

JPM TITLE: Locally Operate the Atmospheric Steam Dump Control Valves

JPM NUMBER: PBN JPM P000.044a.AOT **REV.** 3

TASK NUMBER(S) / TASK TITLE(S): PBN P000.044.AOT / Locally Operate the Atmospheric Steam Dump Control Valves

K/A NUMBERS: 035 K6.02 **K/A VALUE:** 3.1/3.5
 035 A3.02 3.7/3.5

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:	Mike Angle 	5/20/2014 <u>8/7/2014</u>
	Instructor/Developer	Date
Reviewed by:		<u>8/11/2014</u>
	Instructor (Instructional Review)	Date
Validated by:	ERIC SCHWOERER 	<u>8/7/14</u>
	SME (Technical Review)	Date
Approved by:		<u>8/11/14</u>
	Training Supervision	Date
Approved by:		<u>8/12/14</u>
	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Has the JPM been reviewed and validated by SMEs?	<input checked="" 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 checked="" type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input checked="" 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 checked="" type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input checked="" 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 checked="" 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 checked="" type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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}



**PBN JPM P000.044a.AOT, Locally Operate the Atmospheric
Steam Dump Valves, Rev. 3**

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

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR #	PREPARER	DATE
				SUPERVISOR	DATE
Rev. 0	See microfilm.				
Rev. 1	Revised cue for the 2012 NRC ILT Exam.				
Rev. 2	Unknown				
Rev. 3	Updated for the 2014 operational exam.				
Rev 3 Pen/lnk	Added a evaluator cue to step 1	Cue added if examinee questions the applicability of AOP-10C	N/A	J Hinze	
				T Larson	

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

Simulator Setup Instructions:

- None

SIMULATOR MALFUNCTIONS:

- None

SIMULATOR OVERRIDES:

- None

SIMULATOR REMOTE FUNCTIONS:

- None

Required Materials: FOP 1.2, Potential Fire Affected Safe Shutdown Components (Fire Area A01H - Unit 2 Facade) page 108 Unit 2 Secondary System Isolation

General References: FOP 1.2, Potential Fire Affected Safe Shutdown Components (Fire Area A01H - Unit 2 Facade)

Task Standards: Locally operate 2MS-2015 per FOP 1.2 using the gagging device.

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

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

INITIAL CONDITIONS:

- Unit 2 tripped from full power due to a fire in the Unit 2 Facade.
- 2MS-2015 'B' SG Atmospheric Steam Dump Valve is operating sporadically and currently is partially open.
- The fire is OUT and the Fire Brigade Leader has determined it is safe for personnel to access the facade area to perform any needed actions.

INITIATING CUES (IF APPLICABLE):

- OS2 directs you to fail shut 2MS-2015, 'B' SG Atmospheric Steam Dump Valve per FOP-1.2, Potential Fire Affected Safe Shutdown Components (Fire Area A01H-Unit 2 Facade) and notify the Control Room when the valve it is shut.

