Job Performance Measure

Determine Venting Time for Reactor Vessel Void

JPM Number: S-108

Revision Number: 151

Date: 03 / 21 / 2016

Developed By:	Eric Steinberg Instructor	03/21/2016 Date
Validated By:	Dan Burton SME or Instructor	4/22/2016 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 1BwFR-I.3 Rev: 201
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

KEY

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

Revision Record (Summary)

Revision 151, updated to current JPM template and most recent procedure revision.

KEY

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

SIMULATOR SETUP INSTRUCTIONS

1. NONE

KEY

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

INITIAL CONDITIONS

Unit 1 is recovering from an event that caused a suspected hydrogen bubble to accumulate in the reactor vessel head. The crew is currently performing 1BwFR-I.3, RESPONSE TO VOIDS IN REACTOR VESSEL. The TSC has directed the crew to perform a direct vessel vent. Current plant conditions are:

Containment temperature (dry bulb) = 160°F

Containment pressure = 3.5 psig

Containment hydrogen concentration = 1%

RCS pressure = 1900 psig

INITIATING CUE

The Shift Manager has directed you to calculate the vessel vent time per 1BwFR-I.3, Attachment B. Inform the Shift Manager when you have completed the calculation.

Provide examinee with a copy of 1BwFR-I.3.

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.

KEY

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

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***1**	**Calculate containment temperature in Rankine.**	Perform Attachment B, step 1: ○ Enter 160 in ºF blank. • **Add 460 to 160 and enter 620 in ºR blank.**	___	___	___
***2**	**Calculate containment air volume based on current temperature and pressure.**	Perform Attachment B, step 2: ○ Enter 620 in ºR blank. ○ Enter 3.5 in CNMT press blank. • **Perform calculation and enter 2,750,968 (or approx. 2.75E6) in ft^3 blank**.	___	___	___
***3**	**Calculate maximum hydrogen volume that can be vented keeping cnmt concentration below 3%.**	Perform Attachment B, step 3: ○ Enter 1 in cnmt hydrogen conc. blank. ○ Enter 2,750,968 (or approx. 2.75E6) in ft^3 blank • **Perform calculation and enter 55,019 (or approx. 5.5E4) in ft^3 blank.**	___	___	___
***4**	**Determine hydrogen flow rate from RCS vent.**	Perform Attachment B, step 4: • **Plot RCS pressure on Figure 1BwFR I.3-4 and determine flow rate will be 5850 scfm (range of 5800 to 5900)** ○ Enter flow rate in step 4 SCFM blank.	___	___	___
***5**	**Calculate maximum venting time.**	Perform Attachment B, step 5: ○ Enter 55,019 (or approx. 5.5E4) in ft^3 blank. ○ Enter 5850 (5800 – 5900) in SCFM blank. • **Calculate minutes and enter 9.4 (range of 9.3 to 9.5) in minutes blank.**	___	___	___
6	Report to SM results of venting calculation.	Notify SM that RCS venting can be performed for approx. 9.4 minutes.	___	___	___
CUE	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: Determine Venting Time for Reactor Vessel Void
JPM Number: S-108 Revision Number: 151
Task Number and Title: S-FR-017 Determine venting time for Reactor Vessel Void
K/A Number and Importance: 0020002.1.25 SRO 4.2
Suggested Testing Environment: Simulator or Classroom
Alternate Path: ☐ Yes ☒ No SRO Only: ☒ Yes ☐ No Time Critical: ☐ Yes ☒ No
Reference(s): 1BwFR-I.3, rev 201, RESPONSE TO VOIDS IN REACTOR VESSEL

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**: _____

KEY

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

INITIAL CONDITIONS

Unit 1 is recovering from an event that caused a suspected hydrogen bubble to accumulate in the reactor vessel head. The crew is currently performing 1BwFR-I.3, RESPONSE TO VOIDS IN REACTOR VESSEL. The TSC has directed the crew to perform a direct vessel vent. Current plant conditions are:

Containment temperature (dry bulb) = 160°F

Containment pressure = 3.5 psig

Containment hydrogen concentration = 1%

RCS pressure = 1900 psig

INITIATING CUE

The Shift Manager has directed you to calculate the vessel vent time per 1BwFR-I.3, Attachment B. Inform the Shift Manager when you have completed the calculation.

