Continuous Use

3.3 RESETTING RCIC TURBINE TRIP

~~**NOTE**~~

Operation of the solenoid and mechanical trip are independent of each other due to the slip link arrangement on the valve trip lever.

Closing of MO2404 prior to reset of MO2405 resets the ramp generator function of RCIC Speed Control. This prevents RCIC from over speeding when restarting.

ARO

~~**CAUTION**~~

A mechanical overspeed condition is indicative of a serious malfunction in the control system. CRS permission is required prior to resetting the mechanical overspeed.

ARO

(1) Reset the turbine trip as follows:

(a) Verify Turbine Steam Supply, MO2404 is CLOSED

ARO

(b) Place and hold HS-2405 TURBINE STOP VALVE MOTOR CONTROL

MO-2405 in CLOSE until the Motor Control indicates full closed.

ARO

~~**NOTE**~~

If the RCIC Turbine Trip was due to a mechanical overspeed condition, neither the MO-2405 valve nor motor operator will open until reset locally at the RCIC Turbine.

If the trip condition is not cleared, the valve for MO-2405 will not open, regardless of motor operator position.

ARO

(c) Place and hold HS-2405 in the OPEN position until the Motor .

ARO

Operator Control indicates full open.

(d) If the turbine trip was due to mechanical overspeed, perform the following to manually reset the mechanical trip linkage (see drawing in Appendix 2):

1. Move the spring loaded emergency connecting rod against the spring force, moving the emergency head lever away from the emergency tappet and tappet nut.

2. Ensure the emergency tappet moves in the downward direction and the tappet nut locates in the "trip reset" position on the head bracket to hold the emergency connecting rod in position under spring tension. _____
3. Place and hold HS-2405 in the OPEN position until the Motor Operator Control indicates full open. _____
- (e) Verify Turbine Stop Valve MO-2405 indicates full open. _____
- (f) Verify RCIC MO-2405 TURBINE TRIP (1C04C, A-5) annunciator is clear. _____

NOTE

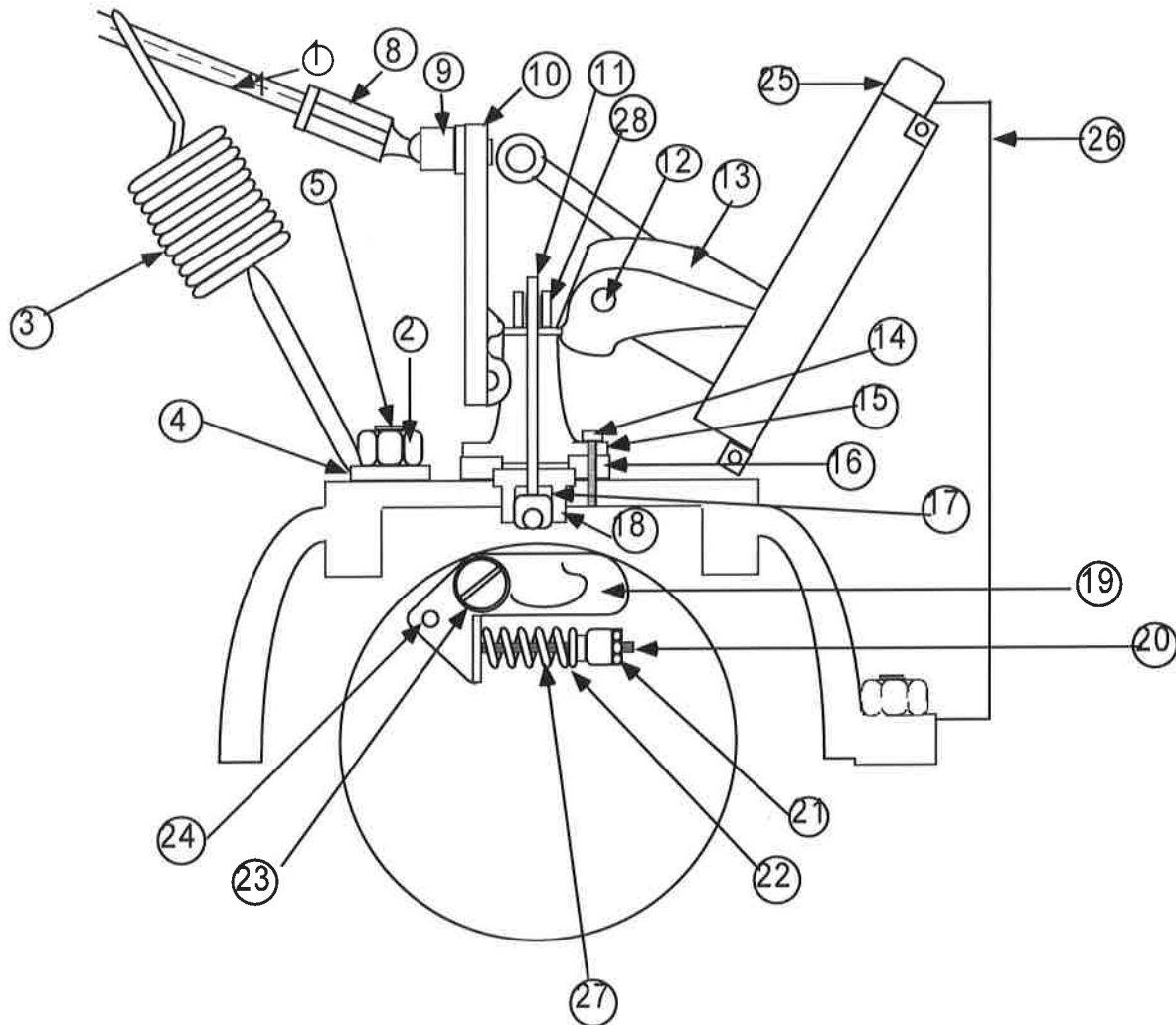
Following a Turbine run, oil level may require an hour, after turbine shutdown, to return to standby/shutdown conditions.

If the RCIC turbine trip is being reset during RCIC testing or other maintenance evolutions, the CRS may decide to mark the following step N/A.