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

JPM PERFORMANCE INFORMATION

Start Time: _____

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

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

Performance Step: 1 Critical Y	1. Fail 2MS-2015, 'B' SG Atmospheric Dump Valve SHUT by: <ul style="list-style-type: none"> • Shut IA-872, SG B Atmospheric Steam Dump Operating Air Inlet
Standard:	The examinee shuts IA-872, SG B Atmospheric Steam Dump Operating Air Inlet.
Evaluator Cue:	If asked, control air is reading approximately half scale. IA-872 valve handwheel is fully inserted.
Evaluator Cue:	IF ASKED, AOP-10C (AS REFERENCED IN FOP 1.2) IS NOT APPLICABLE DUE TO THE LOCATION OF THE FIRE. THIS CUE IS APPLICABLE FOR THE DURATION OF THE JPM.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 2 Critical Y	2. Fail 2MS-2015, 'B' SG Atmospheric Dump Valve SHUT by: <ul style="list-style-type: none"> • Open moisture trap filter plug for 2MS-2015 to vent air
Standard:	The examinee vents air for 2MS-2015
Evaluator Cue:	The moisture trap filter plug is open. Initially there was a sound of air venting, after several seconds it has stopped. If asked, control air pressure is reading zero. If asked, 2MS-2015 indicates shut locally.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 3 Critical N	3. Report the status of 2MS-2015 to the Control Room.
Standard:	The examinee notifies the Control Room that 2MS-2015 is shut locally.
Evaluator Cue:	The Control Room acknowledges your report and OS2 directs you to locally throttle 2MS-2015 five turns open using the gagging handwheel. If asked, there are no further actions required by AOP-10C Attachment C.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 4 Critical Y	4. Using the gagging handwheel, open 2MS-2015, 'B' SG Atmospheric Dump Valve 5 turns.
Standard:	The examinee opens 2MS-2015 five turns using the manual gagging device.
Evaluator Note:	The handwheel must be turned clockwise to gag the valve open. If the examinee indicates the handwheel is being turned counter-clockwise, provide a cue that the handwheel did not move.
Evaluator Cue:	2MS-2015 gagging handwheel is turned five turns open and the sound of steam flow is heard.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 5 Critical N	5. Inform the Control Room the status of 2MS-2015.
Standard:	The examinee notifies the Control Room that 2MS-2015 is gagged open five turns.
Evaluator Cue:	The Control Room acknowledges your report.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Terminating Cues: THIS COMPLETES THE JPM

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

Stop Time: _____

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 2 tripped from full power due to a fire in the Unit 2 Facade.
- 2MS-2015 'B' SG Atmospheric Steam Dump Valve is operating sporadically and currently is partially open.
- The fire is OUT and the Fire Brigade Leader has determined it is safe for personnel to access the facade area to perform any needed actions.

INITIATING CUES (IF APPLICABLE):

- OS2 directs you to fail shut 2MS-2015, 'B' SG Atmospheric Steam Dump Valve per FOP-1.2, Potential Fire Affected Safe Shutdown Components (Fire Area A01H-Unit 2 Facade) and notify the Control Room when the valve it is shut.

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



JOB PERFORMANCE MEASURE

JPM TITLE: Shift Battery Chargers (Battery Charger D-09 Supplying Power to Bus D-02)

JPM NUMBER: PBN JPM P063.003a.AOT **REV.** 8

TASK NUMBER(S) / TASK TITLE(S): PBN P063.003.AOT / Shift Battery Chargers

K/A NUMBERS: 2.1.30
063 K1.03 **K/A VALUE:** 4.4 / 4.0
2.9 / 3.5

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: 30 Minutes Time Critical: No

Alternate Path [NRC]: No

Alternate Path [INPO]: No

Developed by:	Jeffrey Hinze Instructor/Developer	_____	Date
Reviewed by:	Andrew Zommers Instructor (Instructional Review)	_____	Date
Validated by:	Jeff Baugniet SME (Technical Review)	_____	Date
Approved by:	Randy Amundson Training Supervision	_____	Date
Approved by:	Tom Larson 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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6. Has the completion time been established based on validation data or incumbent experience?	<input checked="" 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 checked="" type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input checked="" 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 checked="" 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 checked="" type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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}



PBN JPM P063.003a.AOT, Shift Battery Chargers (Battery Charger D-09 Supplying Power to Bus D-02), Rev. 8

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

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR #	PREPARER	DATE
				SUPERVISOR	DATE
Rev. 0-2	See historical records.				
Rev. 3	Reformatted to the current revision of QF-1075-01. Revised to Rev. 10 of 0-SOP-DC-002, 125 VDC System, Bus D-02 & Components.				
Rev. 4	JPM updated to new format. Editorial changes made to JPM.				
Rev. 5	Corrected typographical error. Verified correct for Rev 16 of 0-SOP-DC-002.				
Rev. 6	Updated due to procedure revision. Verified correct for revision 18 of 0-SOP-DC-002.				
Rev. 7	Updated for the 2014 operational exam.				
Rev 8	Updated for 2015 NRC ILT Exam due to procedure change				

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

SIMULATOR SETUP INSTRUCTIONS:

- None

SIMULATOR MALFUNCTIONS:

- None

SIMULATOR OVERRIDES:

- None

SIMULATOR REMOTE FUNCTIONS:

- None

Required Materials: 0-SOP-DC-002, 125 VDC System Bus D-02 & Components

General References: 0-SOP-DC-002, 125 VDC System Bus D-02 & Components

Task Standards: The examinee places Battery Charger D-09 in service for Battery Charger D-08 (D-09 initially supplying Battery D-305) in accordance with the applicable steps of 0-SOP-DC-002.

