Job Performance Measure

Perform Rod Drive MG Set Startup

JPM Number: IP-101

Revision Number: 151

Date: 03 / 17 / 2016

Developed By:	Eric Steinberg Instructor	03/17/2016 Date
Validated By:	Dan Burton SME or Instructor	04/22/2016 Date
Reviewed By:	Kevin Lueshen Operations Representative	04/22/2016 Date
Approved By:	Eric Steinberg Training Department	04/26/2016 Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure BwOP RD-1 Rev: 7

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

SME / Instructor	Date
SME / Instructor	Date
SME / Instructor	Date

Revision Record (Summary)

Revision 151, Revision includes current revisions of referenced procedures and current revision of TQ-AA-150-J020 JPM Template.

SIMULATOR SETUP INSTRUCTIONS

1. N/A, In-Plant

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: **Perform Rod Drive MG Set Startup**

JPM Number: **IP-101** Revision Number: **151**

Task Number and Title: **R-RD-014, Start up the Control Rod Drive System**

K/A Number and Importance: **001000A4.08, 3.7/3.4**

Suggested Testing Environment: **In-Plant**

Alternate Path: ☐ Yes ☒ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s): BwOP RD-1, Rev. 7; Control Rod Drive MG Set Startup

Materials:

1. BwOP RD-1
2. Pictures of the insides of Cabinet 2B for switch 1KS.
3. Pictures of Reactor Trip/Bypass Breakers (Open) and racked out.
4. Laser pointer.

Actual Testing Environment: ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: **10** minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

1. You are an EO.
2. Unit 2 is in the process of being started up per 2BwGP 100-2.
3. Unit 1 is at full power.

INITIATING CUE

1. The US has directed you to start the 2A Rod Drive MG set per BwOP RD-1.

Provide examinee with copy of BwOP RD-1 and inform them all prerequisites, precautions, limitations and actions are met.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

NOTE: Once filled out, only pages 1-8 will be filed with the student records. The approved master copy of this JPM must be filed in its entirety.