- (2) Unless directed by the CRS, continue with Section 3.4, FINAL RETURN TO STANDBY READINESS (otherwise, mark this step N/A). _____

APPENDIX 2

RCIC OVERSPEED MECHANISM



- 1 Emerg. Conn. Rod
- 2 3/8 Nut
- 3 Spring
- 4 Emergency Spring Holder
- 5 3/8 Hex Head Bolt
- 6 Not Used
- 7 Not Used
- 8 Ball Rod End
- 9 Ball Socket
- 10 Emerg. Head Lever

- 11 Tappet & Ball
- 12 Trip Lever Pin
- 13 Trip Lever
- 14 5/16 x 1" Cap. Scr. Soc. Head
- 15 Head Bracket
- 16 Space Collar
- 17 Comp. Spring
- 18 Emergency Tappet Guide
- 19 Emergency Gov. Weight
- 20 Emergency Spring Adj. Stud

- 21 Jam Nut
- 22 Emerg. Spring Seat
- 23 Emerg. Gov. Weight Screw
- 24 Emerg. Gov. Weight Stop Pin
- 25 Micro Switch
- 26 Bracket
- 27 Emerg. Weight Spring
- 28 Emerg. Tappet Nut

JOB PERFORMANCE MEASURE

JPM TITLE: RETURN THE SBDG TO A STANDBY READINESS CONDITION - NRC AP

JPM NUMBER: 264000-13 **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): NSPEO 324-03.02 / SUPPORT SHUTDOWN OF THE A(B) SBDG AND RETURN TO STANDBY READINESS

K/A NUMBERS: A2.09 **K/A VALUE:** 3.7 / 4.1

Justification (FOR K/A VALUES <3.0): N/A

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: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

[illegible]

SIMULATOR SET-UP: None

SIMULATOR SETUP INSTRUCTIONS: None

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: 1. OI 324, Section 8.2 and 8.5

General References: 1. OI 324, Revision 119

Task Standards:

1. Trip injection pump control racks by depressing the Emergency Stop Pushbutton (overspeed trip) at the engine.
2. The candidate takes the reset lever to the reset position.
3. The candidate depresses pushbutton HS-3253A ALARM RESET to clear the Shutdown Relay Signal.

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:

- 1G-31, 'A' SBDG was shutdown 45 minutes ago following an auto start due to a lightning strike at DAEC.
- The 'A' ESW pump, 1P-99A, has been secured.
- This task is not Time Critical

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to return 1G-31 to the standby readiness condition in accordance with OI 324, Section 8.2, in the SBDG room.

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 <u>N</u> (SEQ-)	At 1C93, verify HS-3281A, IDLE-RATED SWITCH, in RATED.
Standard:	The candidate verifies HS-3281A, IDLE-RATED SWITCH, in RATED.
Evaluator Cue:	If candidate requests prompt, cue the candidate that “ HS-3281A, IDLE-RATED SWITCH, is in RATED. ”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2 Critical <u>N</u> (SEQ-)	If the A SBDG is not running, proceed to Step (5).
Standard:	The candidate reads the step, place keeps the step, N/A’s step 3 and 4, and proceeds to step 5.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 3 Critical <u>N</u> (SEQ-)	Secure A ESW, unless required to support other plant operations.
Standard:	The candidate signs the step as completed (initial cue has the pump secured), the candidate may call the Control Room for verification, role play as the RO.
Evaluator Cue:	If candidate calls the Control Room, report “1P099A, A ESW pump is secured.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 4 Critical <u>N</u> (SEQ-)	Rotate A SBDG with air per Section 8.5.
Standard:	The candidate proceeds to section 8.5.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 5 Critical <u>N</u> (SEQ-)	<p style="text-align: center;">NOTE</p> <p>Depressing the Emergency Stop Pushbutton (Overspeed Trip) renders the associated Diesel Generator and associated ESW Subsystem INOPERABLE per TS 3.8.1.b and TS 3.7.3.</p>
Standard:	The candidate reads and place keeps note.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 6 Critical <u>N</u> (SEQ-)	<p align="center">CONTINUOUS RECHECK STATEMENT</p> <p>IF standby lube oil temperature falls below 105F and the standby lube oil pump 1G031/LOP is running, THEN rotate the engine one revolution every 15 minutes until lube oil temperature is greater than 110° F. (refer P&L (2))</p>
Standard:	The candidate reads and place keeps CRS.
Evaluator Cue:	If asked, reply “Lube oil temperature is 130°F and constant. “
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	<hr/>

Performance Step: 7 Critical <u>N</u> (SEQ-)	Wait until after the diesel engine has been shut down greater than 30 minutes but less than 4 hours, then rotate the engine to remove oil from the overpiston areas.
Standard:	The candidate reads and place keeps the step and proceeds to the next steps to accomplish this action.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	<hr/>

Performance Step: 8 Critical <u>N</u> (SEQ-)	Verify associated SBDG and ESW Subsystem LCOs has been entered.
Standard:	The candidate contacts the control room to verify the appropriate LCOs have been entered.
Evaluator Cue:	When called as the CRS role play as the CRS and report, “The appropriate LCOs have been entered.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 9 Critical <u>N</u> (SEQ-)	<p align="center">CONTINUOUS RECHECK STATEMENT</p> <p>IF During the performance of Section 8.5 steps (3) through (11), 1G31 gets an emergency start signal,</p> <p>THEN rapidly perform Section 8.5 steps (10)(a) and (11), mark other steps N/A as needed.</p>
Standard:	The candidate reads and place keeps CRS.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 10 Critical <u>N</u>(SEQ-)	Perform the following substeps: (a) Inform Control Room that tripping the associated fuel rack in the next Step will render the associated SBDG inoperable and will disable the associated ESW pump auto-start feature rendering the associated ESW Subsystem inoperable. [ref. P&L (31)]
Standard:	The candidate informs the control room that the Fuel Rack will be tripped rendering the SBDG inoperable and disabling the associated ESW pump auto-start feature.
Evaluator Cue:	When called in the Control Room, reply to the candidate “Tripping the Fuel Rack and 1G31, A SBDG will be Inoperable.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 11 Critical <u>Y</u>(SEQ-)	Perform the following substeps: (b) Trip injection pump control racks by depressing the Emergency Stop Pushbutton (overspeed trip) at the engine.
Standard:	The candidate depresses the Emergency Stop Pushbutton.
Evaluator Cue:	“The Emergency Stop Pushbutton has been depressed.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 12 Critical N (SEQ-)	At 1C93, confirm annunciator ENGINE OVERSPEED (1C93, A-1) is activated.
Standard:	The candidate verifies that annunciator 1C93, A-1 is activated.
Evaluator Cue:	Prompt when required, "1C93 <A-1> is ON."
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 13 Critical N (SEQ-)	Close V-32-112, AIR ISOLATION TO OIL BOOSTER TANKS. This is located on the northwest end of the engine near inspection cover 13.
Standard:	N/A
Evaluator Cue:	After the candidate has located V32-0112 and before closing the valve, inform the candidate that he/she hears a Plant Page reporting "Reactor SCRAM, Reactor SCRAM due to a loss of offsite power."
Evaluator Cue:	If called as Control Room, inform candidate standby diesel generator operation is required.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Evaluator Note: Per the **CONTINUOUS RECHECK STATEMENT**

IF During the performance of Section 8.5 steps (3) through (11), 1G31 gets an emergency start signal,
THEN rapidly perform Section 8.5 steps (10)(a) and (11), mark other steps N/A as needed.

