Exelon Generation

Job Performance Measure

Complete 2BGP 100-7T1, RRD

JPM Number: RA-1-04-23

Revision Number: 2

Date: 6/15/23

Developed By:	Barry Mingus / Barry Mingus /s/	Instructor: Print / Sign	6/15/23 Date
Reviewed By:	William Hines / William Hines /s/	SME or Instructor: Print / Sign	6/12/23 Date
Reviewed By:	Austin Wilde / Austin Wilde /s/	Operations Representative: Print / Sign	6/12/23 Date
Approved By:	Brian Lewin / Brian Lewin /s/	Training Department: Print / Sign	7/31/23 Date

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

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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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure:	2BGP 100-7	Revision:	9
Procedure:	2BGP 100-7T1	Revision:	12
Procedure:	BCB-2 Table 1-2	Revision:	30
Procedure:	BCB-2 Table 1-4	Revision:	25
Procedure:	BCB-2 Table 1-7	Revision:	21
Procedure:	BCB-2 Table 2-1	Revision:	28
Procedure:	BCB-2 Figure 2C	Revision:	21
Procedure:	BCB-2 Figure 8C	Revision:	30
Procedure:	BCB-2 Figure 17A	Revision:	30

10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

Revision #	Summary
Revision 01	Applied new template TQ-AA-150-J020 Revised to Unit 2 to ensure stable procedures during development and delivery. Modified to Unit 2 and Initial Conditions. Revision to critical steps to only include steps with determination using curve book/interpolation required. Changed referenced procedures to Unit 2 and included Curve Book Tables and Figures Updated task Title and Number to reflect Vision
Revision 2	Updated to current JPM template. Updated to current revisions of procedures and curve data.

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JPM SETUP INSTRUCTIONS

1. This is an Administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify current revisions of the following information is available for JPM performance:
   - Byron Unit 2 Curve book
3. ENSURE the following is available during performance of JPM
   - Calculator
   - 2BGP 100-7
   - 2BGP 100-7T1
4. ENSURE the following between performances of JPM:
   - Any marks made within curve book are erased.
5. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 2 NSO.

- A unit shutdown is planned.
- The unit has been at steady state 80.0% power for the previous 6 days.
- Control Bank D is currently at 178 steps withdrawn.
- Chemistry has reported a boron concentration of 840 ppm for a sample drawn one hour ago.
- Current Core Average Burnup is 6500 EFPH.
- No QNE is currently available.
- This is the first startup and the first RRD of the year.

INITIATING CUE

The Unit Supervisor directs you to perform Step F.1 of 2BGP 100-7T1, Reference Reactivity Data (RRD) Worksheet before the shutdown commences. Another NSO will perform step F.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: **4, 7, 9 & 10**

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:	JPM Sequence #: of

Task Standard:

Candidate accurately completes step F.1 2BGP 100-7T1 worksheet, per the highlighted portions of the key, in preparation for a planned shutdown.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the candidate with a copy of 2BGP 100-7, 2BGP 100-7T1 and the Byron Unit 2 Curve Book / all BCB-2s listed on page 2.				
1	Enters Unit Two Startup Number.	• Year: **2023** • SU#: **1** • RRD#: **1**	___	___	___
NOTE:	Per the cue sheet, this is startup number 1 and RRD number 1 for this year.				
2	Enters Reference Date and Time (1.a)	• Today's Date • Current Time	___	___	___
3	Enters Control Bank steps (1.b)	• Control Bank **D** at **178** steps	___	___	___
NOTE:	To determine Control Rod Worth, the candidate may use BCB Unit 2 Figure 2C or interpolated from BCB Unit 2 Table 1-7, for 6350.7 EFPH, page 3 of 5 to obtain the (-)110.3 pcm value.				
***4**	Determines and enters Inserted Control Bank Worth (1.c)	• **(-) 110.3 pcm** (Acceptance criteria is (-) 100 pcm to (-) 125 pcm)	___	___	___
5	Determines and enters Critical Boron Concentration (1.d)	• Circles Accurate sample • C_B = **840 ppm** • 1 hour prior to Current Time • Today's Date	___	___	___
6	Enters Reference power level (1.e)	• **80 %**	___	___	___
NOTE:	To determine Power Defect, the candidate may use BCB Unit 2 Figure 17A page 3 of 4 or interpolated from BCB Unit 2 Table 2-1, for 6350.7 EFPH, page 5 of 8 to obtain the (-) 1451 pcm value.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***7**	Determines and enters Total Power Defect (1.f)	• **(-) 1451 pcm** (Acceptance criteria is (-)1425 to (-)1475 pcm)	___	___	___
8	Determines and enters Accumulated core average burnup (1.g)	• **6500 EFPH**	___	___	___
NOTE:	To determine Samarium Worth, the candidate may use BCB Unit 2 Table 1-4, for 6350.7 EFPH, page 4 of 5 to obtain the (-) 1052 pcm value.				
***9**	Determines and enters Samarium Worth (1.h)	○ Sm Eq. PWR = **80 %** • SM Worth = **(-) 1052 pcm**	___	___	___
NOTE:	To determine Xenon Worth, the candidate may use BCB Unit 2 Figure 8C pages 7 and 8 of 10 or BCB Unit 2 Table 1-2, for 6350.7 EFPH, page 4 of 5 to obtain the (-) 2965 pcm value.				
***10**	Determines and enters Xenon Worth (1.i)	• Xe Worth = **(-) 2965 pcm** (Acceptance criteria is (-)2800 to (-)3000 pcm)	___	___	___
CUE	This JPM is complete.				

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JPM SUMMARY

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

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

JPM Title: Complete 2BGP 100-7T1, RRD

JPM Number: RA-1-04-23 Revision Number: 12

Task Number and Title: 4C.GP-01 PERFORM Reference Reactivity Data Calculation and Estimated Critical Condition Calulation

Task Standard: Candidate accurately completes step F.1 2BGP 100-7T1 worksheet, per the highlighted portions of the key, in preparation for a planned shutdown.

K/A Number and Importance: 2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management Importance: 4.3/4.6

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure:	2BGP 100-7	Revision:	9
Procedure:	2BGP 100-7T1	Revision:	12
Procedure:	BCB-2 Table 1-4	Revision:	25
Procedure:	BCB-2 Table 1-7	Revision:	21
Procedure:	BCB-2 Table 2-1	Revision:	28
Procedure:	BCB-2 Figure 2C	Revision:	21
Procedure:	BCB-2 Figure 8C	Revision:	30
Procedure:	BCB-2 Figure 17A	Revision:	30

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 30 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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

You are the Unit 2 NSO.

- A unit shutdown is planned.
- The unit has been at steady state 80.0% power for the previous 6 days.
- Control Bank D is currently at 178 steps withdrawn.
- Chemistry has reported a boron concentration of 840 ppm for a sample drawn one hour ago.
- Current Core Average Burnup is 6500 EFPH.
- No QNE is currently available.
- This is the first startup and the first RRD of the year.

INITIATING CUE

The Unit Supervisor directs you to perform Step F.1 of 2BGP 100-7T1, Reference Reactivity Data (RRD) Worksheet before the shutdown commences. Another NSO will perform step F.2

File Location: 1.02.0128

Note: fields required to satisfy the task standard are highlighted in yellow.

REFERENCE REACTIVITY DATA WORKSHEET

NOTE

Step F.1 of this surveillance is only required if this worksheet is supporting manual estimated critical calculations. If this surveillance is being executed to support margin or computer based estimated critical calculations, then proceed to step F.2

NOTE

This worksheet will be retained as plant documentation. DO NOT DISCARD. Forward completed form to the Operating Clerks for retention when no longer required on shift for reference.

NOTE

The following validated data sources may be used throughout this procedure as applicable:

Accumulated Core Burnup (EFPH):
- o PPC Burnup Recording Program (as available)
- o PPC point PDMA09
- o Reactor Engineering

Average Reactor Power Level (% RTP):
- o PPC Burnup Recording Program (as available)
- o PPC Calorimetric Program (U0923, U0925)
- o 2BOSR NR-1
- o PPC point PDMA09, by the following formula:
  100 * (duration difference in PDMA09) / (duration)
  duration expressed in hours
- o Reactor Engineering

Unit Two Startup Number 2023 - 1 - 1
Year - S/U# - RRD#

1. Stable Reference Reactivity Data

NOTE

The data recorded in step 1 shall be data from a stable core condition. Contact Reactor Engineering for assistance, if necessary. An exception to the stability criteria would be if this RRD were for a recent reactor startup.

1.a. Reference Date: today Reference Time: current time

KEY

REFERENCE REACTIVITY DATA WORKSHEET
(continued)

1.b. Control Bank D at 178 steps.

* 1.c. Inserted Control Bank Worth

BCB-2 Table 1-7, Figure 2, Figure 2C, or equivalent (-)110.3pcm

*, 2.b

* 1.d. Critical Boron Concentration from (CIRCLE mode of analysis used):

1). Accurate sample at a recent known stable condition,

2). Calculated by the Qualified Nuclear Engineer n/a

(Attach calculations, logs, PPDS used)

C_B = 840 ppm Time/Date: 1 hour ago/ today

*, 2.h

1.e. Reference power level:

Stable Power: 80 %

1.f. Total Power Defect from:

BCB-2 Figure 17A, Table 2-1, or equivalent (-) 1451 pcm

1.g. **RECORD** accumulated core average burnup:

Core Average Burnup: 6500 EFPH

NOTE

If this RRD is being performed to reference a recent reactor startup, obtain the Samarium Worth from the applicable ECC step 3 for Startup Samarium Worth or 2BVSR XPT-13, as applicable. N/A the Samarium Equivalent Power.

1.h. Equivalent Power for Samarium Calculation:

Sm Eq. PWR = Unweighted average power over 5 days (120 hrs)

Sm Eq. PWR = 80 %

Sm Worth from BCB-2 Table 1-4 or equivalent at 0 hrs after shutdown (-) 1052 pcm

KEY

REFERENCE REACTIVITY DATA WORKSHEET
(continued)

NOTE
If this RRD is being performed to reference a recent reactor startup, obtain the Xe Worth from the applicable ECC step 4 for Startup Xenon Worth or 2BVSR XPT-13, as applicable.

1.i. Determine the Xenon Worth from power in step 1.e and time at 0 hours from BCB-2 Figure 8c, Table 1-2, or equivalent:

Xe Worth (-) 2965 pcm

2. Final Power Operation Reference Reactivity Data:

NOTE
The data recorded in step 2 shall include the operating history of the reactor until it is shutdown. If the reactor tripped from a stable condition, record the applicable data from step 1 into step 2.

2.a. Reference Date:_____ Reference Time: _____

NOTE
The PPC may be used to determine the information in steps F.2.b, F.2.c, and F.2.d by performing the following and attaching the PPC printout to this surveillance. Navigate to Operator Demandable, Core Burnup, Reports, then Generate Shutdown Reference Reactivity for the desired date and time.