Job Performance Measure

Determine if Reactor Start-up should continue.

JPM Number: S-114

Revision Number: 151

Date: 03 / 30 / 2016

Developed By:	Eric Steinberg Instructor	3/30/2016 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 1BwGP-100-2 Rev: 40
Procedure 1BwGP-100-7T2 Rev: 17
Procedure BwCB-1 Fig 2A Rev: 25
Procedure BwCB-1 Fig 9 Rev: 24
Procedure 1BwGP-100-2A1 Rev: 5

_____ 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

KEY

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

Revision Record (Summary)

Revision 151, New JPM for ILT 15-1 NRC exam.

KEY

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

SIMULATOR SETUP INSTRUCTIONS

1. None, perform in classroom.
2. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
3. This completes the setup for this JPM.

KEY

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

INITIAL CONDITIONS

1. Unit 1 is being started up from a 5 day long forced outage for turbine repairs.
2. The reactor core burnup is 1681.3 EFPH.
3. 1BwGP 100-2, PLANT STARTUP, is in progress at step F.23.I.
4. Control Bank C is at 90 steps.
5. Counts are stable at 8-fold count rate.
6. There is no ITR for this startup.

INITIATING CUE

1. You are the Unit 1 Reactivity Manager.
2. The RO has predicted criticality at control bank D at 65 steps based on 8-fold rod position.
3. The Shift Manager has directed you to determine if the reactor start-up should continue.

Provide the examinee a place kept copy of 1BwGP100-2, and a filled out copy of 1BwGP 100-7T2, estimated critical conditions table.

BwCB curve books should also be available for reference.

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.

KEY

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

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	The correct critical rod height from the 8 fold graph is Control Bank D at 5 steps (CB C at 120 is the same height).				
*1	**Verify estimated critical rod height.**	○ Refer to BwCB-1 Figure 9. ○ Determine page 2 of 5 is the correct graph for the current core burn up. • **Determine correct estimated critical rod height is CB C 120 steps +/- 5 steps.** ○ Inform the Shift Manager the RO's estimated critical rod height is incorrect.	___	___	___
CUE	If told as the Shift Manager that the estimated critical position is wrong, acknowledge the report.				
*2	**Determine startup should be stopped.**	○ Refers to note before step F.23.I. ○ The estimated critical rod height is below the 750 pcm limit and no ITR exists. ○ Checks if ICRR estimate outside +/- 750 pcm limit. (yes) • **Determines 1BwGP 100-2 Attachment A needs to be performed.** ○ Directs the RO to stop the startup.	___	___	___
CUE	If asked as the Nuclear Engineer to report ICRR estimate report, "ICRR predicts criticality at CB C at 120 steps or CB D at 5 steps." If asked for an ITR, "There is no ITR and one cannot be provided."				

3	Inform the Shift Manager.	• Calls Shift Manager to inform him that you are suspending the reactor startup. • Direct that an IR be written.	___	___	___
CUE	As the Shift Manager acknowledge the report of suspending the startup and need to write an IR. Inform the Examinee, “The unit supervisor will oversee the remaining actions.” That completes this JPM.				

JPM Stop Time: _____

KEY

JPM SUMMARY

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

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

JPM Title: Determine if Reactor Start-up should continue.

JPM Number: S-114 Revision Number: 151

Task Number and Title: S-AM-151, PERFORM proper reactivity management on unit startup and during normal plant operations.

K/A Number and Importance: 001G2.1.37, 4.6

Suggested Testing Environment: Classroom

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

Reference(s): 1BwGP 100-2, rev 40, PLANT STARTUP, 1BwGP 100-2A1, rev 5, Attachment A contingency for suspended reactor startup, 1BwGP 100-7T2, rev 17, Calculation of estimated critical condition based on known boron concentration, BwCB-1Fig. 2A, rev 25, Braidwood unit 1 cycle 19 HZP differential and integral rod worth vs RCCA steps withdrawn, BwCB-1 Fig. 9, rev 24, Braidwood unit 1 cycle 19 ECC bank position VS 8-Fold increase bank position.