The candidate proceeds to these steps to restore the EDG to operable status.

Performance Step: 14 Critical <u>Y</u> (SEQ-)	Reset the overspeed trip using the reset lever (located near the Emergency Trip Pushbutton) as follows: {C002} Take the reset lever to the reset position (e.g., feel the latch drop in place, hear a click), then release the reset lever.
Standard:	The candidate takes the reset lever to the reset position (e.g., feel the latch drop in place, hear a click), then release the reset lever.
Evaluator Cue:	Provide prompt when earned, “The reset lever has been taken to the reset position and you heard a click and felt it latch.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 15 Critical <u>Y</u> (SEQ-)	On 1C91, depress pushbutton HS-3253A ALARM RESET to clear the Shutdown Relay Signal.
Standard:	The candidate depresses pushbutton HS-3253A ALARM RESET to clear the Shutdown Relay Signal.
Evaluator Cue:	Inform the candidate the pushbutton, HS-3253A, has been depressed. 60 seconds later, you hear the A SBDG, 1G31, cranking and starting without issues.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues: The A SBDG is running, this 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:

- 1G-31, 'A' SBDG was shutdown 45 minutes ago following an auto start due to a lightning strike at DAEC.
- The A ESW pump, 1P-99A, has been secured.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to return 1G-31 to the standby readiness condition in accordance with OI 324, Section 8.2, in the SBDG room.

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

8.0 SHUTDOWN OF SBDG TO STANDBY/READINESS CONDITION

Usage Level
Reference Use

8.1 UNLOADING THE A SBDG

- (1) If the A SBDG is not loaded, proceed to Section 8.2. _____
- (2) If the A SBDG started automatically (UNIT OPERATION) and energized the essential bus, then transfer essential bus 1A3 to either the Startup or Standby Transformer per OI 304.2, Section 7.0. _____
- (3) If the A SBDG is in PARALLEL OPERATION, then reduce the load on the Diesel Generator to 1500-1600 KW by using the DIESEL GENERATOR 1G-31 SPEED ADJUST CONTROL. _____
- (4) Adjust A DIESEL GENERATOR 1G-31 VOLTAGE ADJUST to maintain 0.9 power factor per Appendix 1. _____
- (5) Operate at 1500 to 1600 KW for 5 minutes to allow for cooldown. _____

NOTE

Placing the BUS 1A3 Transfer handswitch to MANUAL makes the A SBDG and the Standby Transformer Offsite Circuit inoperable. (TS 3.8.1.a and TS 3.8.1.b)

- (6) Verify AC Sources and SBDG LCOs have been entered. _____
- (7) Place BUS 1A3 TRANSFER handswitch in MANUAL. _____

NOTE

The time from reducing load to engine shutdown should not exceed 15 minutes to prevent extended unloaded operation during shutdown of the engine.

- (8) Reduce the load on the Diesel Generator to 50 KW by using the DIESEL GENERATOR 1G-31 SPEED ADJUST CONTROL. _____

CAUTION

The Diesel Generator may overspeed and trip after tripping the output breaker.

- (9) Place the control switch for 4KV BREAKER 1A311 A DIESEL GENERATOR 1G-31 in the TRIP position. Observe that the green (breaker tripped) and the white (closing spring charged) indicating lights are ON.

NOTE

1G-31 A SBDG and the Standby Transformer Offsite Circuit will be operable when BUS 1A3 Transfer handswitch is returned to AUTO.

- (10) Place BUS 1A3 TRANSFER handswitch in the AUTO position.
- (11) At 1C08, confirm annunciator 4KV BUS AUTO TRANSFER INOP (1C08A, D-7) is reset.
- (12) Place the A GOVERNOR MODE SWITCH (DROOP) HS-3234A at 1C93 in UNIT.
- (13) At 1C93, place HS-3281A, IDLE-RATED SWITCH, in RATED.

8.2 SHUTDOWN OF THE A SBDG AND RETURN TO STANDBY READINESS

- (1) At 1C93, verify HS-3281A, IDLE-RATED SWITCH, in RATED. _____
- (2) If the A SBDG is not running, proceed to Step (5). _____
- (3) At 1C08, perform the following:
 - (a) Set A Diesel Generator frequency to 60 ± 0.2 Hz (59.8 to 60.2 Hz) using handswitch A Diesel Generator 1G31 speed adjust. _____
 - (b) Set A Diesel Generator voltage to approximately 4160 ± 50 VAC (4110 to 4210 VAC) using handswitch A Diesel Generator 1G31 voltage adjust. _____
- (4) Stop A DIESEL GENERATOR 1G-31 by performing one of the following:
 - (a) Place A DIESEL GENERATOR 1G-31 CONTROL handswitch HS-3231A on 1C08 in the STOP position, hold for 5 to 10 seconds, and then return to AUTO. _____

NOTE

The following step will activate the A DIESEL GEN 1G-31 AUTO START INHIBITED (1C08A, D-10) annunciator.

- (b) If an initiation signal is present, then place HS-3231A in the PULL-TO-LOCK position on 1C08. _____

NOTE

The following step will not stop the Diesel Engine if it has automatically started due to a LOOP or LOCA.

CAUTION

Stopping 1G-31 by placing HS-3232A in the LOCKOUT AND STOP position is a non-preferred method as it will disable the associated ESW pump auto-start feature rendering the associated ESW subsystem inoperable. [refer to P&L (31)]

(c) At 1C93, stop SBDG 1G-31 by completing the following:

1. Inform Control Room that by momentarily placing HS-3232A in the LOCKOUT AND STOP position (next Step), the associated ESW pump auto-start feature will be disabled thereby rendering the associated ESW subsystem inoperable. An appropriate LCO log entry will need to be made.
2. Place brass handle Engine Mode Select Switch HS-3232A in the LOCKOUT AND STOP position, hold for 5 to 10 seconds, and then return to AUTO.

(5) Secure A ESW, unless required to support other plant operations.

(6) Rotate A SBDG with air per Section 8.5.

(7) Return A Diesel Generator 1G-31 to Standby/Readiness by performing Attachment 10 SBDG STANDBY/READINESS CONDITION CHECKLIST.