2.b. RECORD accumulated core average burnup:

Core Average Burnup:_____EFPH

2.c. Equivalent Power for Samarium Calculation:

Sm Eq. PWR = Unweighted average power over 5 days (120 hrs)

Sm Eq. PWR =_____%

KEY

REFERENCE REACTIVITY DATA WORKSHEET
(continued)

2.d. Determine the Equivalent Power for Xenon Calculation:

Hours Prior to Shutdown	Average Power (%)	Multiplier	Product
0 to 1		x 6	=
1 to 2		x 5	=
2 to 3		x 5	=
3 to 4		x 5	=
4 to 5		x 4	=
5 to 6		x 4	=
6 to 7		x 4	=
7 to 8		x 4	=
8 to 9		x 4	=
9 to 10		x 3	=
10 to 11		x 3	=
11 to 12		x 3	=
12 to 13		x 3	=
13 to 14		x 3	=
14 to 15		x 3	=
15 to 16		x 3	=
16 to 17		x 2	=
17 to 18		x 2	=
18 to 19		x 2	=
19 to 20		x 2	=
20 to 21		x 2	=
21 to 22		x 2	=
22 to 23		x 2	=
23 to 24		x 2	=
24 to 25		x 2	=
25 to 26		x 1	=
26 to 27		x 1	=
27 to 28		x 1	=
28 to 29		x 1	=
29 to 30		x 1	=
30 to 31		x 1	=
31 to 32		x 1	=
32 to 33		x 1	=
33 to 34		x 1	=
34 to 35		x 1	=
35 to 36		x 1	=

TOTAL = _____

REFERENCE REACTIVITY DATA WORKSHEET
(continued)

2.d. continued

Equivalent Power for Xenon = $\frac{\text{Total}}{91}$ = $\frac{\quad}{91}$

Xe Eq. PWR:_____%

Remarks: _____
_____
_____

*

NOTE
This procedure shall be performed by:

- Qualified Nuclear Engineer (QNE)
- o QNE
  o NSO

*, 2.c

Performed by:_____/_____(QNE)
Name Date

Reviewed by:_____/_____(NSO or QNE)
Name Date

SRO:_____/_____
Name Date

KEY

Exelon Generation

Job Performance Measure

Perform a QPTR Calculation

JPM Number: RA-2-1-23

Revision Number: 10

Date: 6/15/23

Developed By:	Barry Mingus / Barry Mingus /s/	Instructor: Print / Sign	6/15/23 Date
Reviewed By:	William Hines / William Hines /s/	SME or Instructor: Print / Sign	6/15/23 Date
Reviewed By:	Austin Wilde / Austin Wilde /s/	Operations Representative: Print / Sign	6/15/23 Date
Approved By:	Brian Lewin / Brian Lewin /s/	Training Department: Print / Sign	7/31/23 Date

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

Exelon Generation

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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: 1BOSR 2.4.1-1 Revision: 16
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

Bill Hines /		6/15/23
SME / Instructor (Print/Sign)		Date
/		
SME / Instructor (Print/Sign)		Date
/		
SME / Instructor (Print/Sign)		Date

Revision Record (Summary)

Revision #	Summary
10	− Applied new template TQ-JA-150-02 Rev.1 − Updated to revision 16 of 1BOSR 2.4.1-1 - Modified plant data
09	– Verified/ updated KAs and TPOs to current revision
08	– Validated 03/03/13 by Bill Hochstetter and Rob Lawlor, only change was procedure rev that did not affect JPM. Rev number carried over from JPM N-18 Rev 8

JPM SETUP INSTRUCTIONS

1. This is an administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.

2. Verify current revisions of the following information is available for the JPM performance:

- 1BOSR 2.4.1-1 Rev 16

3. IF this JPM will be done in an environment other than the simulator or MCR, THEN ENSURE the following items are available during performance of the JPM:

Operator Aid titled “UNIT 1 Nuclear Instrumentation Settings” (Simulator)

Image of current for:
- N41
- N42
- N43
- N44

Calculator

4. ENSURE the following between performances of the JPM:

• New clean procedure copies for examinee to work from during performance

5. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO
- The unit is in MODE 1, 100% steady state power
- The plant process computer has been inoperable for the last 30 minutes
- PDMS is inoperable

NI Power indication
  - N41 = 99.8%
  - N42 = 99.8%
  - N43 = 99.8%
  - N44 = 99.8%

INITIATING CUE

- The Unit Supervisor instructs you to perform 1BOSR 2.4.1-1, UNIT ONE QUADRANT POWER TILT RATIO CALCULATION using the installed meters to satisfy the weekly surveillance frequency.
- Another NSO will monitor the Main Control Board panels and address alarms as necessary.
- An IM Technician AND Station Reactor Engineer are NOT available.
- All NI Channels are OPERABLE.
- The Shift Manager has given his permission and the cover sheet has been signed.
- Inform the Unit Supervisor when you have completed 1BOSR 2.4.1-1

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: **4-9**

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:	JPM Sequence #: of

Task Standard:

Applicant correctly completes 1BOSR 2.4.1-1, Unit 1 Quadrant Power Tilt Ratio Calculation per the key to determine if related T.S. requirements are met.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	If this JPM is performed on the simulator, only the cues underlined are required to be provided to the examinee				
1	Refer to 1BOSR 2.4.1-1 Unit 1 Quadrant Power Tilt Ratio Calculation Verify all applicable Prerequisites, Precautions, Limitations and Actions are satisfactorily addressed	Refer to 1BOSR 2.4.1-1 Verify all applicable Prerequisites, Precautions, Limitations and Actions are satisfactorily addressed	☐	☐	___
CUE:	All Prerequisites are met				
2	Reads Main Body Note	Determines Section F.2 is applicable ○ Marks section F.1 as N/A	☐	☐	___
3	Records step 2.a data on Data sheet D3 Indicated power for: ° N41 = 99.8% ° N42 = 99.8% ° N43 = 99.8% ° N44 = 99.8%	At 1PM07J On Data sheet **D3** Records: ° Date ° Time Indicated power for: ° N41 = 99.8% ° N42 = 99.8% ° N43 = 99.8% ° N44 = 99.8%	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE to EVALUATOR This JPM is calculated so that QPTR will meet surveillance acceptance criteria. Detector currents and interpretation of provided NI current readings may differ slightly (±3.5) from the values indicated in the steps below. If the values vary far enough to cause QPTR to exceed 1.02 then the examinee has failed this JPM.					
***4**	Determine detector currents Upper Detector Current • N-41 • N-42 • N-43 • N-44 Lower Detector Current • N-41 • N-42 • N-43 • N-44	At 1PM07J (or from visual aid) record: (step b.1).) Upper Detector Current • N-41 = 203.5 • N-42 = 200.2 • N-43 = 203.5 • N-44 = 205.8 Lower Detector Current • N-41 = 196 • N-42 = 195.3 • N-43 = 194.5 • N-44 = 195.5 On Data Sheet D3 ○ Mark DVM QA number and Cal Date as **N/A**	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*5	From provided Operator Aid Records: 100% Upper Detector Current • N-41 • N-42 • N-43 • N-44 100% Lower Detector Current • N-41 • N-42 • N-43 • N-44	Use provided Operator Aid placed on 1PM07J (or provided to the examinee if outside the simulator) record last determined 100% Power NIS current on Data Sheet D3 (step F.2.c) 100% Upper Detector Current • N-41 = 200.5 • N-42 = 199.2 • N-43 = 200.5 • N-44 = 202.8 100% Lower Detector Current • N-41 = 201 • N-42 = 201.3 • N-43 = 199.5 • N-44 = 200.5	☐	☐	___
*6	Determine Normalized Detector Current Upper Detector Current • N-41 • N-42 • N-43 • N-44 Lower Detector Current • N-41 • N-42 • N-43 • N-44	On Data Sheet D3 divide the obtained detector current by the 100% current: (step F.2.d) Upper Detector Current • N-41 = 203.5/200.5 **= 1.0150** • N-42 = 199.2/200.2 **= 1.0050** • N-43 = 203.5/200.5 **= 1.0150** • N-44 = 205.8/202.8 **= 1.0150** Lower Detector Current • N-41 = 196.0/201.0 **= 0.9751** • N-42 = 195.4/201.3 **= 0.9702** • N-43 = 194.5/199.5 **= 0.9750** • N-44 = 195.5/200.5 **= 0.9751**	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*7	Determine Average Normalized Detector Current for: Upper detectors: Lower detectors:	On Data Sheet D3 compute the average normalized current for: (step F.2.e) Upper detectors: 1.0150+1.0050+1.0150+1.0148 =4.0500/4 = **1.0125** Lower detectors: 0.9751+0.9702+0.9750+0.9751 =3.8954/4 = **0.9739**	☐	☐	___
*8	Determine Quadrant Power Tilt Ratio Upper Detector Current • N-41 • N-42 • N-43 • N-44 Lower Detector Current • N-41 • N-42 • N-43 • N-44	On Data Sheet D3 compute the QPTR: (step F.2.f) Upper Detector Current • N-41 = **1.0150 / 1.0125 = 1.0025** • N-42 = **1.0050 / 1.0125 = 0.9926** • N-43 = **1.0150 / 1.0125 = 1.0025** • N-44 = **1.0148 / 1.0125 = 1.0023** Lower Detector Current • N-41 = **0.9711 / 0.9739 = 1.0013** • N-42 = **0.9655 / 0.9739 = 0.9963** • N-43 = **0.9706 / 0.9739 = 1.0012** • N-44 = **0.9706 / 0.9739 = 1.0013**	☐	☐	___
*9	Determines QPTR requirements are met	Determines QPTR has not exceeded 1.02 and informs Unit Supervisor	☐	☐	___
CUE:	**This JPM is complete.**				

JPM Stop Time: _____

JPM SUMMARY

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

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

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

JPM Title: UNIT ONE QUADRANT POWER TILT RATIO CALCULATION

JPM Number: RA-2-1-23 Revision Number: 10

Task Number and Title: 4C.RK-01 PERFORM A QPTR Calculation

Task Standard: Applicant correctly completes 1BOSR 2.4.1-1, Unit 1 Quadrant Power Tilt Ratio Calculation per the key to determine if related T.S. requirements are met.

K/A Number and Importance: 2.1.7 Ability to evaluate plant performance and make operational judgements based on operating characteristics, reactor behavior, and instrument interpretation.

Importance: 4.3/4.6

Suggested Testing Environment: Simulator or Classroom

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

Reference(s):

Procedure: 1BOSR 2.4.1-1 Revision: 16

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 25 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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO
- The unit is in MODE 1, 100% steady state power
- The plant process computer has been inoperable for the last 30 minutes
- PDMS is inoperable

  NI Power indication
  - N41 = 99.8%
  - N42 = 99.8%
  - N43 = 99.8%
  - N44 = 99.8%

INITIATING CUE

- The Unit Supervisor instructs you to perform 1BOSR 2.4.1-1, UNIT ONE QUADRANT POWER TILT RATIO CALCULATION using the installed meters to satisfy the weekly surveillance frequency.

- Another NSO will monitor the Main Control Board panels and address alarms as necessary.

- An IM Technician AND Station Reactor Engineer are NOT available.

- All NI Channels are OPERABLE.

- The Shift Manager has given his permission and the cover sheet has been signed.

- Inform the Unit Supervisor when you have completed 1BOSR 2.4.1-1

UNIT ONE
QUADRANT POWER TILT RATIO CALCULATION
DATA SHEET D3

Note: fields required to satisfy the task standard are highlighted in yellow.

DVM QA# n/a Cal Date n/a

	N41	N42	N43	N44
today / now Time / Date	99.8 %	99.8 %	99.8 %	99.8 %

UPPER DETECTORS (A)	N41	N42	N43	N44
Detector Current	203.5	200.2	203.5	205.8
100% Detector Current	200.5	199.2	200.5	200.8
Normalized Detector Current	1.0150	1.0050	1.0150	1.0150
Average Normalized Current	//	1.0125	//	
Quadrant Power Tilt Ratio ($\phi \leq 1.02$)	1.0025 ¢	0.9926 ¢	1.0025 ¢	1.0023 ¢

LOWER DETECTORS (B)	N41	N42	N43	N44
Detector Current	196	195.3	194.5	195.5
100% Detector Current	201	201.3	199.5	200.5
Normalized Detector Current	0.9751	0.9702	0.9750	0.9751
Average Normalized Current	//	0.9739	//	
Quadrant Power Tilt Ratio ($\phi \leq 1.02$)	1.0013 ¢	0.9963 ¢	1.0012 ¢	1.0013 ¢

Acceptance Criteria

No Quadrant Power Tilt Ratio shall exceed 1.02 (SR 3.2.4.1).