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. Unit 1 is being started up from a 5 day long forced outage for turbine repairs.
2. The reactor core burnup is 1681.3 EFPH.
3. 1BwGP 100-2, PLANT STARTUP, is in progress at step F.23.I.
4. Control Bank C is at 90 steps.
5. Counts are stable at 8-fold count rate.
6. There is no ITR for this startup.

INITIATING CUE

1. You are the Unit 1 Reactivity Manager.
2. The RO has predicted criticality at control bank D at 65 steps based on 8-fold rod position.

The Shift Manager has directed you to determine if the reactor start-up should continue.

Job Performance Measure

Review Surveillance and Determine Battery operability Requirements

JPM Number: S-204

Revision Number: 151

Date: 03 / 22 / 2016

Developed By:	Eric Steinberg Instructor	03/22/2016 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. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure 1BwOSR 3.8.6.5-2 Rev: 13
Procedure 1BwOL 3.8.4 Rev: 7
Procedure 1BwOL 3.8.6 Rev: 3
Procedure 1BwOL TRM 3.8.c Rev: 4

_____ 9. Verify cues both verbal and visual are free of conflict.

_____ 10. Verify performance time is accurate

_____ 11. If the JPM cannot be performed as written with proper responses, then revise the JPM.

_____ 12. 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

KEY

Revision Record (Summary)

Revision 151, updated to current revision of the JPM template and procedures.

KEY

JPM SETUP INSTRUCTIONS

1) Fill out the data sheet D-2 as follows:
   a) F.1: Mode 1, make up numbers for serial numbers for all 4 instruments.
   b) F.6: 130V
   c) F.7: Check no corrosion present.
   d) F.8: record 4.0 for amps and 0.4 mvdc for shunt voltage.
   e) F.9: record 130V
   f) F.12 record 1.225
   g) F.13 record 0.032
   h) F.14 record 80
   i) F.15 record 81
   j) F.16 record 2.24
   k) F.17 record 0.18
2) Fill out data sheet D-3 and D-4 as follows:
   a) N/A all temp correct factors
   b) Y for all cell levels
   c) For cell 18 enter: 80°, 1.193, 2.06V, 1.193
   d) For the remaining cell temperatures enter the following (randomly): 79° in 9 cells, 81° in 9 cells, and 80° in the remaining cells.
   e) For the remaining cell ICVs enter the following randomly: 2.24 in 36 cells, 2.25 in 9 cells, 2.26 in 7 cells, and 2.23 in 5 cells.
   f) For the remaining cell SGs (corrected and uncorrected) enter the following randomly: 1.226 in 33 cells, 1.227 in 1 cell, 1.224 in 1 cell, 1.223 in 1 cell, and 1.225 in 21 cells.
3) Place keep the main body and fill in the following (connected cells =58):
   a) F.12: sum = 71.05, average = 1.225
   b) F.13 1.225 - 1.193 = 0.032
   c) F.14 sum = 4640, average = 80
   d) F.15 81° – 80° = 1°
   e) F.16 sum =129.92, average = 2.24
   f) F.17 2.24 – 2.06 = 0.18

KEY

INITIAL CONDITIONS

1. You are the Unit 1 Unit Supervisor.
2. Both units are at full power.

INITIATING CUE

1. An EO has informed you that 1BwOSR 3.8.6.5-2, Unit One 125V DC Battery 112 Operability Surveillance, is complete and ready for review.
2. Cell #47 is the pilot cell for battery 112.
3. Review the surveillance and inform the Shift Manager when the surveillance is complete.

Hand student completed copy of 1BwOSR 3.8.6.5-2.

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.