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 DC Distribution system is operating under normal conditions.
- Battery Charger D-09 is supplying Battery D-305.
- Battery Charger D-09 is being supplied from 1B-49.
- D-109 Battery Charger is OOS for maintenance.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to place Battery Charger D-09 in service for Battery Charger D-08 in accordance with 0-SOP-DC-002, 125 VDC System, Bus D-02 & Components section 5.2, Placing Battery Charger D-09 in Service for Battery Charger D-08 (D-09 initially supplying battery D-305).

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.

NOTE: The Evaluator will act as the Concurrent Checker for all necessary steps and will concur with all actions taken by the examinee.

5.2 Placing D-09 Battery Charger in Service for D-08 Charger, (D-09 Initially Supplying D-305 Battery)

<p>Performance Step: 1 Critical N</p>	<p>5.2.1 CHECK the following are in OFF at D-301 and D-02 OR have OPEN indication on 2C20:</p> <ul style="list-style-type: none"> • D72-301-01, Alternate Power to D-01 DC Distr Pnl • D72-301-03, Alternate Power to D-02 DC Distr Pnl • D72-301-04, Alternate Power to 1/2D-201 DC Distr Pnl • D72-301-06, Feed to D-302 from D-305 Swing Station Battery • D72-301-07, Power to Mnt Test Equipment (no 2C20 ind) • D72-02-04, Feed to D-02 from D-301 Swing Batt Distr Pnl
<p>Standard:</p>	<p>The examinee checks that the breakers at panels D-301 and D-02 are OFF.</p>
<p>Evaluator Note:</p>	<p>The examinee may question the NOTE regarding D-109 prior to the 1st step of this section. If necessary, remind the examinee of the turnover information that D-109 is OOS for maintenance.</p>
<p>Evaluator Cue:</p>	<p>The breakers at panels D-301 and D-02 are in the OFF position.</p>
<p>Performance:</p>	<p>SATISFACTORY ____ UNSATISFACTORY ____</p>
<p>Comments:</p>	<p>_____</p>