Performance Measure

Determine the Expected Plant Configuration

JPM Number: RA-3-01-23

Revision Number: 1

Date: 05/23/2023

Developed By:	Barry Mingus / *Barry Mingus /s/*		05/23/2023
	Instructor: Print / Sign		Date
Reviewed By:	Bill Hines / *Bill Hines /s/*		05/23/2023
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / *Austin Wilde /s/*		05/23/2023
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / *Brian Lewin /s/*		07/31/23
	Training Department: Print / Sign		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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Drawing :	6E-1-4008BJ	Revision:	AD
Procedure:	BOP SX-E1	Revision:	6
Procedure:	BOP WE-E1	Revision:	5
Procedure:	BOP VV-E1	Revision:	3
Procedure:	BOP SD-E1	Revision:	8
Procedure:	BOP WF-E1	Revision:	1

10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

Revision #	Summary
1	Modified from RA-2 administered on 2017 ILT NRC Exam Renamed and updated to current template. Changed equipment impacted.
0	This new JPM was developed for the 2017 ILT NRC Exam.

JPM SETUP INSTRUCTIONS

1. This is an Administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify current revisions of the following information is available for JPM performance:
   - 6E-0-4008BJ
   - BOP SX-E1
   - BOP WE-E1
   - BOP WF-E1
   - BOP VV-E1
   - BOP SD-E1
3. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the WEC NSO.

- The WEC Supervisor has just taken a call from a plant carpenter stating that while he was transiting the Aux Building with scaffold poles he bumped Panel 134V1 and may have repositioned breakers A2, B3, or E1.
- Passport is Out of Service for the next five hours during a software upgrade.

INITIATING CUE

The WEC Supervisor directs you to use design and configuration control documentation to determine:

- the affected components EPN and noun name
- the normal position of each breaker

Document below and notify the WEC Supervisor of your findings.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps. **3, 5, & 7**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Evaluate station electrical drawings and procedures to determine the normal configuration of potentially mis-positioned equipment. Document per the key and notify supervisor.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	If this JPM is being administered in a classroom, provide drawing 6E-1-4008BJ and procedures BOP WE-E1, WF-E1, BOP VV-E1, BOP SD-E1 and SX-E1. If being performed in the simulator, ensure the procedures are available for the examinee to locate. The examinee may elect to use Key Diagram, Electrical Lineup or both to determine component and normal position.				
1	Locate correct drawing	• LOCATE 6E-1-4008BJ	☐	☐	___
2	Locate correct procedure	• LOCATE BOP WF-E1	☐	☐	___
***3**	Determine 134V1 cubicle A2 component affected and expected position	For 134V1 A2: • Determine component is 1WF04PB - AUX BLDG SUMP PUMP 1B • Determine normal position is ON ○ Document / Notify WEC Supervisor	☐	☐	___
4	Locate correct procedure	• LOCATE BOP SX-E1	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***5**	Determine 134V1 cubicle B3 component affected and expected position	For 134V1 B3: • Determine component is 1SX01FB - ESSENTIAL SERVICE WATER PUMP STRAINER 1B • Determine normal position is ON ○ Document / Notify WEC Supervisor			
6	Locate correct procedure	• LOCATE BOP WE-E1			
***7**	Determine 134V1 cubicle E1 component affected and expected position	For 134V1 E1: • Determine component is 0WE04MA – S/G (BLOWDOWN) SAMPLE COLLECTION TANK PUMP • Determine normal position is OFF ○ Document / Notify WEC Supervisor			
8.	Present findings	• Document findings • notify WEC supervisor			
CUE:	**This JPM is complete.**				

JPM Stop Time: _____

JPM SUMMARY

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

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

JPM Title: Determine the Expected Plant Configuration

JPM Number: RA-3-01-23 Revision Number: 1

Task Number and Title: 4C.AM-18, DEMONSTRATE general knowledge of Configuration Management by understanding that the physical plant must match the Design Documents, Procedures and Drawings

Task Standard: Evaluate station electrical drawings and procedures to determine the normal configuration of potentially mis-positioned equipment. Document per the key and notify supervisor.

K/A Number and Importance:

2.2.15: Ability to determine the expected plant configuration using design and configuration control documentation, such as drawings, lineups, or tagouts (reference potential) importance 3.9/4.3

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure:	6E-0-4001BJ	Revision:	AD
Procedure:	BOP SX-E1	Revision:	6
Procedure:	BOP WE-E1	Revision:	5
Procedure:	BOP WF-E1	Revision:	1

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

KEY – RA-3-01-23

134V1 (1AP39E)	Component EPN	Component name (component name from E-lineup) (either is acceptable)	Normal Position
A2	1WF04PB	AUX BLDG SUMP PUMP 1B (AUX BLDG FLOOR DRN SUMP pp 1B BRKR)	ON
B3	1SX01FB	ESSENTIAL SERVICE WATER PUMP STRAINER 1B (1B SX PP STRN BKWH MOTOR BRKR)	ON
E1	0WE04MA	BLOWDOWN SAMPLE COLLECTION TANK PUMP (S/G SAMPLE COLLECTION TANK PP)	OFF

INITIAL CONDITIONS

You are the WEC NSO.

- The WEC Supervisor has just taken a call from a plant carpenter stating that while he was transiting the Aux Building with scaffold poles that he bumped Panel 134V1 and may have repositioned breakers A2, B3, or E1.
- Passport is Out of Service for the next five hours during a software upgrade.

INITIATING CUE

The WEC Supervisor directs you to use design and configuration control documentation to determine:

- the affected components EPN and noun name
- the normal position of each breaker

Document below and notify the WEC Supervisor of your findings.

134V1 (1AP39E)	Component EPN	Component name	Normal Position
A2			
B3			
E1			

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

Exelon Generation

Job Performance Measure

Change RM-11 Setpoints in Preparation for a Unit 1 Containment Release

JPM Number: RA-4-2-23

Revision Number: 1

Date: 6/15/23

Developed By:	Barry Mingus / Barry Mingus /s/		6/15/23
	Instructor: Print / Sign		Date
Reviewed By:	William Hines / William Hines /s/		6/15/23
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / Austin Wilde /s/		6/15/23
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / Brian Lewin /s/		7/31/23
	Training Department: Print / Sign		Date

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

Exelon Generation

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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: BCP 400-ECNMT/ROUTINE Revision: 2
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

Bill Hines /		6/15/23
SME / Instructor (Print/Sign)		Date
/		
SME / Instructor (Print/Sign)		Date
/		
SME / Instructor (Print/Sign)		Date

Revision Record (Summary)

Revision #	Summary
1	− Applied new template TQ-JA-150-02 Rev.1 − Incorporated Rev 2 of BCP 400-ECNMT/ROUTINE
0	JPM used for NRC 2016 NRC exam

Exelon Generation

JPM SETUP INSTRUCTIONS

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

1. Reset to IC-71

2. Ensure that either the 0A or 0B Aux Building Exhaust Fan is in operation.

3. Verify that the RMS values for the appropriate channels agree with the surveillance paperwork.

4. Run SmartScenario file RA-4.ssf . This will insert malfunction RM02B to remove PR11J from service.

5. 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

6. This completes the setup for this JPM

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO.
- A Unit 1 Containment release is pending.
- 1RE-PR011 is not in service and has been in LCOAR since beginning BCP preparations.
- Daily Channel Checks of 1RE-PR001 has been performed Satisfactory per 0BOSR 0.1-0.
- 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. CNMT Purge Effluent (1(2)PR01J Source/Channel Check) has been completed

INITIATING CUE

You have been directed to perform Section 4 of BCP 400-ECNMT/ROUTINE in preparation for this release.

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: **6-9 and 12-13**

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.

Exelon Generation

JPM Start Time:	JPM Sequence #: of
Task Standard: Candidate puts RMS into supervisor mode and selects monitor 1PB101, then Inputs Alert alarm setpoint of 3.14 E-04 and High Alarm setpoint of 5.86 E-04 per BCP 400-ECNMT/ROUTINE into the RMS system in preparation for a release.	

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: To initiate this JPM, hand the partially completed BCP 400-ECNMT/ROUTINE and Pre-Release Permit Report to the examinee.					
1	Refer to the partially completed BCP 400-ECNMT/ROUTINE	REVIEW BCP 400-ECNMT/ROUTINE for completeness up to Section 4	☐	☐	___
2	Step 4.2.1.1 Complete daily channel checks	VERIFY/COMPLETE the daily channel check on 1RE-PR001	☐	☐	___
Cue: The daily channel check of 1RE-PR001 has been performed satisfactorily					
3	Step 4.2.1.2 Perform Source/Channel check	PERFORM the 1PR01J source/channel check	☐	☐	___
Cue: 1BOSR 11.b.6-1 has been completed and reviewed satisfactorily.					
4	Step 4.2.1.3 Noble gas trend for 1PR11J (1PB111)	Marks step N/A	☐	☐	___
5	Step 4.2.1.4 “As Found” setpoints of 1RE-PR001	At the RMS, RECORD “As Found” setpoints of 1RE-PR001 Gas Channel: • High alarm setpoint • Alert alarm setpoint	☐	☐	___
***6**	Step 4.2.1.5 RMS supervisory mode	At the RMS: • PLACE RMS in Supervisory Mode by clicking on Mode Select Button	☐	☐	___
***7**	Step 4.2.1.6 Select monitor	At the RMS, Grid 2: • SELECT 1PB101	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***8**	Step 4.2.1.7 Select high alarm setpoint channel	At the RMS: • SELECT "Channel ITEMS" • SELECT "9"	☐	☐	___
***9**	Step 4.2.1.8-11 High alarm setpoint	At the RMS: • ENTER high alarm setpoint on 1PB101 **(5.86 E-04)** • SELECT "Save" • SELECT "Yes" • RECORD new value ◦ Request verification	☐	☐	___
CUE:	Your request for verification is acknowledged, please continue.				
NOTE:	The next steps repeat Steps 4.2.1.5-11 for the Alert Alarm setpoint.				
10	RMS supervisory mode NOTE: This step may be met per Step 6 above.	At the RMS: ○ VERIFY/PLACE RMS in Supervisory Mode by clicking on Mode Select Button	☐	☐	___
11	Select monitor NOTE: This step may be met per Step 6 above.	At the RMS, Grid 2: ○ VERIFY/SELECT 1PB101	☐	☐	___
***12**	Select Alert alarm setpoint channel	At the RMS: • VERIFY/SELECT "Channel ITEMS" • SELECT "10"	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***13**	Select Alert alarm channel	At the RMS: • ENTER Alert alarm setpoint on 1PB101 **(3.14 E-04)** • SELECT "Save" • SELECT "Yes" • RECORD new value ◦ Request verification	☐	☐	___
CUE:	Your request for verification is acknowledged, please continue.				
14	Step 4.2.1.13 Place the RMS in Normal Mode	At the RMS: • PLACE the RMS in NORMAL MODE by clicking on Mode Select Button	☐	☐	___
15	Step 4.3 Aux building exhaust fan status	At 0PM02J: • ENSURE the 0A OR 0B Aux Building Exhaust Fan is in operation	☐	☐	___
16	Turn in Package for approval	• Hand in Release package to unit Supervisor for approval.	☐	☐	___
CUE:	This JPM is complete.				

JPM Stop Time: _____

Exelon Generation

JPM SUMMARY

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

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

JPM Title: Change RM-11 Setpoints in Preparation for a Unit 1 Containment Release

JPM Number: RA-4-2-23 Revision Number: 1

Task Number and Title: Title: 4C.GW-01 PERFORM a Gaseous Release

Task Standard: Candidate puts RMS into supervisor mode and selects monitor 1PB101, then Inputs Alert alarm setpoint of 3.14 E-04 and High Alarm setpoint of 5.86 E-04 per BCP 400-ECNMT/ROUTINE into the RMS system in preparation for a release.