KEY

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*1	**Review Data Sheet D-2.**	Review Data Sheet D-2: Determine battery parameters unsat. *(Regulatory Compliance)* o Present Mode: 1 o Instrument data o Battery terminal voltage SAT o No visible corrosion on cells • **Battery float current UNSAT** • **Battery Shunt Volt UNSAT** o Battery charger float voltage o Average corrected cell specific gravity SAT • **Maximum corrected specific gravity deviation below average corrected specific gravity UNSAT** o Average cell electrolyte temperature SAT o Maximum individual cell temperature deviation SAT o Average individual cell voltage SAT o Maximum ICV deviation below average ICV UNSAT	___	___	___
NOTE	If examinee notifies SM of UNSAT parameters, acknowledge report.				

KEY

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*2	**Review Data Sheets D-3, D-4, and D-5.**	Review Data Sheets D-3, D-4, and D-5. Determine Cell #18 parameters unsat. *(Regulatory Compliance)* • **Cell #18 ICV <2.07.** • **Cell #18 corrected specific gravity <1.195.** ○ All other cell parameters SAT. ○ Cell #47 is pilot cell (from comments sheet D-5 and cue sheet).	___	___	___

KEY

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*3	**Refer to Tech Specs/Bases**	Refer to Tech Specs/Bases: *(Regulatory Compliance)* • **Determine that TRM: 3.8.c, Condition A is applicable for Cell #18.** o Cell #18 does not meet category B limits for float voltage and specific gravity. • **Verify cell parameters within category C limits within 24 hours.** o Category A limits do not apply to cell #18 (not a pilot cell) • **Determine that Tech Spec 3.8.6 Conditions A, B, and F are applicable for Battery 112** o Cell #18 float voltage <2.07V and battery current >3A. Immediately declare battery 112 inoperable. • **Determine that Tech Spec 3.8.4 Condition D is applicable for Division 12 DC electrical power subsystem.** o From T.S. 3.8.4 Bases, one source (Battery 112) inoperable. Restore battery 112 within 2 hours.	___	___	___
NOTE	Provide copies of LCOAR paperwork and Tech Specs when requested by examinee.				

JPM Stop Time: _____

JPM SUMMARY

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

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

JPM Title: **Review Surveillance and Determine Battery Operability Requirements**

JPM Number: **S-204** Revision Number: **151**

Task Number and Title: **S-AM-123: Review Surveillances to Ensure Compliance with Tech Specs and Non-Tech Spec requirements.**

K/A Number and Importance: **063000G2.2.40, SRO 4.7**

Suggested Testing Environment: **Simulator or Classroom**

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

Reference(s): 1BwOSR 3.8.6.5-2, Rev 13, Unit One 125V DC ESF Battery 112 Operability Surveillance
1BwOL 3.8.4, Rev 7, LCOAR DC Sources – Operating Tech Spec LCO 3.8.4
1BwOL 3.8.6, Rev 3, LCOAR Battery Parameters Tech Spec LCO 3.8.6
1BwOL TRM 3.8.c, Rev 4, Technical Requirements Manual (TRM) LCOAR Battery Monitoring and Maintenance Tech Spec LCO 3.8.8.

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: **16** 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**: _____

KEY

INITIAL CONDITIONS

1. You are the Unit 1 Unit Supervisor.
2. Both units are at full power.

INITIATING CUE

1. An EO has informed you that 1BwOSR 3.8.6.5-2, Unit One 125V DC Battery 112 Operability Surveillance is complete and ready for review.
2. Cell #47 is the pilot cell for battery 112.
3. Review the surveillance and inform the Shift Manager when the surveillance is complete.

Job Performance Measure

Review Waste Gas Decay Tank Release

JPM Number: S-301

Revision Number: 151

Date: 03 / 23 / 2016

Developed By:	Eric Steinberg Instructor	03/23/2016 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 GW-500T1 Rev: 43
Procedure 0BwOS RETS 2.2.B-1 Rev: 02
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

KEY

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

Revision Record (Summary)

Revision 151, updated to new template and current revision of the procedures.

KEY

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

SIMULATOR SETUP INSTRUCTIONS

1. NONE

NOTE:	It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
3. This completes the setup for this JPM.