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

Cues for In-Plant JPMs that are conducted as simulate will be provided by the evaluator. The evaluator should provide a cue that the operator must evaluate to determine the component's position rather than the evaluator stating the component's position. Example: for a valve position the evaluator would provide the cue of the valve stem position, a valve handle position or the associated valve position pointer. The evaluator may provide the cue "as you see it" if the valve is in the position required for the step in the JPM. The evaluator should not use the words "the valve is open (or closed)". When the operator is reading an instrument or gauge, the operator should first locate the correct instrument or gauge. The evaluator should then (when practical) point to the instrument or gauge rather than stating the as read value. Cues for Simulator JPMs are generally not written in the JPM as the cue is provided by the simulator.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1	Proceed to the 2A Rod Drive MG Set (451' MEER).	Locate the 2A Rod Drive MG Set Control Cabinet: • 2RD03E.	___	___	___
2	Verify/Set the Voltage Adjust Potentiometer to the MID position and Sync switch is OFF. BwOP RD-1 steps F.1 and F.2.	Perform the following at 2RD03E: • VERIFY/SET the Voltage Adjust Potentiometer to MID position. • VERIFY/PLACE the Synchronizer Switch in the OFF position.	___	___	___
CUE	Voltage Adjust Pot is in Mid position (5 on dial).				
CUE	Synch switch is pointing straight UP. (Off position)				
3	Verify Motor and Generator breakers are tripped. BwOP RD-1 steps F.3 and F.4.	VERIFY the MOTOR and GENERATOR breakers are TRIPPED, either locally at the breakers, or at the control switches: • ENSURE Motor Breaker is in the TRIP position. • VERIFY the Motor Breaker OPEN light is ENERGIZED. • CHECK Generator Breaker is in the TRIP position. • VERIFY the Generator Breaker OPEN light is ENERGIZED.	___	___	___
CUE	Motor Breaker Control Switch Flag is GREEN.				
CUE	Motor Breaker GREEN light is Lit.				
CUE	Generator Breaker Control Switch Flag is GREEN.				
CUE	Generator Breaker GREEN light is Lit.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE	Any position except OFF is acceptable for the positions of the switches in the following step.				
4	Verify/Place the Ammeter and Voltmeter Selector Switches in the proper positions. BwOP RD-1 steps F.5 and F.6.	Perform switch alignment for the Ammeter and Voltmeter Selector switches: • VERIFY/PLACE the Ammeter Selector Switch in the A, B, or C position. • VERIFY/PLACE the Voltmeter Selector Switch in the 1-2, 2-3, or 3-1 position.	___	___	___
CUE	Ammeter Sel Switch is in the (A, B, or C) position and reading zero.				
CUE	Voltmeter Sel Switch is in the (1-2, 2-3, or 3-1) position and reading zero.				
NOTE	During performance of the next step, the student will be required to verify a switch position inside of a cabinet. Due to safety concerns, this cabinet will not be opened for the performance of this JPM. Have the student locate the proper cabinet and discuss checking the switch. A picture is available.				
5	Verify the position of the internal grounding switch. BwOP RD-1 steps F.7.	VERIFY/OPEN the internal grounding switch as follows: • LOCATE cabinet 2B. • LOCATE switch 1KS. • OPEN switch 1KS.	___	___	___
CUE	Switch 1KS is as shown in the pictures 1 and 1A (in the Open position).				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6	Verify/Close the Local Stationary and Moving Disconnects above the Rod Drive Power Cabinets. BwOP RD-1 steps F.8.	VERIFY/CLOSE the Local Stationary and Moving Disconnects above the Rod Drive Power Cabinets: • 2RD02JA. • 2RD02JC. • 2RD03JA. • 2RD03JC. • 2RD04JA. • 2RD04JC. • 2RD05JA. • 2RD05JC. • 2RD06JA. • 2RD06JC.	___	___	___
NOTE	Have student use laser pointer to identify switches and positions. Once the first position is verified provide the cue.				
CUE	Local Stationary and Moving Disconnect pointers all indicate ON.				
7	Verify/Close the Local Lift Disconnects above the Rod Drive Power Cabinets. BwOP RD-1 steps F.9.	VERIFY/CLOSE the Local Lift Disconnects above the Rod Drive Power Cabinets: • 2RD02JB. • 2RD03JB. • 2RD04JB. • 2RD05JB. • 2RD06JB.	___	___	___
NOTE	Have student use laser pointer. Once the first position is verified provide the cue.				
CUE	Local Lift Disconnect pointers all indicate ON.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
8	Verify open all Reactor Trip and Reactor Trip Bypass breakers. BwOP RD-1 steps F.10 and F.11.	VERIFY/OPEN all Reactor Trip and Reactor Trip Bypass Breakers: • RTA • RTB • BYA • BYB	___	___	___
CUE	Reactor Trip breaker A and B OPEN targets are displayed in picture 2.				
CUE	Reactor Trip Bypass breakers A and B Disconnect targets are displayed in picture 3.				
9	Ensure no targets indicating on the ground and overcurrent relays for both the A and B cabinets. BwOP RD-1 steps F.12.	OBSERVE the A and B cabinets for Relay targets (9 Targets total).	___	___	___
CUE	No targets are dropped for cabinet A or B.				
***10**	**Close the 2A Motor Breaker.** BwOP RD-1 steps F.13.	Start the 2A MG Motor as follows: *(Procedural Adherence)* • CLOSE the 2A MG Motor Breaker. ○ Wait 15 seconds for the MG to come up to speed.	___	___	___
CUE	RED Flag on the Control Switch is up, RED light is Lit, sounds from the 2A motor starting are heard.				
CUE	15 seconds have elapsed.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*11	**Flash the field of the 2A MG set generator.** BwOP RD-1 steps F.14.	Flash the field of the 2A Generator as follows: *(Procedural Adherence)* • DEPRESS and HOLD the 2A Field Flash pushbutton. ○ OBSERVE Generator Voltmeter indicates ~235 volts. • RELEASE the Field Flash pushbutton.	___	___	___
CUE	Generator Voltmeter indicates 235 volts.				
12	Check the range of control of the Voltage Adjust potentiometer. BwOP RD-1 steps F.15.	ROTATE the 2A MG Set Voltage Adjust Potentiometer and CHECK the range of control between 230 and 300 volts.	___	___	___
CUE	Voltmeter indication changes between 230 and 300 volts				
*13	**Adjust the Generator Voltage.** BwOP RD-1 steps F.16.	Adjust the Generator Voltage to 250 to 270 volts. *(Procedural Adherence)* • Adjust Generator Voltage to 250 to 270 volts using the Voltage Adjust Potentiometer.	___	___	___
CUE	Generator Voltage is 235 volts prior to adjusting and indicates 260 volts after adjusting.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
14	Verify/Close the Local Lift Disconnects above the Rod Drive Power Cabinets. BwOP RD-1 steps F.17.	VERIFY the Local Lift Disconnects above the Rod Drive Power Cabinets are CLOSED: • 2RD02JB. • 2RD03JB. • 2RD04JB. • 2RD05JB. • 2RD06JB.	___	___	___
NOTE	This step rechecks the same items as step 8 of this JPM.				
CUE	Another EO just verified that the Local Lift Disconnects are CLOSED.				
***15**	**Close the 2A MG Set Generator breaker.** BwOP RD-1 steps F.18.	CLOSE the 2A MG Generator Breaker. *(Procedural Adherence)*	___	___	___
CUE	RED Flag on the Control switch is up, RED light is Lit.				