K/A Number and Importance: 2.3.5 Ability to use RMSs, such as fixed radiation monitors and alarms or personnel monitoring equipment. Importance: 2.9/2.9

Suggested Testing Environment: Simulator or Classroom

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

Reference(s):

Procedure: BCP 400-CNMT/ROUTINE Revision: 2

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO.
- A Unit 1 Containment release is pending.
- 1RE-PR011 is not in service and has been in LCOAR since beginning BCP preparations.
- Daily Channel Checks of 1RE-PR001 has been performed Satisfactory per 0BOSR 0.1-0.
- 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. CNMT Purge Effluent (1(2)PR01J Source/Channel Check) has been completed

INITIATING CUE

You have been directed to perform Section 4 of BCP 400-ECNMT/ROUTINE in preparation for this release.

Job Performance Measure

Evaluate a Reactivity Change

JPM Number: SA-1-02-23

Revision Number: 04

Date: 8/17/23

Developed By:	William Hines / William Hines /s/		8/17/23
	Instructor: Print / Sign		Date
Reviewed By:	Barry Mingus / Barry Mingus /s/		8/18/23
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / Austin Wilde/s/		8/24/23
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / Brian Lewin /s/		8/24/23
	Training Department: Print / Sign		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 8 and 12 below.

1. Task description and number, JPM description and number are identified. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

   Procedure: 1BOSR XPT-17 Revision: 5
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision 00 Initial revision of JPM

Revision 01 Revised JPM for modification of calculation

Revision 02 Revised JPM for modification of calculation and time in core life.

Revision 03 Updated Rema for Rev 7 of OP-AP-300-1004.

Revision 04 Modified JPM errors to make them independent of each other and not an error carried forward. Updated to current template

INITIAL CONDITIONS:

1. Unit 2 is at 50% power, 9100 EFPH, 500 ppm boron, with CB D at 89 steps, Tave and Tref matched.
2. The QNE has recommended that Control Bank D be withdrawn 4 steps to control PDMA02 on the desired target, then to perform a reactivity change to match Tave to Tref.
3. The NSO has calculated a reactivity change to move rods, then match Tave with Tref.

INITIATING CUES:

1. Evaluate the reactivity change to restore PDMA02 to target and to match Tave to Tref.
2. Review the Reactivity Change Determination Form for approval.

- Provide completed copy of OP-AP-300-1004, attachment 1, Rev 4, Pwr Boration and Dilution Requirements
- Provide copy of Unit 2 Rema Thumbrules

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* **Denotes critical steps 2 & 3**

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.

TASK STANDARDS:

1. Evaluate the reactivity change to match Tave to Tref.
2. Review the Reactivity Change Determination Form.

MATERIALS:

- Completed OP-AP-300-1004, Rev 2, Pwr Boration and Dilution Requirements (Attachment 1 is attached)
- Unit 2 Rema Thumbrules at 8500-11000 EFPH

JPM Start Time:	JPM Sequence #: of

Task Standard:

The candidate reviews the Reactivity Change Determination Form and determines there are two errors: a transposition error under 'method and amount required for the reactivity change' of 2 steps vice 4 steps, and a procedure use error, where the candidate incorrectly calculates the value for boration using the RWST vice the BAST(93 gal/ºF vice 25 gal/ºF).

STEP	ELEMENT	STANDARD	SAT	UNSAT	CMT#
CUE	**Provide completed copy of OP-AP-300-1004 and a copy of the Unit 2 Rema thumbrules**				
EVALUATOR NOTE: These steps may be performed in any order.					
1	Refer to • OP-AP-300-1004, Rev 2, Pwr Boration and Dilution Requirements • Unit 2 Rema Thumbrules	In accordance with the provided: • OP-AP-300-1004, Rev 2, Pwr Boration and Dilution Requirements • Unit 2 Rema Thumbrules	____	____	____
***2**	Part 1 Review Attachment 1 of OP-AP-300-1004 4 steps on Control Bank D will give a 2°F change in Tave that will need to be compensated for.	○ Station: Byron Unit: 2 ○ Desired change ○ Withdraw Rods 4 steps for PDMA02 control ○ Borate to lower Tave (2°F) to match Tref ○ Reason for change ○ PDMA02 control ○ Temperature control ○ What is the method & amount required for the reactivity change? • **2 steps withdrawal of CB D** ○ And a 186 gallon boration ○ Inputs ○ Rema thumbrules • ***Identify that for the subsequent step, the RO records 2 steps instead of 4 based on a transposition with the 2°F.***	____	____	____
CUE:	**When examinee identifies the deficiency, direct them to review the rest of the calculations**				

***3**	<u>Part 2</u> Review Attachment 1 of OP-AP-300-1004 **NOTE: Calculation of correct numbers is NOT required for success**	○ Calculation of change: ○ Withdrawal of CB D 4 steps raises temp 2°F • Then borate to lower temperature by 2ºF: **93 gal/°F** X 2ºF = **186 gal** • ***Identify an incorrect thumbrule was used to calculation the magnitude of the boration.*** *(Used RWST values instead of BA values (93Gal/Deg vs 25 Gal/Deg)* • *Correct boration calculation is:* ***25 gal/ºF** X 2º = **50 gal***	____	____	____
CUE	**This JPM is complete.**				

RECORD STOP TIME:_____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert

JPM Title: Evaluate a Reactivity Change

JPM Number: SA-1-02-23 Revision Number: 04

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

K/A Number and Importance: GEN 2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management

Importance 4.6

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure: OP-AP-300-10041 Revision: 4

Procedure: Unit 2 Rema Thumbrules Revision: BY2CXX-TH-04.0

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**: _____

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. Unit 2 is at 50% power, 9100 EFPH, 500 ppm boron, with CB D at 89 steps, Tave and Tref matched.
2. The QNE has recommended that Control Bank D be withdrawn 4 steps to control PDMA02 on the desired target, then to perform a reactivity change to match Tave to Tref.
3. The NSO has calculated a reactivity change to move rods, then match Tave with Tref.

INITIATING CUES:

1. Evaluate the reactivity change to restore PDMA02 to target and to match Tave to Tref.
2. Review the Reactivity Change Determination Form for approval.

ATTACHMENT 1
REACTIVITY CHANGE DETERMINATION FORM

Station: *Byron* **Unit:** 1 (2) **Time:** *Now* **Date:** *Today*

Desired change:
(Parameter, Magnitude, and Direction: Reactor Power, Rod Position, RCS Temp, Delta I, etc.)

Withdraw Rods 4 steps for PDMA02 control
Borate to lower Tave (2°F) to match Tref

Reason for Change:
(Temperature control, flux control, fuel burn up)

PDMA02 control and temperature control

What is the method and amount required for the reactivity change?
(Bleed Tank Volume, Gallons of Dilution/Boration/Blended Flow, Rod Insertion/Rod Withdrawal steps/percent)

2 steps withdrawal of CB D and 186 gallons of Boration

Inputs:
(ReMA Thumbrules, ReMA maneuver guidance, Curve Book Figure/Table, Computer based trend plot, RCS Cb, EFPD – Preparer and Reviewer should use independent inputs when possible)

Rema thumbrules for Unit 2 at 9100 EFPH

Calculation of change:
(E.G. Bwd/Byr: ReMA Thumbrule identifies 20 gallons BA = 1.0°F RCS temp reduction. *Desired change* = 0.5°F drop. *Calculation of change:* (20 gal/1.0°F) * 0.5°F = 10 gal., previously used borations and dilutions)
(TMI: Procedure 1102-4 Power Operations Fig. 1, Volume of Demineralized Water for 1% Rod Insertion)

Withdrawal of control rods 4 steps raises temp 2°F.
Then borate to lower temperature by 2°F: 93 gals/°F x (2°F) = 186 gals boration.

Joe Rowe	*P Chech*	
Preparer (RO)	**Reviewer** (RO/SRO)	**Approver** (SRO)

Shift Manager Notified: Yes No

Exelon Generation

Job Performance Measure

Perform a Manual Safety Assessment (Shutdown)

JPM Number: SA-2-1-23

Revision Number: 02

Date: 6/19/23

Developed By:	Barry Mingus / Barry Mingus /s/		6/19/23
	Instructor: Print / Sign		Date
Reviewed By:	William Hines / William Hines /s/		6/19/23
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / Austin Wilde/s/		6/19/23
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / Brian Lewin /s/		7/31/23
	Training Department: Print / Sign		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.

BM	1.	Task description and number, JPM description and number are identified.
BM	2.	Knowledge and Abilities (K/A) references are included.
BM	3.	Performance location specified. (in-plant, control room, simulator, or other)
BM	4.	Initial setup conditions are identified.
BM	5.	Initiating cue (and terminating cue if required) are properly identified.
BM	6.	Task standards identified and verified by SME review.
BM	7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
BM	8.	If an alternate path is used, the task standard contains criteria for successful completion.
BM	9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure OU-AP-104 Rev: 29 Procedure _____ Rev: _____ Procedure _____ Rev: _____
BM	10.	Verify cues both verbal and visual are free of conflict.
BM	11.	Verify performance time is accurate
BM	12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
BM	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 00, This JPM developed/modified from LORT Bank JPM S013 revision 4. Additional items marked for current revision of OU-AP-104 on Attachment 1. Initial Configurations modified to obtain an Orange result for Reactivity Control and for Shutdown Cooling and a Red result for Inventory Control. Applied new template TQ-AA-150-J020

Revision 01 This JPM has been modified from administration as 2018 Certification Exam JPM SA-1. This JPM has been modified by making the following changes:

- The initial conditions have changed.
- The change of conditions has created new safety function status.

JPM number format has been revised to better track JPMs as opposed to changing letter designations based on where placed sequentially on ES-301 forms. Added a Task Performance Standard. Verified/ updated KAs and TPOs to current revision. Updated the referenced procedure.

Revision 02 JPM clarified to provide better operational validity.
Overall strategy of the JPM maintained.

JPM SETUP INSTRUCTIONS

1. This is an Administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify current revisions of the following information is available for JPM performance:
   - OU-AP-104, SHUTDOWN SAFETY MANAGEMENT PROGRAM BYRON / BRAIDWOOD ANNEX
3. ENSURE the following is available during performance of the JPM:
   - OU-AP-104, SHUTDOWN SAFETY MANAGEMENT PROGRAM BYRON / BRAIDWOOD ANNEX
4. ENSURE the following between performances of the JPM:
   - New clean procedure copies for examinee to work from during performance
5. This completes the setup for this JPM.

INITIAL CONDITIONS

You are an extra Senior Reactor Operator.

- Unit 2 is in Mode 6.
- The conoseals are open (broken) for head venting.
- Containment is intact.
- RX Vessel Level is stable at 398.5'.
- Time to SFP Boil is 20.3 hours.
- The RX Vessel head is installed, and preparations are being made for lift.
- Switchyard activities are NOT allowed.
- Bus 241 is faulted and cannot be re-energized.
- Unit 0 Component Cooling Pump is unavailable.
- PARAGON is unavailable.

INITIATING CUE

You have been handed a partially completed OU-AP-104, SHUTDOWN SAFETY MANAGEMENT PROGRAM BYRON / BRAIDWOOD ANNEX, Attachment 1.

- Reactivity Control, Fuel Pool Cooling, and Containment have been determined to be Green
- Electric Power Control is Yellow

You have been requested to complete the Safety Function Status determination for Shutdown Cooling, Inventory Control, and Vital Support Systems, and to determine the Unit Overall Safety Level.