KEY

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

INITIAL CONDITIONS

1. You are the Unit 1 Unit Supervisor.
2. BOTH Units are at 100% power.
3. The Unit 1 Assist NSO has just completed a release package for the 0F Gas decay tank up to step D.21.

INITIATING CUE

1. The Shift Manager directs you to complete the review and approval of the gas decay tank release package.
2. Inform the Shift Manager when you have approved the release package for release.

Hand examinee marked up BwOP GW-500T1.

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.

KEY

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

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: **This JPM is performed by having the student review BwOP GW-500T1. BwOP GW-500T1 Part D contains TWO errors. 0BwOS RETS 2.2.B-1 has NOT been performed (step D.2) AND 0PB102 high alarm is set too high (step D.20.q). The examinee must locate BOTH errors PRIOR TO approving the release.**					
1	Review partially completed Part D of BwOP GW-500T1.	Review partially completed Part D of BwOP GW-500T1 • Read step D.22 and determines SRO review of Part D of BwOP GW-500T1 required. • Review Part D of BwOP GW-500T1	___	___	___
***2**	**Determine 0BwOS RETS 2.2.B-1 has NOT been performed. (step D.2).**	Determine 0BwOS RETS 2.2.B-1 has NOT been performed. • **Determine step D.2 is not initialed or signed as completed**. • **Determine 0BwOS RETS 2.2.B-1 is required to be performed.** ○ Determine 0BwOS RETS 2.2-1a is NOT in effect (Step A.3) ○ Notify SM 0BwOS RETS 2.2.B-1 has NOT been performed.	___	___	___
CUE	If informed as SM that 0BwOS RETS 2.2.B-1 has not been complete, acknowledge the report. Provide the completed copy of 0BwOS RETS 2.2.B-1 and inform the examinee that U-2 assist NSO had the completed surveillance.				
3	Review 0BwOS RETS 2.2.B-1.	Review 0BwOS RETS 2.2.B-1. • Determine acceptance criteria met. • Complete BwOP GW-500T1, step D.2.	___	___	___

KEY

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*4	**Continue review of Part D of BwOP GW-500T1.**	Determine 0PB102 high alarm incorrectly set. ○ Notify SM 0PB102 high alarm incorrectly set. • **Inform NSO to adjust 0PB102 high alarm to correct setpoint**. ○ Sign and date Part D review (step D.22).	___	___	___
CUE	That completes this JPM.				

JPM Stop Time: _____

KEY

JPM SUMMARY

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

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

JPM Title: Review Waste Gas Decay Release

JPM Number: S-301 Revision Number: 151

Task Number and Title: S-HP-002, Authorize Gas Decay tank Rad Waste Release

K/A Number and Importance: 0730002.3.6 3.8

Suggested Testing Environment: Simulator or Classroom

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

Reference(s): BwOP GP-500T1, rev 43, Gas Decay Tank release form
0BwOS RETS 2.2.B-1, UNIT COMMON PRE-RELEASE SOURCE AND CHANNEL CHECK FOR GAS DECAY TANK EFFLUENT MONITOR 0PR02J rev 02

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 15 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 the Unit 1 Unit Supervisor.
2. BOTH Units are at 100% power.
3. The Unit 1 Assist NSO has just completed a release package for the 0F Gas decay tank up to step D.21.

INITIATING CUE

1. The Shift Manager directs you to complete the review and approval of the gas decay tank release package.
2. Inform the Shift Manager when you have approved the release package for release.

Job Performance Measure

Classify Event, Cold Matrix

JPM Number: S-413

Revision Number: 151

Date: 03 / 25 / 2016

Developed By:	Eric Steinberg Instructor	03/25/2016 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 EP-AA-1001 AD 3 Rev: 1
Procedure EP-MW-114-100 Rev: 16
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

KEY

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

Revision Record (Summary)

Revision 151, modified from JPM S-408. Revised to new TQ-AA-150-J020 template and new revision of procedures verified.