**Usage Level
Reference Use**

8.3 UNLOADING THE B SBDG

- (1) If the B SBDG is not loaded, proceed to Section 8.4. _____
- (2) If the B SBDG started automatically (UNIT OPERATION) and energized the essential bus, then transfer essential bus 1A4 to either the Startup or Standby Transformer per OI 304.2, Section 7.0. _____
- (3) If the B SBDG is in PARALLEL OPERATION, then reduce the load on the Diesel Generator to 1500-1600 KW by using the DIESEL GENERATOR 1G-21 SPEED ADJUST CONTROL. _____
- (4) Adjust B DIESEL GENERATOR 1G-21 VOLTAGE ADJUST to maintain 0.9 power factor per Appendix 1. _____
- (5) Operate at 1500 to 1600 KW for 5 minutes to allow for cooldown. _____

NOTE

Placing the BUS 1A4 Transfer handswitch to MANUAL makes the B SBDG and the Standby Transformer Offsite Circuit inoperable. (TS 3.8.1.a and TS 3.8.1.b)

- (6) Verify AC Sources and SBDG LCOs have been entered. _____
- (7) Place BUS 1A4 TRANSFER handswitch in MANUAL. _____

NOTE

The time from reducing load to engine shutdown should not exceed 15 minutes to prevent extended unloaded operation during shutdown of the engine.

- (8) Reduce the load on the Diesel Generator to 50 KW by using the DIESEL GENERATOR 1G-21 SPEED ADJUST CONTROL. _____

CAUTION

The Diesel Generator may overspeed and trip after tripping the output breaker.

- (9) Place the control switch for 4KV BREAKER 1A411 B DIESEL GENERATOR 1G-21 in the TRIP position. Observe that the green (breaker tripped) and the white (closing spring charged) indicating lights are ON. _____

NOTE

1G-21 B SBDG and the Standby Transformer Offsite Circuit will be operable when BUS 1A4 Transfer handswitch is returned to AUTO.

- (10) Place BUS 1A4 TRANSFER handswitch in AUTO.
- (11) At 1C08, confirm annunciator 4KV BUS AUTO TRANSFER INOP (1C08A, D-7) is reset.
- (12) Place the B GOVERNOR MODE SWITCH (DROOP) HS-3234B at 1C94 in UNIT.
- (13) At 1C94, place HS-3281B, IDLE-RATED SWITCH, in RATED.

8.4 SHUTDOWN OF THE B SBDG AND RETURN TO STANDBY READINESS

- (1) At 1C94, verify HS-3281B, IDLE-RATED SWITCH, in RATED. _____
- (2) If the B SBDG is not running, proceed to Step (5). _____
- (3) At 1C08, perform the following:
 - (a) Set B Diesel Generator frequency to 60 ± 0.2 Hz (59.8 to 60.2 Hz) using handswitch B Diesel Generator 1G21 speed adjust. _____
 - (b) Set B Diesel Generator voltage to approximately 4160 ± 50 VAC (4110 to 4210 VAC) using handswitch B Diesel Generator 1G21 voltage adjust. _____
- (4) Stop B DIESEL GENERATOR 1G-21 by performing one of the following:
 - (a) Place B DIESEL GENERATOR 1G-21 CONTROL handswitch HS-3231B on 1C08 in the STOP position, hold for 5 to 10 seconds, and then return to AUTO. _____

NOTE

The following step will activate the B DIESEL GEN 1G-21 AUTO START INHIBITED (1C08B, D-3) annunciator.

- (b) If an initiation signal is present, then place HS-3231B in the PULL-TO-LOCK position on 1C08. _____

NOTE

The following step will not stop the Diesel Engine if it has automatically started due to a LOOP or LOCA.

CAUTION

Stopping 1G-21 by placing HS-3232B in the LOCKOUT AND STOP position is a non-preferred method as it will disable the associated ESW pump auto-start feature rendering the associated ESW subsystem inoperable. [refer P&L (31)]

(c) At 1C94, stop SBDG 1G-21 by completing the following:

1. Inform Control Room that by momentarily placing HS-3232B in the LOCKOUT AND STOP position (next Step), the associated ESW pump auto-start feature will be disabled thereby rendering the associated ESW subsystem inoperable. An appropriate LCO log entry will need to be made.
2. Place brass handle Engine Mode Select Switch HS-3232B in the LOCKOUT AND STOP position, hold for 5 to 10 seconds, and then return to AUTO.

(5) Secure B ESW, unless required to support other plant operations.

(6) Rotate B SBDG with air per Section 8.6.

(7) Return B Diesel Generator 1G-21 to Standby/Readiness by performing Attachment 10 SBDG STANDBY/READINESS CONDITION CHECKLIST.

**Usage Level
Reference Use**

8.5 ROTATING THE A DIESEL GENERATOR 1G-31 WITH AIR

NOTE

Depressing the Emergency Stop Pushbutton (Overspeed Trip) renders the associated Diesel Generator and associated ESW Subsystem INOPERABLE per TS 3.8.1.b and TS 3.7.3.



CONTINUOUS RECHECK STATEMENT

(applicable to the remainder of the section)



IF standby lube oil temperature falls below 105°F and the standby lube oil pump 1G031/LOP is running,	 	THEN rotate the engine one revolution every 15 minutes until lube oil temperature is greater than 110°F. (refer to P&L (2))
--	-------------------------------	---

- (1) Wait until after the diesel engine has been shut down greater than 30 minutes but less than 4 hours, then rotate the engine to remove oil from the overpiston areas.
- (2) Verify associated SBDG and ESW Subsystem LCOs has been entered.



CONTINUOUS RECHECK STATEMENT

(applicable Section 8.5 Steps (3) through (11))



IF During the performance of Section 8.5 Steps (3) through (11), 1G31 gets an emergency start signal,	 	THEN rapidly perform Section 8.5 Steps (10)(a) and (11), mark other steps N/A as needed.
--	-------------------------------	---

- (3) Perform the following substeps:
 - (a) Inform Control Room that tripping the associated fuel rack in the next Step will render the associated SBDG inoperable and will disable the associated ESW pump auto-start feature rendering the associated ESW Subsystem inoperable. [refer to P&L (31)]
 - (b) Trip injection pump control racks by depressing the Emergency Stop Pushbutton (overspeed trip) at the engine.

(4) At 1C93, confirm annunciator ENGINE OVERSPEED (1C93, A-1) is activated.

(5) Close V-32-112, AIR ISOLATION TO OIL BOOSTER TANKS. This is located on the northwest end of the engine near inspection cover 13.