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: **1, 5, 9, and 15**

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:	JPM Sequence #: of

Task Standard:

The candidate performs an assessment of each remaining Safety Function; determines no Red status exists, that Shutdown Cooling and Inventory Control safety functions are Orange, and an Overall Unit Status of Orange. Documents per the key.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	**Provide applicant a copy of OU-AP-104, Attachment 1**				
CUE	**Provide applicant a copy of OU-AP-104, SHUTDOWN SAFETY MANAGEMENT PROGRAM BYRON / BRAIDWOOD ANNEX.**				
***1**	Determine current plant configuration. from OU-AP-104 Attachment 9, Figure 1.	Determine: • Mode 6 • RCS Volume: ≤ 415 ft Cav (M6) L • RCS Status: Vented • **Use Configuration 4**	___	___	___
2	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4.	**Safety Assessment: Shutdown Cooling** Determine M6 with Rx Cavity ≥ 415' • N	___	___	___
3	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4	Determine RH Trains with Suction from RWST Number Available: • 1 (B Train only available)	___	___	___
4	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4	Determine Feed & Bleed Available: • Y	___	___	___
***5**	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4	Determine Shutdown Cooling Risk: • ORANGE	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6	CHECK the appropriate box on page 2 of Attachment 1, Shutdown Safety Equipment Status Checklist.	Safety Function Status by Functional Category: • Check Shutdown Cooling Box - Orange	___	___	___
7	Perform Manual Safety Assessment: Inventory Control; from OU-AP-104 Attachment 9, Configuration 4	**Safety Assessment: Inventory Control** Determine RH Trains with Suction from RWST Number Available: • 1 (B Train only available)	___	___	___
8	Perform Manual Safety Assessment: Inventory Control; from OU-AP-104 Attachment 9, Configuration 4	Determine CV/SI Pumps Number Available: • 2 (B Train only available – 1 CV Pump and 1 SI Pump)	___	___	___
***9**	Perform Manual Safety Assessment: Inventory Control; from OU-AP-104 Attachment 9, Configuration 4	Determine Inventory Control Risk: • ORANGE	___	___	___
10	CHECK the appropriate box on page 2 of Attachment 1, Shutdown Safety Equipment Status Checklist.	Safety Function Status by Functional Category: • Check Inventory Control Box - Orange	___	___	___
NOTE:	The opposite units SX System can be credited as a train of SX for the Outage Unit if both of the SX pumps are AVAILABLE and capable of being cross tied. The 1 + 1 availability is defined as only 1 opposite unit SX train both Available and capable of being cross tied concurrent with only 1 Outage Unit SX pump being available.				
11	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4.	**Safety Assessment: Vital Systems** Determine SX Trains Number Available: • $\geq$ 2	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
12	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4	Determine CC Trains Number Available: • 1 (B Train only available)	___	___	___
13	Perform Manual Safety Assessment: Shutdown Cooling; from OU-AP-104 Attachment 9, Configuration 4	Determine Vital Systems Risk: • YELLOW	___	___	___
14	CHECK the appropriate box on page 2 of Attachment 1, Shutdown Safety Equipment Status Checklist.	Safety Function Status by Functional Category: • Check Vital Support Systems Box - Yellow	___	___	___
***15**	CHECK the appropriate box on page 2 of Attachment 1, Shutdown Safety Equipment Status Checklist.	Overall Unit Status: • Check Box - ORANGE	___	___	___
NOTE	Candidate may request 1BOA PRI10 to continue the procedure. In that event, acknowledge the request and end the JPM				
CUE	This JPM is complete.				

JPM Stop Time: _____

JPM SUMMARY

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

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

JPM Title: Perform a Manual Safety Assessment (Shutdown)

JPM Number: SA-2-1-23 Revision Number: 01

Task Number and Title: 8E.AM-182 PERFORM Shutdown Risk Evaluation

Task Standard: The candidate performs an assessment of each Safety Function; determines no Red status exists, that two safety functions are orange per the key, and an Overall Unit Status of Orange.

K/A Number and Importance: 2.1.23, Ability to perform general and/or normal operating procedures during any plant condition Importance 4.4

Suggested Testing Environment: Classroom

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

Reference(s): Procedure OU-AP-104 Rev: 28

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

Testing Method: ☐ Simulate ☐ Perform

Estimated Time to Complete: 30 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**: _____

Outage Unit (check one): ☐ Unit 1 ☒ Unit 2

The equipment designated below, is in the indicated state (circle applicable):

EQUIPMENT	TRAIN A			TRAIN B		
RH	OP	Avail	Unavail	OP	Avail	Unavail
CV	OP	Avail	Unavail	OP	Avail	Unavail
SI		Avail	Unavail		Avail	Unavail
AF		Avail	Unavail		Avail	Unavail
SX Outage Unit SX Opp Unit	OP OP	Avail Avail	Unavail Unavail	OP OP	Avail Avail	Unavail Unavail
DG this Unit	OP	Avail	Unavail	OP	Avail	Unavail
DG opposite Unit (including Xtie BKRS)	OP	Avail	Unavail	OP	Avail	Unavail
Source Range Channels	OP	Avail	Unavail	OP	Avail	Unavail
Gamma Metrics Channels		Avail	Unavail		Avail	Unavail
125 VDC (including Battery)	OP	Avail	Unavail	OP	Avail	Unavail
FHB Fans	OP	Avail	Unavail	OP	Avail	Unavail
CC		Avail	Unavail		Avail	Unavail
Pressurizer PORVs/Blocks	OP	Avail	Unavail	OP	Avail	Unavail

Instr. Busses	211	212	213	214
With Inverter	OP Avail Unavail	OP Avail Unavail	OP Avail Unavail	OP Avail Unavail
CVT'S	Avail Unavail	Avail Unavail	Avail Unavail	Avail Unavail
	A	B	C	D
Steam Generator	Avail N/A	Avail N/A	Avail N/A	Avail N/A
Stm Gen PORV	Avail N/A	Avail N/A	Avail N/A	Avail N/A
RCFCs	Avail Unavail	Avail Unavail	Avail Unavail	Avail Unavail

RWST	Level >10% Yes No	
SDM	Met (Avail) Not Met (Unavail)	
SFP Make up trains available	1 2 3 4	
	Unit 1	Unit 2
FC Loops	Avail Unavail	Avail Unavail
System Aux. Transformers	Avail Unavail	Avail Unavail

KEY

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Equipment Hatch Status (check one):

☒ Interlocks Installed ☐ 1 Door Closed ☐ Both Doors Open ☐ Removed

Emergency Hatch Status (check one):

☒ Interlocks Installed ☐ 1 Door Closed ☐ Both Doors Open

RWST Level >10% ☒ Yes ☐ No

If RWST boron concentration is less than the COLR limits for Mode 6 **then ENTER** BOL / BwOL 3.9.2 as applicable.

Switchyard Activities (check one): ☐ In Progress ☐ Permitted ☒ Not Permitted

Time to RCS Boil: 11 (min) / hrs (circle)

Time to Core Uncovery: 2.25 hours

Source (check one): ☐ Paragon ☒ Graphs

Safety Function Status by Functional Category (check one):

Reactivity Control	☐ Red	☐ Orange	☐ Yellow	☒ Green
Shutdown Cooling	☐ Red	☒ Orange	☐ Yellow	☐ Green
Inventory Control	☐ Red	☒ Orange	☐ Yellow	☐ Green
Fuel Pool Cooling	☐ Red	☐ Orange	☐ Yellow	☒ Green
Electric Power Control	☐ Red	☐ Orange	☒ Yellow	☐ Green
Containment	☐ Red	☐ Orange	☐ Yellow	☒ Green
Vital Support Systems	☐ Red	☐ Orange	☒ Yellow	☐ Green

Overall Unit Status (Least Desirable Key Safety Function Level):

☐ Red ☒ Orange ☐ Yellow ☐ Green

KEY

KEY

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

INITIAL CONDITIONS

You are an extra Senior Reactor Operator.

- Unit 2 is in Mode 6.
- The conoseals are open (broken) for head venting.
- Containment is intact.
- RX Vessel Level is stable at 398.5’.
- Time to SFP Boil is 20.3 hours.
- The RX Vessel head is installed, and preparations are being made for lift.
- Switchyard activities are NOT allowed.
- Bus 241 is faulted and cannot be re-energized.
- Unit 0 Component Cooling Pump is unavailable.
- PARAGON is unavailable.

INITIATING CUE

You have been handed a partially completed OU-AP-104, SHUTDOWN SAFETY MANAGEMENT PROGRAM BYRON / BRAIDWOOD ANNEX, Attachment 1.

- Reactivity Control, Fuel Pool Cooling, and Containment have been determined to be GREEN
- Electric Power Control is YELLOW

You have been requested to complete the Safety Function Status determination for Shutdown Cooling, Inventory Control, and Vital Support Systems, and to determine the Unit Overall Safety Level.

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

Exelon Generation

Job Performance Measure

Review Offsite AC Power Availability Surveillance

JPM Number: SA-1-01-23

Revision Number: 02

Date: 6/15/23

Developed By:	Barry Mingus / Barry Mingus /s/		6/12/23
	Instructor: Print / Sign		Date
Reviewed By:	William Hines / William Hines /s/		6/12/23
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / Austin Wilde/s/		6/12/23
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / Brian Lewin /s/		7/31/23
	Training Department: Print / Sign		Date

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

Exelon Generation

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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: 1BOSR 8.1.1-1 Revision: 14
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

Exelon Generation

Revision Record (Summary)

Revision #	Summary
Revision 01	Modified from SA-1 administered on 2014 NRC Exam incorporating changes in switchyard configuration and procedure revisions. Applied new template TQ-AA-150-J020. Revised Task number to an SRO task. Designated as Time Critical to ensure compliance with Tech Spec 3.8.1 Completion time requirements.
Revision 02	Updated to current revisions of JPM template and procedures

SIMULATOR SETUP INSTRUCTIONS

1. This is an Administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify current revisions of the following information is available for JPM performance:
   - 1BOSR 8.1.1-1, NORMAL AND RESERVE OFFSITE AC POWER AVAILABILITY WEEKLY SURVEILLANCE.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 1 Supervisor

- Unit 1 is at 100% power.
- Unit 2 is shutdown and defueled during a refueling outage.
- Plant conditions are as follows:
  - Line 0627 disconnect is OOS OPEN for line work outside the switchyard.
  - BT Breaker 10-14 and both of its disconnects are OOS OPEN for troubleshooting a breaker problem.
  - BT breakers 10-11 and 11-12 are OOS OPEN for Unit 2 MPT disconnect repairs.
  - Bus 242 is being powered from the Unit 1 reserve feed from Bus 142 as part of breaker functional tests.
  - ACB 2422 is OPEN to support ACB 1424 and ACB 2424 functional tests but is fully operational.
  - SAT 242-2 bus-tie link OOS OPEN for SAT 242-2 replacement.
  - SAT 242-1 to 242-2 cross-connect link is CLOSED.
  - All voltages, amps and MWs, and bus alive lights indicate as expected for the listed plant conditions.
- The 1A DG was declared inoperable 30 minutes ago and the Unit 1 Assist NSO was assigned 1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance to perform.
- The NSO has completed the surveillance and given it to you for review and approval.

INITIATING CUE

You have been handed the completed 1BOSR 8.1.1-1 and have been requested to perform a review and evaluate acceptance criteria determination.