Performance Step: 2 Critical N	5.2.2 CHECK DC current is approximately zero on D-09 Charger.
Standard:	The examinee checks that Battery Charger D-09 DC CURRENT is approximately '0' amps.
Evaluator Cue:	Battery Charger D-09 DC CURRENT is '0' amps.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 3 Critical Y	5.2.3 PLACE D-09-DC, D-09 Swing Stn Battery Charger Output to the OFF position on D-09.
Standard:	The examinee places D-09-DC breaker to the OFF position.
Evaluator Note:	Per the NOTE prior to step 5.2.3; when D-09-DC breaker is taken to OFF a D-09 Battery Charger Trouble Alarm will occur in the Control Room.
Evaluator Cue:	<ul style="list-style-type: none"> • D-09-DC is in the OFF position. • The control room announces: "D-09 BATTERY CHARGER TROUBLE ALARM"
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 4 Critical Y	5.2.4 PLACE D72-301-05, Feed to D-301 From D-305 Swing Station Battery, to the OFF position on D-301.
Standard:	The examinee places D72-301-05 to the OFF position.
Evaluator Note:	As the Concurrent Checker the Evaluator will concur with all actions taken by the examinee.
Evaluator Cue:	Breaker is in the OFF position.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 5 Critical N	5.2.5 IF D-09 is NOT being supplied from the desired AC source, THEN PERFORM the following:
Standard:	D-09 is already aligned to the desired source, Step 5.2.5 has been previously marked N/A; the examinee moves on to Step 5.2.6.
Evaluator Cue:	If the examinee asks, D-09 IS aligned to 1B-49, the desired AC source (provided in the turnover).
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 6 Critical N	5.2.6 ENSURE the following for D-09 Battery Charger: a. D-09 voltage is approximately equal to D-08 Charger voltage - ADJUST D-09 Float potentiometer as necessary. b. D-09 Battery Charger voltage is 132 to 135 vdc.
Standard:	The examinee checks that D-08 and D-09 Charger voltages are approximately equal and that D-09 voltage is between 132-135 VDC.
Evaluator Cue:	<ul style="list-style-type: none"> • Battery Charger D-08 voltage is 133.5 VDC. • Battery Charger D-09 voltage is 133.5 VDC.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 7 Critical N	5.2.7 ENSURE D72-301-02, Feed to D-301 from D-09 Swing Stn Battery Chgr, is in the ON position on D-301.
Standard:	The examinee ensures breaker D72-301-02 is in the ON position.
Evaluator Cue:	Breaker is in the ON position
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 8 Critical Y	5.2.8 PLACE D72-301-03, Alternate Power to D-02 DC Distribution Panel to the ON position on D-301.
Standard:	The examinee places breaker D72-301-03 to the ON position.
Evaluator Cue:	Breaker is in the ON position
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 9 Critical Y	5.2.9 PLACE D72-02-04, Feed to D-02 from D-301 Swing Batt Distr Pnl to the ON position on D-02..
Standard:	The examinee places breaker D72-02-04 to the ON position.
Evaluator Cue:	Breaker is in the ON position
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 10 Critical N	5.2.10 RECORD DC current on D-08 Charger: D-08 DC current _____ amps
Standard:	The examinee records DC current (130 amps) for Battery Charger D-08.
Evaluator Cue:	DC current for Battery Charger D-08 is 130 amps.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 11 Critical Y	5.2.11 PLACE D-09-DC, D-09 Swing Stn Battery Charger Output to the ON position on D-09.
Standard:	The examinee places breaker D-09-DC to ON .
Evaluator Note:	Per the NOTE prior to step 5.2.11; when D-09-DC is taken to ON the D-09 Battery Charger Trouble Alarm will clear in the Control Room.
Evaluator Cue:	<ul style="list-style-type: none"> • Breaker is in the ON position, D-09 current moves to 90 amps. • Control Room announces: "D-09 Battery Charger Trouble Alarm Clear"
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 12 Critical N	5.2.12 ADJUST D-09 Float potentiometer as necessary until the charger assumes at least 50 but no greater than 100 percent of the current previously carried by D-08 from Step 5.2.10.
Standard:	The examinee verifies that D-09 current (90 amps) is between 50 and 100% of previously given D-08 current (130 amps). No adjustment is necessary.
Evaluator Note:	130 amps was given (Cued) at step 5.2.10 for D-08 load.
Evaluator Cue:	D-09 current is 90 amps.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 13 Critical N	5.2.13 ENSURE D-09 Battery Charger is functioning normally (ie., no fluctuations in voltage or current and no alarms).
Standard:	The examinee verifies verifies that Battery Charger D-09 is operating properly.
Evaluator Cue:	D-09 Charger Status is: <ul style="list-style-type: none"> • voltage is 133.5 VDC and stable • current is 90 amps and stable • No alarms in
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 14 Critical Y	5.2.14 PLACE D-08-DC, D-08 DC Station Battery Charger Output to the OFF position on D-08.
Standard:	The examinee places D-08-DC breaker to OFF position.
Evaluator Note:	Per the NOTE prior to step 5.2.14; when D-08-DC breaker is taken to OFF a D-08 Battery Charger Trouble Alarm will occur in the Control Room.
Evaluator Cue:	<ul style="list-style-type: none"> • D-08-DC is in the OFF position. • The control room announces: "D-08 BATTERY CHARGER TROUBLE ALARM"
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 15 Critical N	5.2.15 ADJUST D-09 Float potentiometer as necessary until D-09 Battery Charger voltage is 133.5 (132-135) vdc.
Standard:	The examinee verifies D-09 Charger voltage is 133.5 VDC.
Evaluator Cue:	D-09 Charger voltage is 133.5 VDC (previously given at step 5.2.13)
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 16 Critical N	5.2.16 CHECK D-09 Charger current is approximately equal to the previous current on D-08 (recorded in Step 5.2.10).
Standard:	The examinee verifies D-09 Charger current is approximately equal to previous D-08 Charger current.
Evaluator Cue:	D-09 Charger current is 130 amps.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 17 Critical N	5.2.17 PLACE D-08-AC, D-08 DC Station Battery Charger Input to the OFF position on D-08.
Standard:	The examinee places D-08-AC breaker to the OFF position.
Evaluator Note:	Per the NOTE prior to step 5.2.17; when D-08-AC is taken to OFF the D-08 Battery Charger Trouble Alarm will clear in the Control Room.
Evaluator Cue:	<ul style="list-style-type: none"> • Breaker is in OFF position • Control Room announces, "D-08 Battery Charger Trouble Alarm Clear" • The red AC Power Failure light on D-08 Charger is OFF.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 18 Critical N	5.2.18 IF D-08 contactor is operable from the Control Room, THEN TRIP D-08 Battery Charger Supply contactor.
Standard:	The examinee notifies the control room to trip the D-08 Battery Charger Supply contactor.
Evaluator Cue:	The Control Room acknowledges the report, then reports back that 2B42-491, D-08 Battery Charger Supply contactor is OPEN.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 19 Critical N	5.2.19 IF D-08 contactor not operable from the Control Room, THEN TRIP locally in accordance with Section 5.7.
Standard:	The examinee acknowledges that 2B42-491, D-08 Battery Charger Supply contactor was opened from the control room, marks Step 5.2.19 N/A, and moves on to Step 5.2.20.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Performance Step: 20 Critical N	5.2.20 WHEN the AC Supply Contactor is tripped, THEN PLACE D72-02-07, Feed to D-02 from D-08 Stn Battery Charger to the OFF position on D-02.
Standard:	The examinee places breaker D72-02-07 to the OFF position.
Evaluator Cue:	Breaker is in the OFF position.
Performance:	SATISFACTORY ____ UNSATISFACTORY ____
Comments:	_____