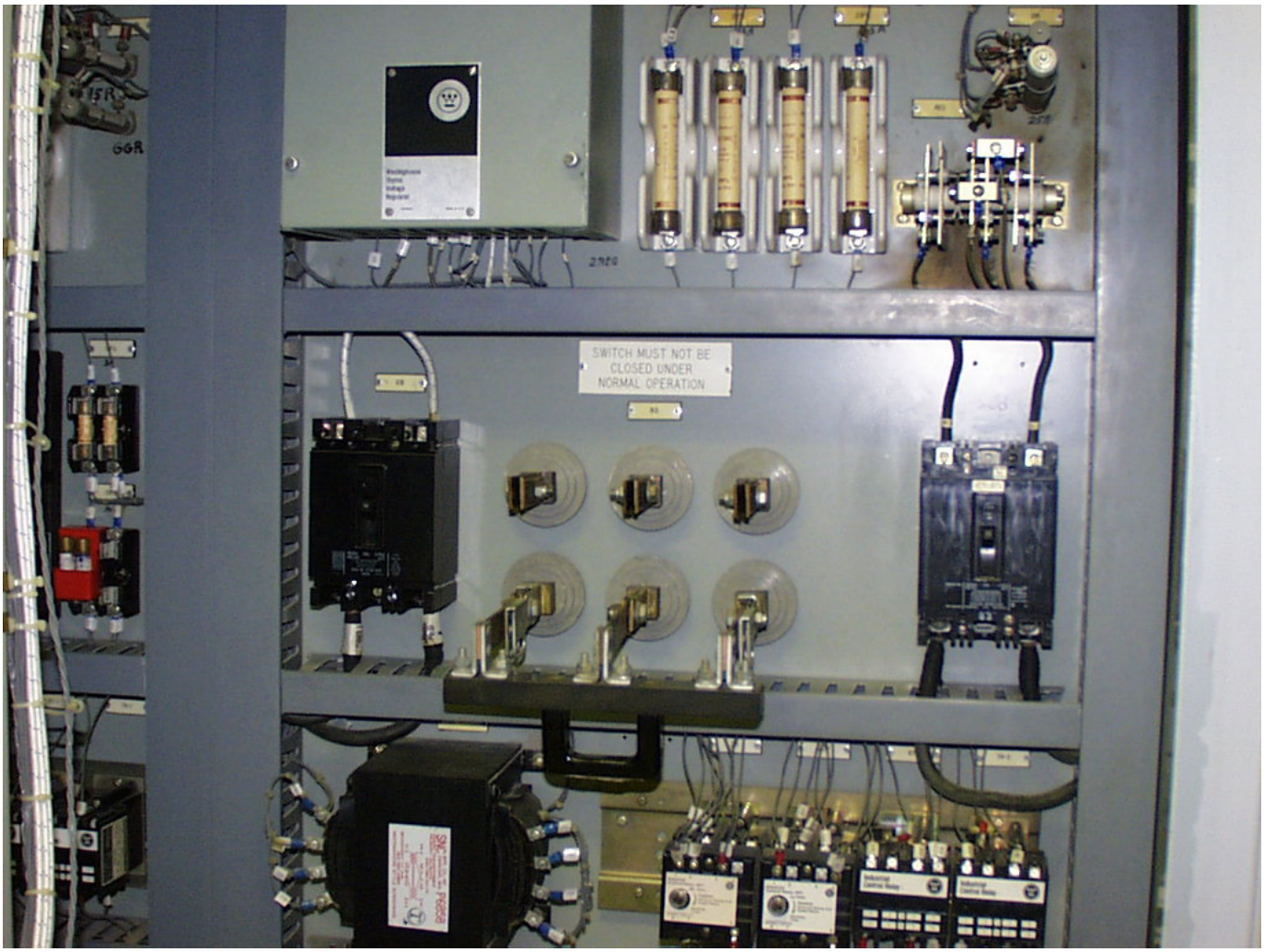
JPM Stop Time: _____

INITIAL CONDITIONS

1. You are an EO.
2. Unit 2 is in the process of being started up per 2BwGP 100-2.
3. Unit 1 is at full power.

INITIATING CUE

1. The US has directed you to start the 2A Rod Drive MG set per BwOP RD-1.

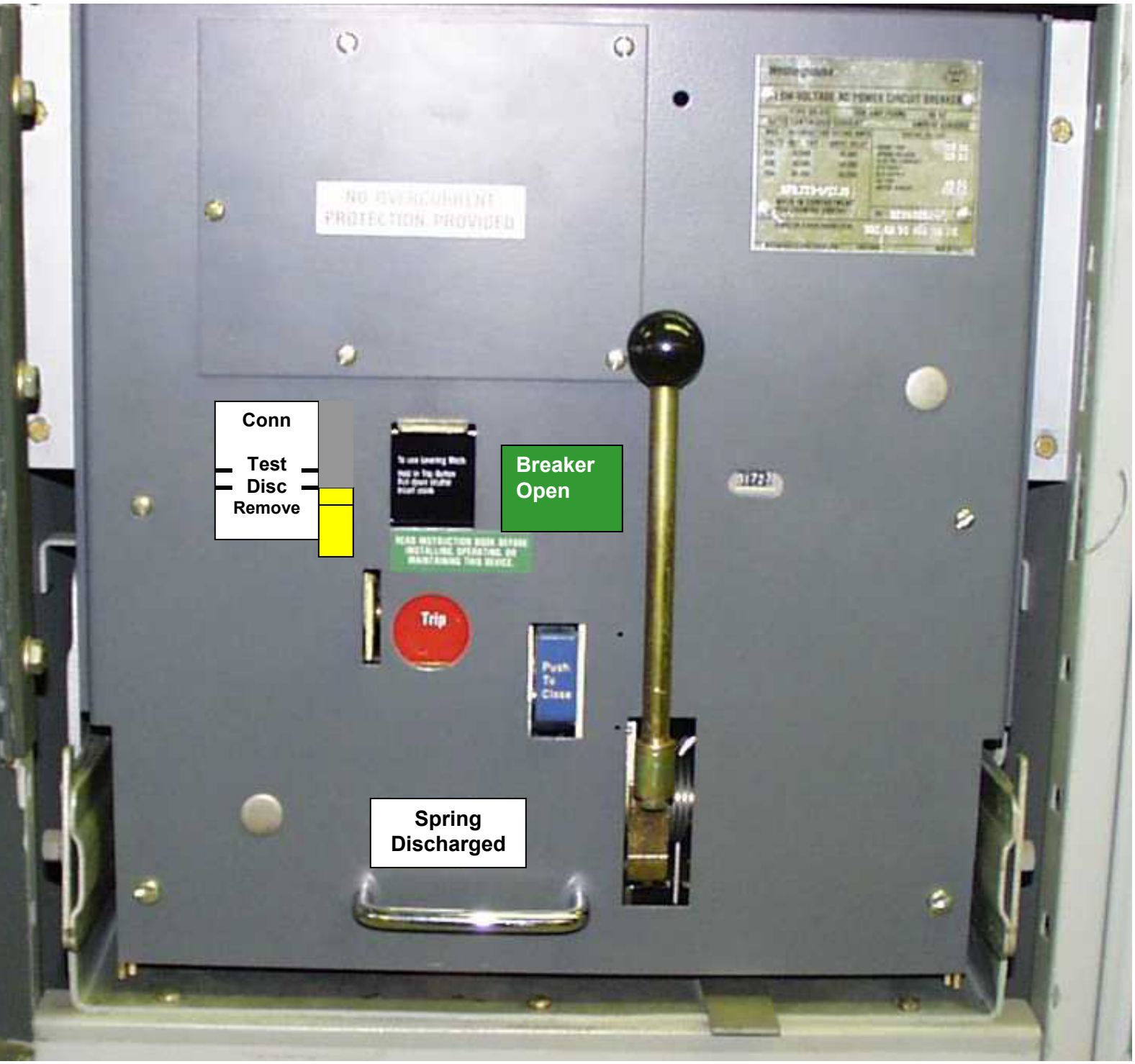


Picture 1

Picture 1A


Conn
Test
Disc
Remove
Breaker
Open
Trip
Push
To
Close
Spring
Charged

Picture 2


Conn
Test
Disc
Remove
Breaker
Open
Trip
Push
To
Close
Spring
Discharged

Picture 3

Job Performance Measure

Operate the Fire Detection/Alarm Equipment

JPM Number: IP-801

Revision Number: 151

Date: 03 / 24 / 2016

Developed By:	Eric Steinberg Instructor	03/24/2016 Date
Validated By:	Dan Burton SME or Instructor	04/22/2016 Date
Reviewed By:	Kevin Lueshen Operations Representative	04/22/2016 Date
Approved By:	Eric Steinberg Training Department	04/26/2016 Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure BwOP CO-5 Rev: 006
Procedure BwOP CO-5T2 Rev: 004
Procedure _____ Rev: _____

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

SME / Instructor	Date
SME / Instructor	Date
SME / Instructor	Date

Revision Record (Summary)

Revision 151, updated to the new template and procedure revisions.

SIMULATOR SETUP INSTRUCTIONS

1. None in plant JPM.

INITIAL CONDITIONS

1. You are an extra operator.
2. Both Units are at full power.
3. A fire exists in the 2B Diesel Generator Room.
4. The automatic CO_2 actuating circuits have failed to operate.
5. Security has verified the no personnel are in the room.