This is a time critical JPM

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: **1, 6 & 9**

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:	JPM Sequence #: of

Task Standard:

Applicant performs review of completed 1BOSR 8.1.1-1, identifying that acceptance criteria is NOT met due to incorrect Evaluation Criteria #5 and #10 as shown on the KEY. Complete JPM < 30 minutes to ensure compliance with 1 hour Tech Spec required completion time.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the applicant a copy of 1BOSR 8.1.1-1 as completed by the NSO.				
NOTE:	For Evaluation Criteria #5, Lines 0621, 0622, and 0626 cannot be considered independent transmission lines. Thus to satisfy the criteria, either Line 0621, 0622, or 0627 is required to be available AND either Line 0624 or 0627 is required to be available (neither 0624 or 0627 is available).				
***1**	Evaluate Criteria #5.	Determines: • Two independent offsite sources to the Unit SAT Banks are available: **NO**	___	___	___
NOTE:	If the applicant requests the NSO to re-perform 1BOSR 8.1.1-1 to correct the noted deficiency, provide the following cue:				
CUE	Continue to review the provided 1BOSR 8.1.1-1 and document any inaccuracies.				
2	Evaluate Criteria #6.	Determines: • Normal power 345 KV Bus 6 energized: **YES** • Reserve power 345 KV Bus 13 energized: **YES**	___	___	___
3	Evaluate Criteria #7.	Determines: • Normal power: SAT 142-1 and 142-2 energized: **YES** • Reserve power: U-2 SAT crosstie links installed and either SAT 242-1 or 242-2 energized: **YES**	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
4	Evaluate Criteria #8.	Determines: • 4160 volt ESF Bus 141 energized: **YES** • 4160 volt ESF Bus 142 energized: **YES**	___	___	___
5	Evaluate Criteria #9.	Determines: • 4160 volt ESF Bus 241 energized: **YES** • 4160 volt ESF Bus 242 energized: **YES**	___	___	___
NOTE:	For Evaluation Criteria #10, though Bus 242 is energized (from Reserve Feed), ACB 2422 SAT Feed Breaker is currently open.				
***6**	Evaluate Criteria #10.	Determines: • ACB 1412 SAT Feed Breaker to Bus 141 closed/connected: **YES** • ACB 1422 SAT Feed Breaker to Bus 142 closed/connected: **YES** • ACB 2412 SAT Feed Breaker to Bus 241 closed/connected: **YES** • ACB 2422 SAT Feed Breaker to Bus 242 closed/connected: **NO**	___	___	___
NOTE:	If the applicant requests the NSO to re-perform 1BOSR 8.1.1-1 to correct the noted deficiency, acknowledge and provide the following cue:				
CUE	Continue to review the provided 1BOSR 8.1.1-1 and document any inaccuracies				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
7	Evaluate Criteria #11.	Determines: • ACB 1414 Bus 141 Reserve Feed Breaker available: **YES** • ACB 1424 Bus 142 Reserve Feed Breaker available: **YES** • ACB 2414 Bus 241 Reserve Feed Breaker available: **YES** • ACB 2424 Bus 242 Reserve Feed Breaker available: **YES**	___	___	___
8	Evaluate Criteria #12.	Determines: • 1PA55J-851PST11 Loss of Phase RLY SAT 142-1 operable: **YES** • 1PA55J-851PST12 Loss of Phase RLY SAT 142-2 operable: **YES**	__	___	___
NOTE:	Record time step 9 is complete and it is determined that acceptance criteria are NOT met: _____:_____:_____ Time step 9 complete – time from JPM start = _____:_____:_____ (< 30 minutes). Elapsed time to complete JPM ≤ 30 minutes to ensure complete within 1 hour Tech Spec required completion time.				
***9**	Determine acceptance criteria are NOT met.	Determines: • Acceptance criteria are NOT MET at step G because two independent off-site sources do not exist.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	This JPM is complete				

Exelon Generation

JPM SUMMARY

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

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

JPM Title: Review Offsite AC Power Availability Surveillance

JPM Number: SA-1-01-23 Revision Number: 01

Task Number and Title: 8E.AM-123, REVIEW surveillances to ensure compliance with Tech Specs and Non-Tech Spec requirements

Task Standard: Applicant performs review of completed 1BOSR 8.1.1-1, identifying that acceptance criteria is NOT met due to incorrect Evaluation Criteria #5 and #10 as shown on the KEY. Complete JPM < 30 minutes to ensure compliance with 1 hour Tech Spec required completion time.

K/A Number and Importance: KA: 2.1.2.1.31, Ability to locate control room switches, controls, and indications and to determine whether they correctly reflect the desired plant lineup 4.6/ 4.3

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure: 1BOSR 8.1.1-1 Revision: 14
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

You are the Unit 1 Supervisor

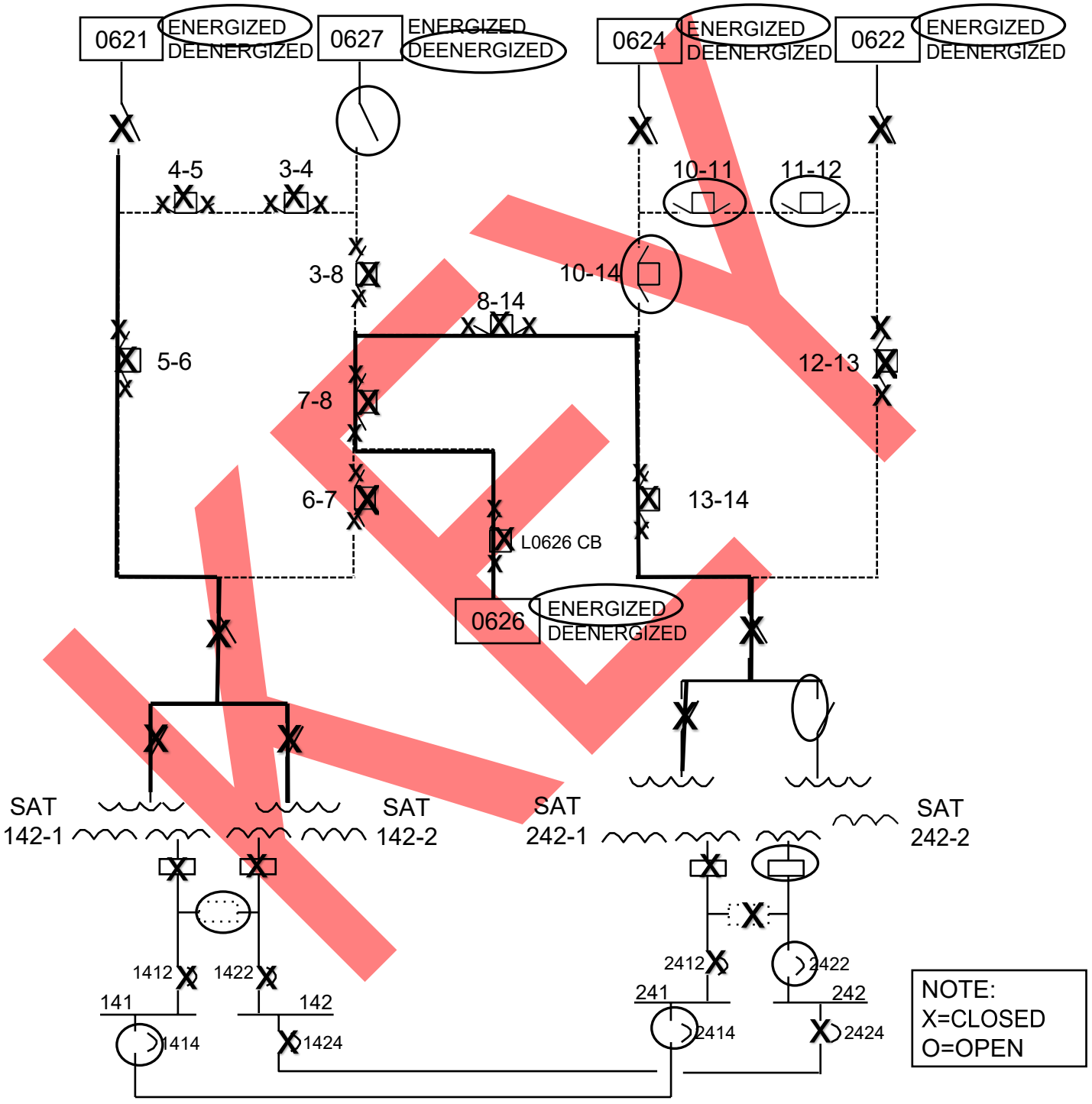
- Unit 1 is at 100% power.
- Unit 2 is shutdown and defueled during a refueling outage.
- Plant conditions are as follows:
  - Line 0627 disconnect is OOS OPEN for line work outside the switchyard.
  - BT Breaker 10-14 and both of its disconnects are OOS OPEN for troubleshooting a breaker problem.
  - BT breakers 10-11 and 11-12 are OOS OPEN for Unit 2 MPT disconnect repairs.
  - Bus 242 is being powered from the Unit 1 reserve feed from Bus 142 as part of breaker functional tests.
  - ACB 2422 is OPEN to support ACB 1424 and ACB 2424 functional tests but is fully operational.
  - SAT 242-2 bus-tie link OOS OPEN for SAT 242-2 replacement.
  - SAT 242-1 to 242-2 cross-connect link is CLOSED.
  - All voltages, amps and MWs, and bus alive lights indicate as expected for the listed plant conditions.
- The 1A DG was declared inoperable 30 minutes ago and the Unit 1 Assist NSO was assigned 1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance to perform.
- The NSO has completed the surveillance and given it to you for review and approval.

INITIATING CUE

You have been handed the completed 1BOSR 8.1.1-1, and have been requested to perform a review and evaluate acceptance criteria determination.

This is a time critical JPM.

NOTE:
Lines 0621, 0622, and 0626 cannot be considered independent transmission lines.



KEY

DATA SHEET
Page 1 or 2

5.	Two independent offsite sources to the Unit SAT Banks are available.	YES (¢) / NO incorrect
6.		
	Normal power 345 KV Bus 6 energized.	YES (¢) / NO
	Reserve power 345 KV Bus 13 energized.	YES (¢) / NO
7.		
	Normal power:	YES (¢) / NO
	SAT 142-1 and 142-2 energized or,	
	N/A U-1 SAT crosstie links installed and either SAT 142-1 or 142-2 energized.	
	Reserve power:	YES (¢) / NO
	N/A SAT 242-1 and 242-2 energized or,	
	U-2 SAT crosstie links installed and either SAT 242-1 or 242-2 energized.	
8.		
	4160 volt ESF Bus 141 energized.	YES (¢) / NO
	4160 volt ESF Bus 142 energized.	YES (¢) / NO
9.		
	4160 volt ESF Bus 241 energized.	YES (¢) / NO
	4160 volt ESF Bus 242 energized.	YES (¢) / NO
10		
	ACB 1412 SAT Feed Breaker to Bus 141 closed/connected.	YES (¢) / NO
	ACB 1422 SAT Feed Breaker to Bus 142 closed/connected.	YES (¢) / NO
	ACB 2412 SAT Feed Breaker to Bus 241 closed/connected.	YES (¢) / NO
	ACB 2422 SAT Feed Breaker to Bus 242 closed/connected.	YES (¢) / NO incorrect
11.		
	ACB 1414 Bus 141 Reserve Feed Breaker available.	YES (¢) / NO
	ACB 1424 Bus 142 Reserve Feed Breaker available.	YES (¢) / NO
	ACB 2414 Bus 241 Reserve Feed Breaker available.	YES (¢) / NO
	ACB 2424 Bus 242 Reserve Feed Breaker available.	YES (¢) / NO

KEY

DATA SHEET
Page 2 or 2

12.		
⊘	1PA55J-851PST11 Loss of Phase RLY SAT 142-1 operable	(YES) / NO
⊘	1PA55J-851PST12 Loss of Phase RLY SAT 142-2 operable	(YES) / NO

KEY

Exelon Generation

Job Performance Measure

Review Containment Release package in preparation for a Unit 1 Containment Release

JPM Number: SA-4-1-23

Revision Number: 08

Date: 6/15/21

Developed By:	Barry Mingus / Barry Mingus /s/	Instructor: Print / Sign	6/12/23 Date
Reviewed By:	William Hines / William Hines /s/	SME or Instructor: Print / Sign	6/19/23 Date
Reviewed By:	Austin Wilde / Austin Wilde /s/	Operations Representative: Print / Sign	6/19/23 Date
Approved By:	Brian Lewin / Brian Lewin /s/	Training Department: Print / Sign	7/31/23 Date

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

Exelon Generation

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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: BCP 400-ECNMT/ROUTINE Revision: 2
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

Barry Mingus / Barry Mingus /s/		6/14/23
SME / Instructor (Print/Sign)		Date
_____ / _____		_____
SME / Instructor (Print/Sign)		Date
_____ / _____		_____
SME / Instructor (Print/Sign)		Date

Exelon Generation

Revision Record (Summary)

Revision #	Summary
04	Applied new template TQ-JA-150-02 Rev.1 Verified/ updated KAs and TPOs to current revision Changed Non Licensed Operator to Equipment Operator
05	Revised to SRO Only review of containment release prior to approval
06	Applied new template TQ-AA-150-J020 to JPM SA-3 from 2012 NRC Exam. Removed simulator setup instructions – administrative JPM can be performed in classroom. Added cue for the 0A Aux. Bldg. Exhaust Fan in operation Updated task to VISION nomenclature Revised procedure revision.
07	Revised to update due to new revision of procedure from BCP 400-TCNMT/ROUTINE to BCP 400-ECNMT/ROUTINE. JPM number format has been revised to better track JPMs as opposed to changing letter designations based on where placed sequentially on ES-301 forms. Added a Task Performance Standard. Verified/ updated KAs and TPOs to current revision. Updated the referenced procedures to the current revisions. Revised the set-up instructions to reflect the changes to include date changes to data sheet to make current.
08	Updated to newest revisions of JPM template and procedures. Updated handouts to current year.