NOTE

More than one revolution may cause the oil to pump back to the upper crank and could cause a hydraulic lock condition on restart. (Refer to P&L (1))

(6) Using the manual override of the emergency air start solenoid SV3261A, or the normal air start solenoid SV-3261B, admit starting air to A DIESEL GENERATOR 1G-31 for 1 to 3 seconds (sufficient to cause one full revolution of the engine crankshaft).

NOTE

The Air Start Header vent cap has a hole installed to permit venting.

(7) Open V-32-111, "A" SBDG AIR START HEADER VENT, to vent the air off of the line to the bearing oil booster Tanks. The valve is located on the northwest end of the engine near inspection cover 13.

(8) After the line is vented, close V-32-111.

(9) Open V-32-112.



******* CRITICAL STEP *******

(10) Reset the overspeed trip using the reset lever (located near the Emergency Trip Pushbutton) as follows: {C002}

(a) Take the reset lever to the reset position (e.g., feel the latch drop in place, hear a click), then release the reset lever.

(b) Slowly take the reset lever to the reset position to verify that the latch is holding the plunger (e.g., the reset lever moves freely, significant force increase near the end of movement), then release the reset lever.

(IV)

(11) On 1C91, depress pushbutton HS-3253A ALARM RESET to clear the Shutdown Relay Signal.

- (12) At 1C93, confirm annunciator ENGINE OVERSPEED (1C93, A-1) is reset. _____
- (13) If rotating with air to restore lube oil temperature and lube oil is > 110°F,
perform the Standby readiness checklist or run the SBDG to declare
operable, otherwise, N/A this step. _____
- (14) Exit associated SBDG and ESW Subsystem LCOs if applicable. _____

**Usage Level
Reference Use**

8.6 ROTATING THE B DIESEL GENERATOR 1G-21 WITH AIR

NOTE

Depressing the Emergency Stop Pushbutton (Overspeed Trip) renders the associated Diesel Generator and associated ESW Subsystem INOPERABLE per TS 3.8.1.b and TS 3.7.3.



CONTINUOUS RECHECK STATEMENT

(applicable to the remainder of the section)



IF standby lube oil temperature falls below 105°F and the standby lube oil pump 1G021/LOP is running,	THEN rotate the engine one revolution every 15 minutes until lube oil temperature is greater than 110°F. (refer to P&L (2))
---	--

- (1) Wait until after the diesel engine has been shut down greater than 30 minutes but less than 4 hours, then rotate the engine to remove oil from the overpiston areas.
- (2) Verify associated SBDG and ESW Subsystem LCOs has been entered.



CONTINUOUS RECHECK STATEMENT

(applicable to Section 8.6 Steps (3) through (11))



IF During the performance of Section 8.6 Steps (3) through (11), 1G21 gets an emergency start signal,	THEN rapidly perform Section 8.6 Steps (10)(a) and (11), mark other steps N/A as needed.
--	---

- (3) Perform the following substeps:
 - (a) Inform Control Room that tripping the associated fuel rack in the next Step will render the associated SBDG inoperable and will disable the associated ESW pump auto-start feature rendering the associated ESW Subsystem inoperable. [refer P&L (31)]
 - (b) Trip injection pump control racks by depressing the Emergency Stop Pushbutton (overspeed trip) at the engine.

(4) At 1C94, confirm annunciator ENGINE OVERSPEED (1C94, A-1) is activated.

(5) Close V-32-109, AIR ISOLATION TO OIL BOOSTER TANKS. This is located on the northwest end of the engine near inspection cover 13.

NOTE

More than one revolution may cause the oil to pump back to the upper crank and could cause a hydraulic lock condition on restart. (Refer to P&L (1))

(6) Using the manual override of the emergency air start solenoid SV3262A, or the normal air start solenoid SV-3262B, admit starting air to B DIESEL GENERATOR 1G-21 for 1 to 3 seconds (sufficient to cause one full revolution of the engine crankshaft).

NOTE

The Air Start Header vent cap has a hole installed to permit venting.

(7) Open V-32-110, "B" SBDG AIR START HEADER VENT, to vent the air off of the line to the bearing oil booster Tanks. The valve is located on the northwest end of the engine near inspection cover 13.

(8) After the line is vented, close V-32-110.

(9) Open V-32-109.



******* CRITICAL STEP *******

(10) Reset the overspeed trip using the reset lever (located near the Emergency Trip Pushbutton) as follows: **{C002}**

(a) Take the reset lever to the reset position (e.g., feel the latch drop in place, hear a click), then release the reset lever.

(b) Slowly take the reset lever to the reset position to verify that the latch is holding the plunger (e.g., the reset lever moves freely, significant force increase near the end of movement), then release the reset lever.

(IV)

(11) On 1C92, depress pushbutton HS-3253B ALARM RESET to clear the Shutdown Relay Signal. _____

(12) At 1C94, confirm annunciator ENGINE OVERSPEED (1C94, A-1) is reset. _____

(13) If rotating with air to restore lube oil temperature and lube oil is > 110°F, perform the Standby readiness checklist or run the SBDG to declare operable, otherwise, N/A this step. _____

(14) Exit associated SBDG and ESW Subsystem LCOs if applicable. _____

8.7 CHARGING THE DIESEL DRIVEN STARTING AIR FLASKS USING STARTING AIR COMPRESSOR 1K-10C

(1) Verify the following for the diesel-driven Starting Air Compressor 1K-10C:

- (a) Diesel engine lube oil level between the F and L marks on the local dipstick. _____
- (b) Compressor lube oil is between the two marks on the local dipstick. _____
- (c) Ensure clutch is disengaged. _____

NOTE

When transferring fuel oil, it may be necessary to block the diesel day tank room door open to avoid pinching the fuel oil transfer hose.

A door stop rod is stored in the metal cabinet just outside of the SBDG rooms to assist in blocking the door open.

Door 133 is a fire door, which requires a FPIR or constant attendance by the operator.

(2) If necessary to add fuel to fuel tank 1T-477, perform the following substeps. Otherwise, mark substeps N/A.

- (a) Verify LIS3207-V-01 LIS3207 VENT/TEST CONNECTION ISOLATION is closed and remove the cap. _____
- (b) Attach temporary tubing from LIS3207-V-01 to 1K10C fuel tank. _____
- (c) Throttle open LIS3207-V-01 as necessary to fill 1K10C fuel tank to the desired level. _____
- (d) Close LIS3207-V-01 and remove temporary tubing. _____
- (e) Install cap on LIS3207-V-01. _____

NOTE

Engine will not start with clutch engaged.