KEY

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

SIMULATOR SETUP INSTRUCTIONS

1. None, this is a desk top admin JPM.

NOTE:	It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.

2. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
3. This completes the setup for this JPM.

KEY

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

INITIAL CONDITIONS

1. Unit 1 is defueled.
2. Bus 142 is OOS for the next 24 hours for a scheduled maintenance window.
3. Unit 1 SATs just de-energized due to a switchyard fault on unit 1.
4. The SAT fault will take 2 hours to emergency clear.
5. 1A DG seized on startup.
6. Bus 141 was successfully cross tied to bus 241 in less than 10 minutes.
7. There are no Rad monitors alarming as a result of this event.
8. 34' Wind speed is 4.5 mph.
9. 34' Wind direction is from 270°.

INITIATING CUE

1. You are the Shift Emergency Director (SED).
2. Classify the event and fill out the NARS form for unit 1.
3. This is a **TIME CRITICAL JPM.** The time critical portion of this JPM begins once you have read and understand these conditions and the initiating cue.

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.

KEY

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	If the examinee does not go to the cold table the wrong EAL will be found.				
1	Determine the correct EAL Matrix.	• Refer to Braidwood Annex. • Determine Cold Matrix is applicable.	___	___	___
NOTE:	EAL MA-1 would be applicable if the Hot Matrix is mistakenly used.				
***2**	**Determine EAL.**	○ Review classification against initial conditions given. • **Determines that EAL CU-1 loss of all but one AC source to emergency busses for 15 minutes or longer is applicable.** ○ Updates the team on current EAL.	___	___	___
NOTE:	Once the examinee determines the EAL, the timing for the time critical portion ends. (expected completion time 5-7 minutes) Record the time the EAL was determined: _____.				
***3**	**Critical time met.**	**Critical time met.** **Time EAL Determined - Start Time ≤ 15minutes** **_____ - _____ ≤ 15minutes**			

KEY

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*4	**Fill out the NARS Form.**	**Fill in the NARS form EP-MW-114-100-F01:** • **Utility Message No: 1** ○ State Message No: N/A **1. Status – [B] Drill/Exercise** **2. Station – [A] Braidwood** **3. Onsite Condition – [A] Unusual Event** **4. Accident Classified:** ○ **Time: Time recorded in note before JPM step 3.** ○ **Date: Todays date.** ○ **EAL # : CU1** ○ Accident Terminated Date and Time: N/A **5. Release Status: [A] None** **6. Type of Release: [A] Not Applicable** **7. Wind Dir: 270** **8. Wind Speed:** ○ [A] is N/A ○ **[B] 4.5 Miles/Hr** **9. Recommended Actions: Utility Recommendation: [A] None** **10. Additional Information: None** Verified With: N/A **Approved By: Examinee Signature**			
CUE	The Shift Manager will verify the form and complete the rest of the SED actions. 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: Classify EAL, Cold Matrix

JPM Number: S-413 Revision Number: 151

Task Number and Title: S-ZP-008 Classify/Reclassify Emergency Action Levels

K/A Number and Importance: 2.4.38 4.0

Suggested Testing Environment: Simulator or Classroom

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

Reference(s): EP-AA-1001 addendum 3 rev1, Emergency Action Levels for Braidwood Station, EP-MW-114-100,

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**: _____

KEY

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

INITIAL CONDITIONS

1. Unit 1 is defueled.
2. Bus 142 is OOS for the next 24 hours for a scheduled maintenance window.
3. Unit 1 SATs just de-energized due to a switchyard fault on unit 1.
4. The SAT fault will take 2 hours to emergency clear.
5. 1A DG seized on startup.
6. Bus 141 was successfully cross tied to bus 241 in less than 10 minutes.
7. There are no Rad monitors alarming as a result of this event.
8. 34’ Wind speed is 4.5 mph.
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INITIATING CUE

1. You are the Shift Emergency Director (SED).
2. Classify the event and fill out the NARS form for unit 1.
3. This is a **TIME CRITICAL JPM.** The time critical portion of this JPM begins once you have read and understand these conditions and the initiating cue.