Exelon Generation

JPM SETUP INSTRUCTIONS

1. This is an administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.
2. Verify current revisions of the following information is available for the JPM performance:
   - BCP 400-ECNMT/ROUTINE
3. ENSURE the following is available during performance of the JPM:
   - BCP 400-ECNMT/ROUTINE partial completed handout
4. ENSURE the following between performances of the JPM:
   - New clean procedure copies for candidate to work from during performance
5. This completes the setup for this JPM.

Exelon Generation

INITIAL CONDITIONS

You are the Unit 1 Unit Supervisor.

- A Unit 1 Containment release is pending.
- 1PR11J is inoperable.
- The Unit has been at 100% power and stable for the past 72 hours

INITIATING CUE

You have been instructed to review Sections 1 through 4 and perform Section 5 to approve the release per BCP 400-ECNMT/ROUTINE

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: **2, 3 & 5**

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:	JPM Sequence #: of

Task Standard:

Candidate does not approve the release after determining step 4.2.1.11 number doesn't match section 2.7 and that the signature is missing in Section 3, page 5.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	To initiate this JPM, hand the partially completed BCP 400-ECNMT/ROUTINE to the candidate. Evaluation of the RETDAS/Release Permit and 1BOSR 11.b.6-1; Radioactive Gaseous Effluent Monitoring Instrumentation Surveillance are NOT included in the Task Standard and do NOT need to be reviewed. If the candidate asks, then provide the CUE following Performance Step 1. Candidate may start with section 5 first (step 4 below), then continue with review of previous sections.				
1	Refer to the partially completed BCP 400-ECNMT/ROUTINE	○ REVIEW BCP 400-ECNMT/ROUTINE for completeness up to Section 3	___	___	___
CUE	**(if asked) Section 2 has been verified along with the RETDAS Gaseous Release Rate printouts.**				
CUE	**(if asked) The isotopic printout and the RP-BY-900-OH3BUBBLER have been verified unit specific, and the stop time verified appropriate (3.1 first two bullets are complete)**				
NOTE:	The candidate should determine the release cannot occur until the missing signature is resolved.				
***2**	Notices signature missing in Section 3, page 5	• Notices 'Reviewed by' signature line is NOT signed and dated	___	___	___
NOTE:	The candidate as an SRO may elect to sign Section 3 and continue. This is acceptable.				
CUE	***If candidate returns the paperwork for signature*, acknowledge the error and request further review for accuracy.**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	The candidate should determine the release cannot proceed during subsequent step due to setpoint number transposition and proceed to performance of JPM step 5.				
***3**	Reviews Section 4	• REVIEW BCP 400-ECNMT/ROUTINE for completeness of Section 4 • Determine Step 4.2.1.11 number doesn't match section 2.7 (8.55 E-4 versus 5.85 E-4 µCi/cc)	___	___	___
CUE	**(If asked to confirm 1PB101 HIGH Alarm Setpoint) Provide screen shot of RMS showing current 1PB101 HIGH Alarm Setpoint is 8.55E-4 µCi/cc.**				
CUE	**(If asked) The Unit 2 Supervisor has verified that the 0A Aux. Bldg. Exhaust Fan is in operation.**				
4	Performs Section 5:	○ Determines that the first paragraph is satisfied. ○ Determines that "containment release" placard must be placed on 0PM02J ○ Determines that 1BOSR 11.b.6-1 must be completed and reviewed	___	___	___
CUE	**(If asked) The Unit 2 Supervisor has verified 0BOSR 0.1-0 and 1BOSR 11.b.6-1 are complete and have been reviewed.**				
***5**	Does NOT approve the release	• Determines that the release should NOT be approved.	___	___	___
CUE	This JPM is complete.				

JPM SUMMARY

Exelon Generation

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

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

JPM Title: Review Containment release package in preparation for a Unit 1 Containment Release

JPM Number: RA-4-01-0 Revision Number: 08

Task Number and Title: S-HP-002 Authorize Gaseous (Containment or Gas Decay Tank) Rad Waste Release

Task Standard: Candidate does not approve the release after determining step 4.2.1.11 number doesn't match section 2.7 and that the signature is missing in Section 3, page 5.

K/A Number and Importance: 2.3.6, Ability to approve liquid or gaseous release permits Importance 3.8

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure: BCP 400-ECNMT/ROUTINE Revision: 02

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

You are the Unit 1 Unit Supervisor.

- A Unit 1 Containment release is pending.
- 1PR11J is inoperable.
- The Unit has been at 100% power and stable for the past 72 hours

INITIATING CUE

You have been directed to review Sections 1 through 4 and perform Section 5 to approve the release per BCP 400-ECNMT/ROUTINE

Exelon Generation

Job Performance Measure

Perform Follow-up PARS for a General Emergency

JPM Number: SA-5-02-23

Revision Number: 1

Date: 6/16/23

Developed By:	Barry Mingus / Barry Mingus /s/	Instructor: Print / Sign	6/15/23 Date
Reviewed By:	William Hines / William Hines /s/	SME or Instructor: Print / Sign	6/12/23 Date
Reviewed By:	Austin Wilde / Austin Wilde /s/	Operations Representative: Print / Sign	6/12/23 Date
Approved By:	Brian Lewin / Brian Lewin /s/	Training Department: Print / Sign	7/31/23 Date

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

Exelon Generation

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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure:	EP-MW-114-100-F01	Revision:	K
Procedure:	EP-AA-111	Revision:	23
Procedure:	EP-AA-111-F-03	Revision:	J
Procedure:	EP-MW-114-100	Revision:	20
Procedure:		Revision:	
Procedure:		Revision:	

10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	JPM creation for NRC Exam 19-2 SRO only
Revision 01	Updated for current revision of JPM template and procedures

Exelon Generation

JPM SETUP INSTRUCTIONS

1. This is an administrative JPM that may be performed in any setting where the necessary procedures and support information can be provided.

2. Verify current revisions of the following information is available for the JPM performance:

   NOTE: Site Emergency Director binder may be accessed to obtain the required procedures if JPM is administered in the Simulator

   - EP-MW-114-100, MIDWEST REGION OFF-SITE NOTIFICATIONS
   - EP-AA-111-F-03 Rev I, BYRON PAR FLOWCHART
   - EP-MW-114-100-F-01 Rev J NARS Form Reference

3. ENSURE the following is available during performance of the JPM:

   - EP-MW-114-100, MIDWEST REGION OFF-SITE NOTIFICATIONS
   - EP-AA-111-F-03 Rev I, BYRON PAR FLOWCHART
   - EP-MW-114-100-F-01 Rev J NARS Form Reference
   - Data sheet

4. ENSURE the following between performances of the JPM:

   - New clean procedure copies and references for examinee to work from during performance

5. This completes the setup for this JPM.

INITIAL CONDITIONS

FG1 General Area Emergency was declared 30 minutes ago due to the SG rupture / faulted outside of containment with a Safety Injection and RCS Activity.

- The meteorological data has just changed since the initial EAL declaration
- The TSC has NOT been activated
- A Rapidly Progressing Severe Accident is NOT in progress
- EONS in unavailable

INITIATING CUE

As Shift Emergency Director, perform an Emergency Plan evaluation due to the changes in meteorological data.

- Perform a PARS evaluation due to change in wind direction.
- Fill out NARS form for transmittal.
    - Note: The STA is unavailable to perform a Peer Check.

This is a Time Critical JPM.

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: **12, 13, 14**

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:	JPM Sequence #: of

Task Standard: Candidate determines Protective Action Recommendations and completes the NARS Form per the annotated key, in <=15 minutes.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide candidate with the completed Nuclear Accident Reporting System NARS Forms for Utility Messages #1 and #2 along with the meteorological PPCS printout with the new data.				
1	Obtain NARS form.	• Locate and Open EP-MW-114-100-F-01, NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM	___	___	___
NOTE: Step 4 is optional and may be performed at any time.					
2	Refer to EP-MW-114-100, MWROG Offsite Notifications, to complete NARS form.	○ Locate and Open, EP-MW-114-100, MWROG Offsite Notifications, Section 4.2, to complete NARS form.	___	___	___
3	Complete NARS Form, Message No.	• UTILITY MESSAGE NO. • Enter: **3** • STATE MESSAGE NO. • Enter: **N/A**	___	___	___
4	Complete NARS Form, block 1.	• 1. STATUS: • Mark: **[B] DRILL/EXERCISE**	___	___	___
5	Complete NARS Form, block 2.	• 2. STATION: • Mark: **[B] BYRON**	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6	Complete NARS Form, block 3.	• 3. ONSITE CONDITION: • Mark: **[D] GENERAL EMERGENCY**	___	___	___
NOTE:	Change in wind direction will require new PAGs to be designated. Event does NOT meet the requirements for a Rapidly Progressing Severe Accident.				
7	Complete NARS Form, block 4.	• 4. ACCIDENT CLASSIFIED: • TIME: • Enter: **"actual time classified"** • DATE: • Enter: **"today's date"** • EAL#: • Enter: **FG1** ○ ACCIDENT TERMINATED: ○ TIME: ○ Enter: **N/A** ○ DATE: ○ Enter: **N/A**	___	___	___
8	Complete NARS Form, block 5.	• 5. RELEASE STATUS: • Mark: **[B] OCCURRING**	___	___	___
9	Complete NARS Form, block 6.	• 6. TYPE OF RELEASE: • Mark: **[B] GASEOUS**	___	___	___
***10**	Complete NARS Form, block 7.	• 7. WIND DIR: • Enter: **193**	___	___	___
***11**	Complete NARS Form, block 8.	• 8. WIND SPEED: • Mark: **[B] MILES/HR:** • Enter: **8.6**	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***12**	Complete NARS Form, block 9.	• 9. RECOMMENDED ACTIONS: • UTILITY RECOMMENDATION: • Mark: **[D] EVACUATE Illinois Sub-areas: 17, 19, and 23,** as determined from EP-AA-111-F-03 Table B and carried over from previous PARS Recommendation. • PARS classification - determined in ≤15 minutes.	___	___	___
NOTE	Change in wind direction will require new PAGs to be designated. Event does NOT meet the requirements for a Rapidly Progressing Severe Accident.				
NOTE	Record time PARs determined: _____:_____:_____ (PARs determined) – (JPM Start time) = _____:_____:_____ (≤15 minutes)				
13	Complete NARS Form, block 10.	○ 10. ADDITIONAL INFORMATION: ○ Enter: **None**	___	___	___
14	Complete NARS Form, approval block.	○ Verified With: ○ Enter: **N/A** ○ Approved By: ○ Enter: **"candidate's signature"**	___	___	___
CUE	If examinee requests a Peer Check for NARS form completion, respond: "STA is unavailable."				
CUE	This JPM is complete.				