- (3) Depress and hold down tattletale button. Press down start switch and release when engine starts. _____
- (4) When engine is running, release tattletale button. _____

(5) Engage clutch to start air compressor.

(6) Observe that compressor 1K-10C automatically stops at approximately 235 psig as indicated on PI-3256A, if not perform Step (7).

(7) If necessary, manually stop 1K-10C by performing the following:

(a) Depress and hold down the Emergency Stop switch.

(b) When the engine stops, release the Emergency Stop switch.

**Usage Level
Reference Use**

8.8 CHARGING THE DIESEL DRIVEN STARTING AIR FLASKS USING STARTING AIR COMPRESSOR 1K-10D

(1) Verify the following for the diesel-driven Starting Air Compressor 1K-10D:

- (a) Diesel engine lube oil level between the F and L marks on the local dipstick. _____
- (b) Compressor lube oil is between the two marks on the local dipstick. _____
- (c) Ensure clutch is disengaged. _____

NOTE

When transferring fuel oil, it may be necessary to block the diesel day tank room door open to avoid pinching the fuel oil transfer hose.

A door stop rod is stored in the metal cabinet just outside of the SBDG rooms to assist in blocking the door open.

Door 132 is a fire door, which requires a FPIR or constant attendance by the operator.

(2) If necessary to add fuel to fuel tank 1T-478, perform the following substeps. Otherwise, mark substeps N/A.

- (a) Verify LIS3209-V-02 LIS3209 VENT/TEST CONNECTION ISOLATION is closed and remove the cap. _____
- (b) Attach temporary tubing from LIS3209-V-02 to 1K10D fuel tank. _____
- (c) Throttle open LIS3209-V-02 as necessary to fill 1K10D fuel tank to the desired level. _____
- (d) Close LIS3209-V-02 and remove temporary tubing. _____
- (e) Install cap on LIS3209-V-02. _____

NOTE

Engine will not start with clutch engaged.

- (3) Depress and hold down tattletale button. Press down start switch and release when engine starts. _____
- (4) When engine is running, release tattletale button. _____

(5) Engage clutch to start air compressor.

(6) Observe that compressor 1K-10D automatically stops at approximately 235 psig as indicated on PI-3256B, if not perform Step (7).

(7) If necessary, manually stop 1K-10D by performing the following:

(a) Depress and hold down the Emergency Stop switch.

(b) When the engine stops, release the Emergency Stop switch.

JOB PERFORMANCE MEASURE

JPM TITLE: RETURN THE SBDG TO A STANDBY READINESS CONDITION - NRC AP

JPM NUMBER: 264000-07 **REV. 6**

TASK NUMBER(S) / TASK TITLE(S): NSPEO 324-03.02 / SUPPORT SHUTDOWN OF THE A(B) SBDG AND RETURN TO STANDBY READINESS

K/A NUMBERS: A2.09 **K/A VALUE:** 3.7 / 4.1

Justification (FOR K/A VALUES <3.0): N/A

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: 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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}

SIMULATOR SET-UP: None

SIMULATOR SETUP INSTRUCTIONS: None

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: 1. OI 324, Section 8.4 and 8.6

General References: 1. OI 324, Revision 115

Task Standards:

1. Trip injection pump control racks by depressing the Emergency Stop Pushbutton (overspeed trip) at the engine.
2. The candidate takes the reset lever to the reset position.
3. The candidate depresses pushbutton HS-3253B ALARM RESET to clear the Shutdown Relay Signal.

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:

- 1G-21, 'B' SBDG was shutdown 45 minutes ago following an auto start due to a lightning strike at DAEC.
- The B ESW pump, 1P-99B, has been secured.
- This task is not Time Critical

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to return 1G-21 to the standby readiness condition in accordance with OI 324, Section 8.4, in the SBDG room.

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	At 1C94, verify HS-3281B, IDLE-RATED SWITCH, in RATED.
Critical N (SEQ-)	
Standard:	The candidate verifies HS-3281B, IDLE-RATED SWITCH, in RATED.
Evaluator Cue:	If candidate requests prompt, cue the candidate that “ HS-3281B, IDLE-RATED SWITCH, is in RATED. ”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2	If the B SBDG is not running, proceed to Step (5).
Critical N (SEQ-)	
Standard:	The candidate reads the step, place keeps the step, N/A’s step 3 and 4, and proceeds to step 5.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 3 Critical <u>N</u> (SEQ-)	Secure B ESW, unless required to support other plant operations.
Standard:	The candidate signs the step as completed (initial cue has the pump secured), the candidate may call the Control Room for verification, role play as the RO.
Evaluator Cue:	If candidate calls the Control Room, report “1P099B, B ESW pump is secured.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 4 Critical <u>N</u> (SEQ-)	Rotate B SBDG with air per Section 8.6.
Standard:	The candidate proceeds to section 8.6.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 5 Critical <u>N</u> (SEQ-)	<p style="text-align: center;">NOTE</p> <p>Depressing the Emergency Stop Pushbutton (Overspeed Trip) renders the associated Diesel Generator and associated ESW Subsystem INOPERABLE per DAEC Tech Specs.</p>
Standard:	The candidate reads and place keeps note.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 6 Critical <u>N</u>(SEQ-)	CONTINUOUS RECHECK STATEMENT IF standby lube oil temperature falls below 105F and the standby lube oil pump 1G021/LOP is running, THEN rotate the engine one revolution every 15 minutes until lube oil temperature is greater than 110° F. (ref. P&L #2)
Standard:	The candidate reads and place keeps CRS.
Evaluator Cue:	If asked, reply “Lube oil temperature is 130°F and constant. “
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 7 Critical <u>N</u>(SEQ-)	Wait until after the diesel engine has been shut down greater than 30 minutes but less than 4 hours, then rotate the engine to remove oil from the overpiston areas.
Standard:	The candidate reads and place keeps the step and proceeds to the next steps to accomplish this action.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 8 Critical <u>N</u>(SEQ-)	Verify associated SBDG and ESW Subsystem LCOs has been entered.
Standard:	The candidate contacts the control room to verify the appropriate LCOs have been entered.
Evaluator Cue:	When called as the CRS role play as the CRS and report, “The appropriate LCOs have been entered.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 9 Critical <u>N</u>(SEQ-)	CONTINUOUS RECHECK STATEMENT IF During the performance of Section 8.6 steps (3) through (11), 1G21 gets an emergency start signal, THEN rapidly perform Section 8.6 steps (10)(a) and (11), mark other steps N/A as needed.
Standard:	The candidate reads and place keeps CRS.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 10 Critical <u>N</u>(SEQ-)	Perform the following substeps: (a) Inform Control Room that tripping the associated fuel rack in the next Step will render the associated SBDG inoperable and will disable the associated ESW pump auto-start feature rendering the associated ESW Subsystem inoperable. [ref. P&L (31)]
Standard:	The candidate informs the control room that the Fuel Rack will be tripped rendering the SBDG inoperable and disabling the associated ESW pump auto-start feature.
Evaluator Cue:	When called in the Control Room, reply to the candidate “Tripping the Fuel Rack and 1G21, B SBDG will be Inoperable.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 11 Critical <u>Y</u>(SEQ-)	Perform the following substeps: (b) Trip injection pump control racks by depressing the Emergency Stop Pushbutton (overspeed trip) at the engine.
Standard:	The candidate depresses the Emergency Stop Pushbutton.
Evaluator Cue:	“The Emergency Stop Pushbutton has been depressed.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 12 Critical N (SEQ-)	At 1C94, confirm annunciator ENGINE OVERSPEED (1C94, A-1) is activated.
Standard:	The candidate verifies that annunciator 1C94, A-1 is activated.
Evaluator Cue:	Prompt when required, “1C94 <A-1> is ON.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 13 Critical N (SEQ-)	Close V-32-109, AIR ISOLATION TO OIL BOOSTER TANKS. This is located on the northwest end of the engine near inspection cover 13.
Standard:	N/A
Evaluator Cue:	After the candidate has located V32-0109 and has started closing the valve, Inform the candidate that he/she hears a Plant Page reporting “ Reactor SCRAM, Reactor SCRAM due to a loss of offsite power. ”
Evaluator Cue:	If called as Control Room, inform candidate standby diesel generator operation is required.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Evaluator Note: Per the **CONTINUOUS RECHECK STATEMENT**