Terminating Cues: THIS COMPLETES THE JPM

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

Stop Time: _____

TURNOVER SHEET

INITIAL CONDITIONS:

- The DC Distribution system is operating under normal conditions.
- Battery Charger D-09 is supplying Battery D-305.
- Battery Charger D-09 is being supplied from 1B-49.
- D-109 Battery Charger is OOS for maintenance.

INITIATING CUES (IF APPLICABLE):

- OS1 directs you to place Battery Charger D-09 in service for Battery Charger D-08 in accordance with 0-SOP-DC-002, 125 VDC System, Bus D-02 & Components section 5.2, Placing Battery Charger D-09 in Service for Battery Charger D-08 (D-09 initially supplying battery D-305).

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



JOB PERFORMANCE MEASURE

JPM TITLE: Perform Lineups on the Spent Fuel Pool Cooling System

JPM NUMBER: PBN JPM P033.001a.AOT **REV. 0**

TASK NUMBER(S) / TASK TITLE(S): PBN P033.001.AOT Perform Lineups of the SFP Cooling System

K/A NUMBERS: 033 G 2.2.15 **K/A VALUE:** 3.9/4.3

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: 20 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by:	Andrew Zommers Instructor/Developer	_____	Date
Reviewed by:	Jeff Hinze Instructor (Instructional Review)	_____	Date
Validated by:	Jeff Baugniet SME (Technical Review)	_____	Date
Approved by:	Randy Amundson Training Supervision	_____	Date
Approved by:	Tom Larson 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 checked="" 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 checked="" type="checkbox"/>
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Has the completion time been established based on validation data or incumbent experience?	<input checked="" 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 checked="" type="checkbox"/>
8. Is the job level appropriate for the task being evaluated if required?	<input checked="" 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 checked="" 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 checked="" type="checkbox"/>
11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately?	<input checked="" 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 checked="" type="checkbox"/>
13. Are all references identified, current, accurate, and available to the trainee?	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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



**PBN JPM P033.001a.AOT Perform Lineups SFP Cooling System,
Rev. 0**

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

#	DESCRIPTION OF CHANGE	REASON FOR CHANGE	AR/TWR#	PREPARER	DATE
				SUPERVISOR	DATE

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

SIMULATOR SETUP INSTRUCTIONS:

1. None
- 2.

SIMULATOR MALFUNCTIONS:

None

SIMULATOR OVERRIDES:

None

SIMULATOR REMOTE FUNCTIONS:

None

Required Materials: OP 8A Spent Fuel Pool Cooling Water System Operation marked up to align P-12A SFP Cooling Pump to HX-13B SFP Heat Exchanger

General References: OP 8A Spent Fuel Pool Cooling Water System Operation

Task Standards: Per OP 8A align P-12A SFP Cooling Pump to HX-13B SFP Heat Exchanger

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:

- Maintenance is required in the Spent Fuel Pool Cooling System which requires a cooling alignment change.
- Currently P-12A, SFP Cooling Pump is in service to HX-13A SFP Heat Exchanger.