INITIATING CUE

The SM has instructed you to manually initiate CO_2 deluge to the 2B Diesel Generator Room per BwOP CO-5, MANUAL ACTUATION OF THE CARBON DIOXIDE FIRE SUPRESSION SYSTEMS.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1	Refer to BwOP CO-5 and BwOP CO-5T2.	Locate and open the following: • BwOP CO-5 • BwOP CO-5T2	___	___	___
CUE	Once examinee locates procedures, provide copies and inform them all prerequisites, precautions, limitation and actions are met.				
2	Locate Pushbuttons #1 and #2 stations for the 2B EDG Room.	Determine and Locate pushbutton stations for 2B D/G room from page 1 of BwOP CO-5T2 ○ Pushbutton #1 (2HS-CO002) is at Turb Bldg 401' L-28. ○ Pushbutton #2 (2HS-CO003) is at Turb Bldg 401' L-29.	___	___	___
NOTE:	**Alternate path** begins once candidate confirms no CO2 flow from the push button actuation.				
3	Attempt to actuate CO2 deluge system from local pushbuttons.	Perform the following at each location to attempt to actuate CO2 deluge system from local pushbuttons. • PULL DOWN the cover on the Pushbutton Station. • Depress the Pushbutton for 3-5 seconds. • Verify the pre-discharge alarm sounds. • After the pre-discharge alarm stops, verify CO2 discharge is occurring by sound and frosting of piping.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Once the examinee depresses the pushbutton. Cue "The pre-discharge alarm is sounding." Cue "The alarm has stopped." When the examinee indicates they are listening for flow noise and looking for frost on the CO2 piping, cue "No flow noise is heard and piping is as seen (no frost).				
NOTE:	**Alternate path** begins here.				
4	Locate damper control cabinet for 2B D/G room and determine power is available.	Determine and locate damper control cabinet from BwOP CO-5T2 page 1 as follows: • Damper control cabinet (2CO17JB) for 2B D/G Room is at Turb Bldg 401' L-29. • Verify power at the damper control cabinet.	___	___	___
CUE	When correct cabinet is located, cue "Power available light is as you see it (light lit)."				
5	Attempt to actuate CO2 deluge from Selector EMPC valve	Perform the following to attempt to actuate CO2 deluge from the EMPC valve: ○ Determine and locate the Selector EMPC (2CO03JB) at Turb Bldg 401' L-29 ○ Break the selector EMPC cabinet glass • Place Selector EMPC in the open position • Verify CO2 discharge by sound and frosting of piping ○ Maintain Selector EMPC in open position for ≥ 95 seconds. • Close Selector EMPC.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Cue “The glass is broken.” Cue: point to the open position for the Selector EMPC. When the examinee indicates they are listening for flow noise and looking for frost on the CO2 piping, cue “No flow noise is heard and piping is as seen (no frost). Cue: point to the closed position for the Selector EMPC.				
*6	**Manually actuate CO2 deluge system by aligning Master EMPC.**	Manually actuate CO2 deluge system by aligning the Master EMPC as follows: ○ Determine and locate Master EMPC to be 0CO09J at Turb Bldg 401’ L-17. ○ Verify the Master EMPC is open. ○ Break the glass on the Master EMPC valve cover (0CO09J). • **Place the actuator lever in the OPEN position.**	___	___	___
CUE	Cue “The Master EMPC is as you see it (closed).” Cue “The glass is broken.” Cue: point to the open position for the Master EMPC selector. If the examinee indicates they are listening for flow noise and looking for frost on the CO2 piping, cue “Flow noise is heard and then stops and the piping has frost on it.”				

***7**	**Actuate CO2 deluge from the Selector EMPC valve.**	Perform the following to actuate CO2 deluge from the Selector EMPC valve: • **Place Selector EMPC in the open position.** • **Verify CO2 discharge by sound and frosting of piping.** • **Maintain selector EMPC in open position for ≥ 95 seconds.** • **Close selector EMPC**.	___	___	___
CUE	Cue: point to the open position for the Selector EMPC. When the examinee indicates they are listening for flow noise and looking for frost on the CO2 piping, cue “Flow noise is heard and piping has frost on it.” If desired time has not elapsed Cue:” time (95 seconds) has elapsed.” Cue: point to the closed position for the Selector EMPC.				
CUE	That completes this JPM.				

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Operate the fire detection/ Alarm Equipment

JPM Number: IP-801 Revision Number: 151

Task Number and Title: R-FP-002, Operate fire detection/alarm equipment

K/A Number and Importance: 086000A2.04 3.3/3.9

Suggested Testing Environment: In Plant

Alternate Path: ☒ Yes ☐ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s): BwOP CO-5 rev 6, Manual Actuation of the Carbon Dioxide Fire Suppression Systems, BwOP CO-5T2 rev 4, Manual Actuation of the Unit 2 Carbon Dioxide Fire Suppression Systems Table 2

Actual Testing Environment: ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 14 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____

INITIAL CONDITIONS

1. You are an extra operator.
2. Both Units are at full power.
3. A fire exists in the 2B Diesel Generator Room.
4. The automatic CO_2 actuating circuits have failed to operate.
5. Security has verified the no personnel are in the room.

INITIATING CUE

The SM has instructed you to manually initiate CO_2 deluge to the 2B Diesel Generator Room per BwOP CO-5, MANUAL ACTUATION OF THE CARBON DIOXIDE FIRE SUPRESSION SYSTEMS.