IF During the performance of Section 8.6 steps (3) through (11), 1G21 gets an emergency start signal,
THEN rapidly perform Section 8.6 steps (10)(a) and (11), mark other steps N/A as needed.

The candidate proceeds to these steps to restore the EDG to operable status.

Performance Step: 14 Critical Y (SEQ-)	Reset the overspeed trip using the reset lever (located near the Emergency Trip Pushbutton) as follows: {C002}
Standard:	The candidate takes the reset lever to the reset position (e.g., feel the latch drop in place, hear a click), then release the reset lever.
Evaluator Cue:	Provide prompt when earned, “The reset lever has been taken to the reset position and you heard a click and felt it latch.”
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 15 Critical Y (SEQ-)	On 1C92, depress pushbutton HS-3253B ALARM RESET to clear the Shutdown Relay Signal.
Standard:	The candidate depresses pushbutton HS-3253B ALARM RESET to clear the Shutdown Relay Signal.
Evaluator Cue:	Inform the candidate the pushbutton, HS-3253B, has been depressed. 60 seconds later, you hear the B SBDG, 1G21, cranking and starting without issues.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues: The B SBDG is running, this 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:

- 1G-21, 'B' SBDG was shutdown 45 minutes ago following an auto start due to a lightning strike at DAEC.
- The B ESW pump, 1P-99B, has been secured.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to return 1G-21 to the standby readiness condition in accordance with OI 324, Section 8.4, in the SBDG room.

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

JOB PERFORMANCE MEASURE

JPM TITLE: SWITCH CRD PUMP DISCHARGE FILTERS

JPM NUMBER: 201001-03

REV. 14

TASK NUMBER(S) / TASK TITLE(S): NSPEO 255-0403/
Switch CRD Pump Discharge Filters

K/A NUMBERS: 201001

K/A VALUE: A2.02 3.2 / 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: ☐

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

Simulator: ☐ Other: ☐

Lab: ☐

Time for Completion: 15 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Is the K/A appropriate to the task and to the licensee level if required?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Is justification provided for tasks with K/A values less than 3.0?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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.

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.

[illegible]

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

SIMULATOR SETUP INSTRUCTIONS:

SIMULATOR SET UP:

Simulator Setup Instructions: None

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials:

1. OI 255, Control Rod Drive Hydraulic System
2. Hand protection (gloves)

General References:

1. OI 255, Control Rod Drive Hydraulic System, Rev. 94, Section 6.3

Task Standards:

1. Open the Combined Vent/Drain Line Isolation, V-17-20(17).
2. Crack open CRD Pump Discharge Filter 1F-201B(A) Vent Valve V-17-18(15) and vent as necessary.
3. Close V-17-18(15).
4. Close V-17-20(17).
5. Slowly Open Outlet Isolation Valve V-17-22(21).
6. Slowly Close Outlet Isolation Valve V-17-21[22].

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:

- Plant is operating at full power and steady state. CRD system is in its normal configuration with the exception of reference leg backfill.
- During review of the NSPEO logs, the NLO identified that the reading on the PDIS 1812, CRD Discharge Filter ΔP is reading 11 psid and initiated a WO to change the filter.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to place the standby CRD discharge filter 1F-201B[A] into service IAW OI-255, Control Rod Drive Hydraulic System.
- The CRS has authorized the use of torque amplifying devices to operate valves, as 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 <u>N</u>	<u>CAUTION</u> Since the CRD Pump Discharge Filters are normally pressurized to 1500 psig, valve operations should be performed carefully.
Standard:	Reviews and placekeeps CAUTION.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 2 Critical <u>N</u>	Verify the following valve positions for standby CRD Pump Discharge Filter 1F-201B: Inlet Isolation Valve V-17-14[13] OPEN Outlet Isolation Valve V-17-22[21] CLOSED
Standard:	Simulates rotating V-17-14[13] handwheel clockwise (CLOSE), verifies rotation, and simulates rotating handwheel fully counter clockwise (OPEN). Also could verify position of the rising stem gate valve initially down and as the valve is opened, the rising stem rises. Simulates rotating V-17-22[21] clockwise and verifies rotation does not occur. Also could verify the rising stem gate valve rising stem is fully down.
Evaluator Cue:	When the student asks about valve response, inform the operator of valve movements based on above standard and operators actions (hand wheel turns in that direction, etc).
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 3 Critical <u>Y</u>	Vent Filter 1F-201B[A] as follows: <ul style="list-style-type: none"> Open Combined Vent/Drain Line Isolation V-17-20[17].
Standard:	Simulates opening V-17-20[17].
Evaluator Cue:	When asked and the student demonstrates moving the valve handwheel in the counter clockwise direction (OPEN), inform the student that the valve turns in the CCW direction for a while then stops.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 4 Critical <u>Y</u>	Vent Filter 1F-201B[A] as follows: <ul style="list-style-type: none"> Crack open CRD Pump Discharge Filter 1F-201B(A) Vent Valve V-17-18(15) and vent as necessary.
Standard:	Simulates cracking open 1F-201B Vent Valve V-17-18(15).
Evaluator Cue:	When asked and the student demonstrates turning valve handwheel CCW, inform student that the valve turns in the CCW direction. If asked, inform the student that flow noise was erratic but is now constant.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 5 Critical <u>Y</u>	Vent Filter 1F-201B[A] as follows: <ul style="list-style-type: none"> Close V-17-18(15).
Standard:	Simulates closing V-17-18(15).
Evaluator Cue:	When asked and the student demonstrates turning the valve handwheel CW, inform the operator the valve turns in the CW direction until it stops. After the valve is closed and when asked, inform the student that flow noise has stopped.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 6 Critical <u>Y</u>	Vent Filter 1F-201B[A] as follows: <ul style="list-style-type: none"> Close V-17-20(17)
Standard:	Simulates closing V-17-20(17).
Evaluator Cue:	When asked and the student demonstrates the valve handwheel CW, inform the student that the valve turns in the CW direction until it stops.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 7 Critical <u>N</u>	<u>CONTINUOUS RECHECK STATEMENT</u> IF PDIS-1812 CRD Pump Discharge Filter High Diff Pressure rises while transferring to the standby filter, THEN stop the evolution, and inform the CRS.
Standard:	Reviews the CRS.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 8 Critical <u>Y</u>	Slowly open Outlet Isolation Valve V-17-22(21).
Standard:	Simulates slowly opening V-17-22(21).
Evaluator Cues:	<p>If asked, inform the operator PSIS-1812 lowers during the transfer. Provide lowering values down to 4 psid as necessary.</p> <p>If asked and the operator demonstrates turning the valve handwheel CCW, inform the operator the valve turned CCW until it stopped. The stem has risen.</p>
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 9 Critical <u>Y</u>	Slowly close Outlet Isolation Valve V-17-21[22].
Standard:	Simulates closing V-17-21[22].
Evaluator Note:	When asked and the student demonstrates turning the valve handwheel Clockwise (CW), inform the student the valve turned CW until it stopped. The stem has gone down.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Performance Step: 10 Critical <u>N</u>	At 1C05, verify that CRD System flow is 40 gpm and drive water pressure is approximately 260 psid as indicated on FI-1814 CRD SYSTEM FLOW and PDI-1825A (CRD PRESSURE) DRIVE WATER ΔP , respectively.
Standard:	Control room operator directed to verify system flow of 40 GPM and drive water pressure of approximately 260 psid. (simulated)
Evaluator Cue:	When contacted, acknowledge communication as the control room operator and inform the operator that CRD system flow is 40 gpm and drive water ΔP is about 260 psid.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	_____

Terminating Cues: After the control room is contacted verifying proper system parameters, inform the student that this 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:

- Plant is operating at full power and steady state. CRD system is in its normal configuration with the exception of reference leg backfill.
- During review of the NSPEO logs, the NLO identified that the reading on the PDIS 1812, CRD Discharge Filter ΔP is reading 11 psid and initiated a WO to change the filter.

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to place the standby CRD discharge filter 1F-201B[A] into service IAW OI-255, Control Rod Drive Hydraulic System.
- The CRS has authorized the use of torque amplifying devices to operate valves, as required.

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

6.3 SWITCHING CRD PUMP DISCHARGE FILTERS

Usage Level
Continuous Use

6.3.1 PLACING STANDBY DISCHARGE FILTER 1F-201B[A] IN SERVICE

CAUTION

Since the CRD Pump Discharge Filters are normally pressurized to 1500 psig, valve operations should be performed carefully.

- (1) Verify the following valve positions for standby CRD Pump Discharge Filter 1F-201B[A]:

Inlet Isolation Valve V-17-14[13]	OPEN
Outlet Isolation Valve V-17-22[21]	CLOSED

- (2) Vent Filter 1F-201B[A] as follows:

- (a) Open Combined Vent/Drain Line Isolation V-17-20[17].
- (b) Crack open CRD Pump Discharge Filter 1F-201B[A] Vent Valve V-17-18[15] and vent as necessary.
- (c) Close V-17-18[15].
- (d) Close V-17-20[17].



CONTINUOUS RECHECK STATEMENT

(Applicable to the remainder of this section)



IF PDIS-1812 CRD Pump Discharge Filter High Diff Pressure rises while transferring to the standby filter,	THEN stop the evolution, and inform the CRS.
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- (3) Slowly open Outlet Isolation Valve V-17-22[21].
- (4) Slowly close Outlet Isolation Valve V-17-21[22].
- (5) At 1C05, verify that CRD System flow is 40 gpm and drive water pressure is approximately 260 psid as indicated on FI-1814 CRD SYSTEM FLOW and PDI-1825A (CRD PRESSURE) DRIVE WATER ΔP , respectively.

Usage Level
Continuous Use

6.3.2 ISOLATING AND DRAINING DISCHARGE FILTER 1F-201A[B]

CAUTION

Since the CRD Pump discharge Filters are normally pressurized to 1500 psig, valve operations should be performed carefully for operator safety.

- (1) Verify closed Outlet Isolation Valve V-17-21[22].
- (2) Close Inlet Isolation Valve V-17-13[14].
- (3) Slowly open the following valves to depressurize and drain the Discharge Filter 1F-201A[B]:
 - (a) Slowly open Combined Vent/Drain Line isolation V-17-17[20].
 - (b) Slowly open CRD Pump Discharge Filter 1F-201A[B] Vent Valve V-17-15[18].
 - (c) Slowly open CRD Pump Disch Filter 1F-201A[B] Drain Valve V-17-16[19].

Usage Level
Continuous Use

6.3.3 RETURNING DISCHARGE FILTER 1F-201A[B] TO A STANDBY CONDITION

CAUTION

Since the CRD Pump discharge Filters are normally pressurized to 1500 psig, valve operations should be performed carefully for operator safety.

- (1) Close Filter Drain Valve V-17-16[19].
- (2) Verify Combined Vent/Drain Line isolation V-17-17[20] is open.
- (3) Throttle Filter Vent Valve V-17-15[18] to one turn open.
- (4) Crack open Filter 1F-201A[B] Inlet Isolation Valve V-17-13[14] to flush air from the filter housing.
- (5) When venting is complete, close Vent Valves V-17-15[18].
- (6) Close Combined Vent/Drain Line isolation V-17-17[20].
- (7) Fully open Filter Inlet Isolation Valve V-17-13[14].