INITIATING CUES (IF APPLICABLE):

- You have been directed by OS1 to perform Section 5.5 of OP 8A, Spent Fuel Pool Cooling Water System Operation to align P-12A, SFP Cooling Pump, to HX-13B, SFP Heat Exchanger.

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>	5.5.1 P-12A, SFP Cooling Pump, is in service to HX-13A, SFP Heat Exchanger.
Standard:	Initial step as complete, information given in turnover.
Evaluator Cue:	If asked, P-12A SFP Cooling Pump is operating.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 2 Critical <u>N</u>	5.5.2 CHECK SF-22, HX-13B SFP Heat Exchanger Outlet, is SHUT.
Standard:	Check SF-22 SHUT
Evaluator Cue:	Valve stem is inserted for SF-22.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 3 Critical <u>N</u>	5.5.3 CHECK the following valves are OPEN: a. SF-23, P-12A and P-12B SFP Cooling Pump Discharge Header Cross-connect. b. SW-2927B, HX-13B SFP HX SW Inlet.
Standard:	Check valves are OPEN.
Evaluator Note:	If examinee asks Control Room for status of SW-2927B report back valve indicates OPEN.
Evaluator Cue:	Valve stems are extended for SF-23 and SW-2927B.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 4 Critical <u>Y</u>	5.5.4 OPEN SW-2930B, HX 13B SFP HX SW Outlet.
Standard:	Have Control Room OPEN SW-2930B.
Evaluator Note:	If examinee checks SW-2930B locally cue valve position consistent with reports given from Control Room (stroking open, etc).
Evaluator Cue:	When examinee asks Control Room to OPEN SW-2930B report back valve SW-2930B was operated and indicates OPEN.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 5 Critical <u>Y</u>	5.5.5 THROTTLE OPEN SW-746, HX-13B SFP HX Return Throttle, for expected heat load.
Standard:	Throttle OPEN SW-746 for expected heat load (can check SW-661 position as reference).
Evaluator Cue:	Handwheel for SW-746 OPEN per examinees request.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 6 Critical <u>Y</u>	5.5.6 SHUT SF-21, HX-13A SFP Heat Exchanger Outlet.
Standard:	SHUT SF-21.
Evaluator Note:	NOTE: The following step will momentarily dead head P-12A. Do not delay the performance of step 5.5.7 once step 5.5.6 is complete.
Evaluator Cue:	Handwheel rotated clockwise until SF-21 valve stem is inserted.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 7 Critical <u>Y</u>	5.5.7 OPEN SF-22, HX-13B SFP Heat Exchanger Outlet.
Standard:	OPEN SF-22
Evaluator Cue:	Handwheel for SF-22 rotated counterclockwise until valve stem is extended.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 8 Critical <u>Y</u>	5.5.8 THROTTLE SF-12, HX-13B SFP Heat Exchanger Inlet, to PROVIDE 1200 to 1300 gpm flow rate.
Standard:	Turn handwheel counterclockwise until indicated SFP Cooling Water Flow is 1200 to 1300 gpm.
Evaluator Note:	NOTE: Following step requires two (2) operators. Flow will be lower than required initially and SF-12 should be throttled open until the report of 1250 gpm is received.
Evaluator Cue:	Cue examinee another operator will standby SFP Cooling flow indicator with flow at 1150 gpm. As SF-12 is throttled OPEN, cue SFP cooling flow rises and is reported as 1250 gpm, then examinee stops opening SF-12.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	