Job Performance Measure

Establish Local Control of Aux Feed Flow

JPM Number: IP-411

Revision Number: 151

Date: 03/ 21 / 2016

Developed By:	Eric Steinberg Instructor	3/21/2016 Date
Validated By:	Dan Burton SME or Instructor	4/22/2016 Date
Reviewed By:	Kevin Lueshen Operations Representative	4/22/2016 Date
Approved By:	Eric Steinberg Training Department	4/26/2016 Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

_____ 1. Task description and number, JPM description and number are identified.

_____ 2. Knowledge and Abilities (K/A) references are included.

_____ 3. Performance location specified. (in-plant, control room, simulator, or other)

_____ 4. Initial setup conditions are identified.

_____ 5. Initiating cue (and terminating cue if required) are properly identified.

_____ 6. Task standards identified and verified by SME review.

_____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).

_____ 8. If an alternate path is used, the task standard contains criteria for successful completion.

_____ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure 1BwOA PRI-5 Rev: 108
Procedure _____ Rev: _____
Procedure _____ Rev: _____

_____ 10. Verify cues both verbal and visual are free of conflict.

_____ 11. Verify performance time is accurate

_____ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

SME / Instructor	Date
SME / Instructor	Date
SME / Instructor	Date

SRRS: 3D.105 (when utilized for operator initial or continuing training)

Revision Record (Summary)

Revision 151, This is a new in plant JPM written for ILT 15-1 NRC exam.

SIMULATOR SETUP INSTRUCTIONS

1. Place keep a copy of 1BwOA PRI-5 to step 10 B to give examinee.
2. No simulator setup required this is an in plant JPM.

INITIAL CONDITIONS

1. The control room has been evacuated due to a fire.
2. Both Unit 1 and Unit 2 have been tripped.
3. Control has been established from the RSDP for both units in accordance with attachment A of 1 BwOA PRI-5.
4. The 1B AF pump is seized.

INITIATING CUE

1. You are an extra NSO and safe shutdown operator.
2. The Shift Manager has directed you to report to the Unit 1 supervisor at the unit 1 RSDP.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

Some operations that are performed from outside of the control room may require multiple steps. These items may be listed as individual steps in this JPM. It is acceptable for the candidate to direct the local operator to perform groups of procedure steps instead of calling for each individual item to be performed.

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	Examinee may elect to not get dosimetry to go the remote shutdown panel. This is acceptable; however they will be required to get dosimetry before proceeding with the alternate path.				
CUE	Once the examinee reaches the Unit 1 remote shutdown panel, provide the following cue. “The Unit 1 supervisor directs you to control AF flow to maintain wide range steam generator levels between 65% and 70% per step 10.b. of 1BwOA PRI-5.”				
1	Verify current conditions.	• Verify SG wide range level is in band. • Verify AF flow is established to each generator.	___	___	___
CUE	When the examinee looks at SG WR level show them picture 1.				
CUE	When the examinee looks at the AF flow meters show them picture 2.				
NOTE:	The **alternate path** of the JPM will start when the candidate attempts to throttle 1AF005B and the valve does not respond.				
2	Attempt to adjust AF flow to 1B SG.	• Adjust controller for 1AF005B in the OPEN direction.	___	___	___
CUE	After making an adjustment to the 1AF005B controller and the 1B AF flow meter is checked, show picture 2 again, no change. If the examinee checks the position indicating lights for 1AF005B, the CLOSED light is ILLIMUNIATED and the OPEN light is DARK. If the examinee checks the position indicating lights for the 1AF013B, the CLOSED light is DARK and the OPEN light is ILLUMINATED. If the examinee checks the position indicator on the controller it indicates closed and the output demand remained zero. If asked, the 1AF005A, C and D open and closed indicating lights are both illuminated for each valve.				

3	Identify local control is required.	• Informs the Unit Supervisor that 1AF005B is closed and not responding to its control signal. • RNO is to locally fail air and throttle 1AF005B.	___	___	___
CUE	There are no equipment operators available, the US directs you perform the RNO actions in the field. The Unit 1 NSO will monitor SG levels from the RSDP				
NOTE:	Failing air will allow the 1AF005B to fully open and flow water to the SG. The examinee may elect to perform JPM step 5 to establish control before step 4 failing the air to 1AF005B.				
***4**	**Establish conditions to take manual local control.**	• **Close valve 1AF005B-IA INST AIR TO 1AOV-AF005B.** • **Bleed off air from the positioner.**	___	___	___
CUE	If asked the 1AF005B begins moving to full open position once air is isolated and bled off, if air is not bled off the valve remains closed.				
5	Establish manual control of 1AF005B.	• Engage the 1AF005B manual jacking device to establish control by turning it clockwise.	___	___	___
CUE	If the examinee turns the jack in the clockwise direction indicate the jack engages the valve. If this step is done after I/A is failed also report the valve begins closing. If contacted for desired flow, cue the examinee that further adjustment is required.				
***6**	**Throttle flow.**	• **Continue throttling 1AF005B by turning the hand wheel for the manual jacking device.**	___	___	___
CUE	Call as the Unit 1 NSO and request that adjustments be stopped. This completes this JPM.				