Performance Step: 9 Critical <u>N</u>	5.5.9 SHUT SW-2930A, HX 13A SFP HX SW Outlet.
Standard:	Have Control Room SHUT SW-2930A.
Evaluator Note:	If examinee checks SW-2930A locally cue valve position consistent with reports given from Control Room (stroking shut, etc).
Evaluator Cue:	When examinee asks Control Room to SHUT SW-2930A report back valve SW-2930A was operated and indicates SHUT.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 10 Critical <u>N</u>	5.5.10 THROTTLE valve SW-746, HX-13B SFP HX Return Throttle, as necessary to MAINTAIN spent fuel pool temperature between 70 and 90°F.
Standard:	Examinee checks SFP Temperature.
Evaluator Cue:	Temperature of SFP is 81°F and stable.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 11 Critical <u>Y</u>	5.5.11 ALIGN radiation monitor RE-220 to TAKE samples from HX-13B SFP HX: a. SHUT SW-665, HX-13A SFP HX Return RE-220 Inlet Isolation.
Standard:	SHUT SW-665
Evaluator Cue:	Handwheel turned clockwise and valve stem inserted for SW-665.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 12 Critical <u>Y</u>	5.5.11 ALIGN radiation monitor RE-220 to TAKE samples from HX-13B SFP HX: b. OPEN SW-747, HX-13B SFP HX Return RE-220 Inlet Isolation.
Standard:	OPEN SW-747
Evaluator Cue:	Handwheel turned counter clockwise and valve stem extended for SW-747.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 13 Critical <u>Y</u>	5.5.11 ALIGN radiation monitor RE-220 to TAKE samples from HX-13B SFP HX: c. SHUT SW-668, HX-13A SFP HX Return RE-220 Outlet Isolation.
Standard:	SHUT SW-668
Evaluator Cue:	Handwheel turned clockwise and valve stem inserted for SW-669.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Performance Step: 14 Critical <u>Y</u>	5.5.11 ALIGN radiation monitor RE-220 to TAKE samples from HX-13B SFP HX: d. OPEN SW-748, HX-13B SFP HX Return RE-220 Outlet Isolation.
Standard:	OPEN SW-748
Evaluator Cue:	Handwheel turned counter clockwise and valve stem extended for SW-748.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

<p>Performance Step: 15 Critical <u>N</u></p>	<p>5.5.11 ALIGN radiation monitor RE-220 to TAKE samples from HX-13B SFP HX:</p> <p>e. THROTTLE OPEN valve SW-667, RE-220 SW Throttle, to OBTAIN a flow rate greater than or equal to 8 gpm as indicated by flow through SG-4456 AND RE-220 is NOT in "FAIL EXTERNAL" on PPCS.</p>
<p>Standard:</p>	<p>Throttle OPEN SW-667 and obtain flow of 8 gpm.</p>
<p>Evaluator Note:</p>	<p>SW-667 is a ball valve.</p> <p>There is no flow meter locally, only a flapper valve indicating flow. Adequate flow is the flapper valve open with the RMS Server indicating not failed (low flow).</p>
<p>Evaluator Cue:</p>	<p>SG-4456 flapper opens as examinee throttles open SW-667.</p> <p>If Control is called, when flapper valve shows full flow, the RMS Server shows Green for RE-220.</p>
<p>Performance:</p>	<p>SATISFACTORY _____ UNSATISFACTORY _____</p>
<p>Comments:</p>	



Performance Step: 16 Critical <u>N</u>	When complete examinee informs OS1 section 5.5 of OP 8A is completed. P-12A SFP Cooling Pump is aligned to HX-13B SFP Heat Exchanger
Standard:	Examinee informs OS1 step 5.5 of OP 8A is completed.
Evaluator Cue:	Acknowledge examinees report.
Performance:	SATISFACTORY _____ UNSATISFACTORY _____
Comments:	

Terminating Cues: **The JPM is complete**

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

Stop Time: _____

TURNOVER SHEET

INITIAL CONDITIONS:

- Maintenance is required in the Spent Fuel Pool Cooling System which requires a cooling alignment change.
- Currently P-12A, SFP Cooling Pump is in service to HX-13A SFP Heat Exchanger.

INITIATING CUES (IF APPLICABLE):

- You have been directed by OS1 to perform Section 5.5 of OP 8A, Spent Fuel Pool Cooling Water System Operation to align P-12A, SFP Cooling Pump to HX-13B SFP Heat Exchanger.

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