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ **Emp. ID#**: _____

Job Title: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Establish local control of aux feed flow

JPM Number: IP-411 Revision Number: 151

Task Number and Title: R-OA-099 Establish emergency control of shutdown equipment.

K/A Number and Importance: APE068AA1.26 3.6/3.8

Suggested Testing Environment: In plant.

Alternate Path: ☒ Yes ☐ No SRO Only: ☐ Yes ☒ No Time Critical: ☐ Yes ☒ No

Reference(s): 1BwOA PRI-5 rev 108, Control Room Inaccessibility Unit1

Actual Testing Environment: ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 10 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

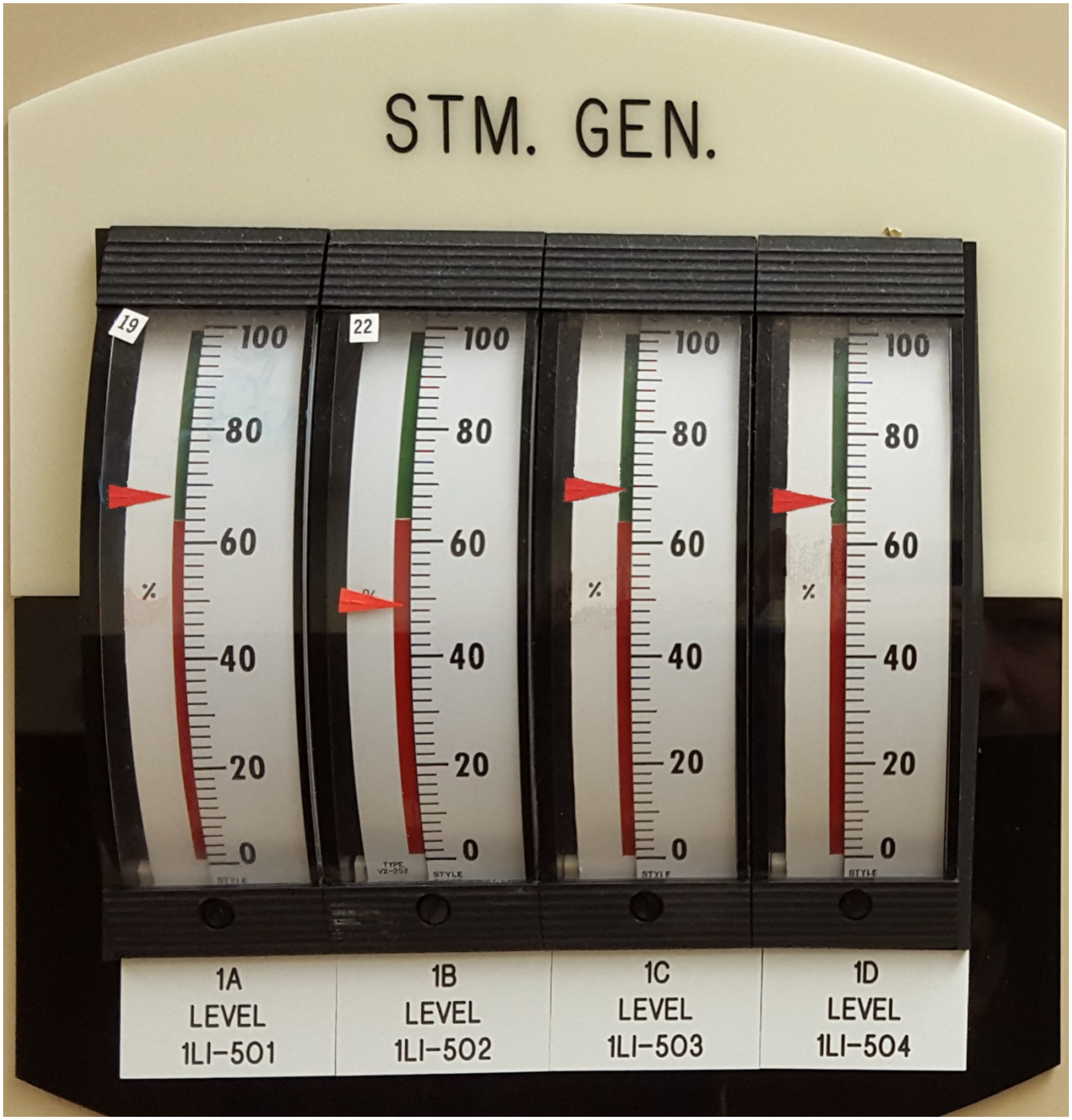
Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

The operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory

Comments: _____

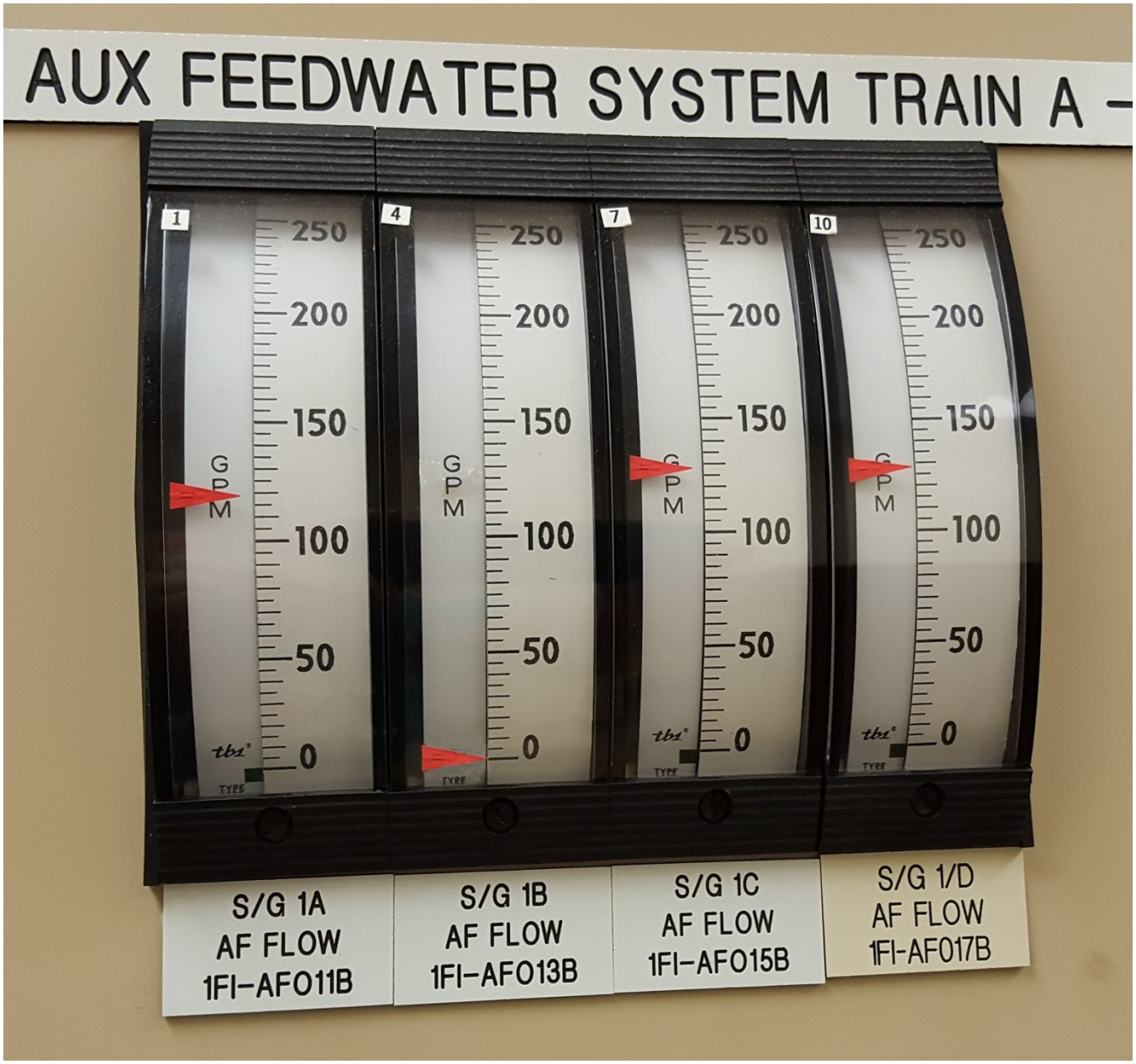
Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date**: _____



Picture 1

SRRS: 3D.100; There are no retention requirements for this section


AUX FEEDWATER SYSTEM TRAIN A –
1
4
7
10
250
200
150
100
50
0
GPM
S/G 1A
AF FLOW
1FI-AF011B
S/G 1B
AF FLOW
1FI-AF013B
S/G 1C
AF FLOW
1FI-AF015B
S/G 1D
AF FLOW
1FI-AF017B

Picture 2

INITIAL CONDITIONS

1. The control room has been evacuated due to a fire.
2. Both Unit 1 and Unit 2 have been tripped.
3. Control has been established from the RSDP for both units in accordance with attachment A of 1 BwOA PRI-5.
4. The 1B AF pump is seized.

INITIATING CUE

1. You are an extra NSO and safe shutdown operator.
2. The Shift Manager has directed you to report to the Unit 1 supervisor at the unit 1 RSDP.