Exelon Generation

JPM SUMMARY

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

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

JPM Title: Perform Follow-up PARS for a General Emergency

JPM Number: SA-5-02-23 Revision Number: 01

Task Number and Title: 8F.ZP-012 RESPOND to Station Emergency as Station Director

Task Standard: Candidate determines Protective Action Recommendations and completes the NARS Form per the annotated key, in <= 15 minutes.

K/A Number and Importance: G 2.4.44 Knowledge of emergency plan implementing procedures protective action recommendations (SRO Only) 4.4

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure:	EP-MW-114-100-F01	Revision:	K
Procedure:	EP-AA-111	Revision:	23
Procedure:	EP-AA-111-F-03	Revision:	J
Procedure:	EP-MW-114-100	Revision:	20
Procedure:		Revision:	
Procedure:		Revision:	

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

FG1 General Area Emergency was declared 30 minutes ago due to the SG rupture / faulted outside of containment with a Safety Injection and RCS Activity.

- The meteorological data has just changed since the initial EAL declaration
- The TSC has NOT been activated
- A Rapidly Progressing Severe Accident is NOT in progress
- EONS in unavailable

INITIATING CUE

As Shift Emergency Director, perform an Emergency Plan evaluation due to the changes in meteorological data.

- Perform a PARS evaluation due to change in wind direction.
- Fill out NARS form for transmittal.
    - Note: The STA is unavailable to perform a Peer Check.

This is a Time Critical JPM.

Performance Measure

Respond to Uncontrolled Rod Motion

JPM Number: *CR-1-03-23*

Revision Number: *11*

Date: *05/25/2023*

Developed By:	Barry Mingus / *Barry Mingus /s/*		*05/25/2023*
	Instructor: Print / Sign		Date
Reviewed By:	Bill Hines / *Bill Hines /s/*		*05/25/2023*
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / *Austin Wilde /s/*		*5/31/2023*
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / *Brian Lewin /s/*		*7/31/23*
	Training Department: Print / Sign		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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Drawing :	BHC-1RD	Revision:	0
Procedure:	1BOA ROD-1	Revision:	105
Procedure:	BOP RD-100	Revision:	6
Procedure:		Revision:	

10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

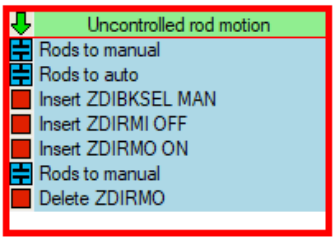
_____ / _____ _____
SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
11	Update to include a short manual rod move followed by uncontrolled rod motion. Rod switch to manual will stop rod motion.
10	Update JPM to current format. Revise JPM for different path to success. Rod motion stop upon cycling in-out switch. Rods are placed back in manual.
9	Update JPM to current format. Revised critical steps for JPM to be reduced to the 2 critical steps indication in the JPM.
8	Update JPM to include actions from BHC 1-RD Rev 0 UNCONTROLLED ROD MOTION and revision to 1BOA ROD-1 UNCONTROLLED ROD MOTION UNIT 1 Rev 105. Update JPM format to comply with current form revision. This JPM was previously designated as N12 in the exam bank. JPM number format revised to CR-1-03-0 in order to better track JPMs as opposed to changing letter designations based on where placed sequentially on ES-301 forms.

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-72 (88% power), or equivalent
2. Initiate Smart Scenario:
   - Open SMART SCENARIO (Extreme Ace icon)
   - Open file Scenario 2023 NRC CR-a.ssf
   - Click on the MODE button (near top of screen) and pick EXECUTE
   - Click on the PLAY button (bottom left of screen)
   - Verify setup conditions for CR-a automatically load
3. Verify the following are included in the Smart Scenario:



4. Ensure Rods are in Auto with CBD 1t 194 ½ steps.
5. Ensure a copy of BHC 1-RD Uncontrolled Rod Motion is available for use by the candidate.
6. Uncontrolled Rod Motion will automatically initiate when the Rod Selector switch is returned to auto.
7. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit NSO

- Unit 1 is at 88% power, steady state
- All controls are in automatic
- Control Rod Bank Delta is at 194 ½ steps

INITIATING CUE

The unit supervisor has directed you to withdraw rods in manual, one half step, in accordance with BOP RD-100, to match Group A and B position counters for Control Bank Delta, and then return Rod Control to Automatic.

The reactivity change for this action has been evaluated by Nuclear Engineering to be negligible. The US has filled out the Boration/Dilution Log and signed for the half step of rod motion.

Bounding Criteria: Candidate will receive an unsat on this JPM if:

1. Annunciator 1-10-D5, Control Bank D Rod Stop C-11 is lit

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps. **1, 2, & 6**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate moves rods out per cue sheet, then returns rod control to auto. Rods will step out uncontrolled at 8 steps per minute. Task is successfully completed when Candidate takes control switch to manual prior to receiving C-11 Rod Stop (Ann 1-10-D5).

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	Candidate may use BOP RD-100 to manipulate the rod selector switch during normal operations but this is not required. Provide the candidate a copy of BOP RD-100 when requested. This may be done at any time.				
***1.**	Place Rods Control in manual	• Place Rods Control in manual ○ Verify Rod Speed Indicator indicates 48 steps/min	☐	☐	___
Note:	Rods may drift more than the intended motion. This is not failure criteria. If this happens and the candidate reports it to the US, cue the candidate: “Place the rods back in auto, and we will have the QNE evaluate”.				
***2.**	Pull Rods one half step	• Momentarily place Rod Motion Control switch in ‘OUT’ and release	☐	☐	___
Note:	Rods will begin to move when candidate places the Rod Bank Select switch in Auto.				
3	Return rod control to auto	• Place Rods control in auto	☐	☐	___
NOTE:	It is permissible, acting as the unit supervisor, to direct the candidate to return rod control back to automatic once the student has report completing the initial alignment, if required.				
NOTE:	**-- -- Alternate path begins here -- --**				
4.	Refer to BHC 1-RD, UNCONTROLLED ROD MOTION	○ Announce failure to SRO • Locate and take actions per BHC 1-RD	☐	☐	___
5.	Check Turbine Power STABLE	• CHECK turbine power STABLE	☐	☐	___
***CUE:**	***Turbine Power is stable.***				
NOTE:	Rod motion will stop after the following action is correctly taken.				
***6.**	Check Rod Control in Manual	• Place Rod control to Manual	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	The operator is required to evaluate each step of the BCH. The only remaining required action is 'Go To BOA ROD-1'.				
7.	IF rods still moving, THEN: CYCLE Rod Control IN-OUT switch in both directions.	• Observe Rods are no longer moving – no action required	☐	☐	___
8.	If rods still moving THEN: PLACE Rod Bank Selector switch to S/D Bank D	• Observe Rods are no longer moving – no action required	☐	☐	___
9.	IF rods still moving or ratcheting at top of core, THEN MANUALLY TRIP Unit 1 Rx. GO TO 1BEP-0.	• Observe Rods are no longer moving – no action required	☐	☐	___
9.	GO to 1BOA ROD-1 as required	• GO to 1BOA ROD-1	☐	☐	___
CUE:	**This JPM is complete.**				

JPM Stop Time: _____

JPM SUMMARY

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

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

JPM Title: Respond to Uncontrolled Rod Motion

JPM Number: CR-1-03-23 Revision Number: 11

Task Number and Title: 4D.OA-01B RESPOND TO UNCONTROLLED ROD MOTION

Task Standard: Candidate moves rods out per cue sheet, then returns rod control to auto. Rods will step out uncontrolled at 8 steps per minute. Task is successfully completed when Candidate takes control switch to manual prior to receiving C-11 Rod Stop.

K/A Number and Importance: 001AA1.01 Ability to operate and/or monitor the following as they apply to Continuous Rod Withdrawal: Bank select switch Importance 3.7

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure:	BHC-1RD	Revision:	0
Procedure:	1BOA ROD-1	Revision:	105
Procedure:	BOP RD-100	Revision:	6
Procedure:		Revision:	

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are the Unit NSO

- Unit 1 is at 88% power steady state
- All controls are in automatic
- Control Rod Bank Delta is at 194 ½ steps

INITIATING CUE

The unit supervisor has directed you to pull rods, in manual, one half step to match Group A and B position counters for Control Bank Delta, and then return Rod Control to Automatic.

The reactivity change for this action has been evaluated by Nuclear Engineering to be negligible. The US has filled out the Boration/Dilution Log and signed for the half step of rod motion.

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

This JPM had to be replaced due to the Simulator MST causing the Simulator to crash. No applicant was tested on this JPM as the first candidate could not make it through the entire JPM. The JPM that follows was the replacement.

Performance Measure

Perform Transfer to Hot Leg Recirc (1SI8802B will not OPEN)

JPM Number: CR-2-01-23

Revision Number: Rev 02

Date: 06/22/2023

Developed By:	Barry Mingus / *Barry Mingus /s/*		06/22/2023
	Instructor: Print / Sign		Date
Reviewed By:	Bill Hines / *Bill Hines /s/*		06/23/2023
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / *Austin Wilde /s/*		06/23/2023
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / *Brian Lewin /s/*		07/31/2023
	Training Department: Print / Sign		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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Drawing : 1BEP ES-1.4 Revision: 300
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

Revision #	Summary
2	Revised to current template and procedure revision. Modified alternate path to 1SI8802B fails to open vice 1SI8840
1	Applied new template TQ-AA-150-J020 Revised K/A and importance to align with Safety Function 2
0	Applied new template TQ-JA-150-02 Rev.1 Verified/ updated KAs and TPOs to current revision Validated 03/03/13 by Bill Hochstetter and Rob Lawlor, revised to make alternate path Created from JPM No. N-30.

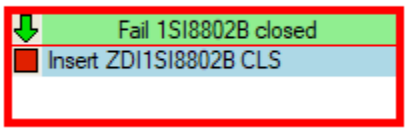
SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC 80 (an IC with a LOCA and currently on Cold Leg Recirc)

   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. Open Smart Scenario 2023 CR-b.ssf
4. Verify the following is included in the Smart Scenario:



5. Ensure a copy of 1BEP ES-1.4 is available for use by the candidate.
6. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 1 NSO

- A large LOCA is in progress
- 1BEP-1 step 19 is in progress
- Conditions have been met to transfer to Hot Leg Recirculation

INITIATING CUE

The Unit Supervisor has directed you to perform 1BEP ES-1.4, Transfer to Hot Leg Recirculation

---

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps. **2, 7-15**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate will perform 1BEP ES-1.4 to re-align Unit 1 for Hot leg recirc. 1SI8802B will fail to open. JPM will end with SI pumps aligned to the A&D Hot legs and B&C cold legs.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	Step 1 may be performed at any time.				
NOTE:	Once the examinee references the procedure the evaluator may hand the candidate a copy of 1BEP ES-1.4				
1	Refer to 1BEP ES-1.4, Transfer to Hot Leg Recirculation	• LOCATE and OPEN 1BEP ES-1.4	___	___	___
*2	Place control switches for SVAG VALVE 480V bus feeds at 1PM06J in - CLOSE	At 1PM06J: • CLOSE 480V FEED TO BUS 131X1A/X2A (A-Train) • CLOSE 480V FEED TO BUS 132X2A/X4A (B-Train)	___	___	___
3	Close RH to cold legs isol valves	At 1PM06J: • CLOSE 1SI8809A • CLOSE 1SI8809B	___	___	___
4	Check 1A RH pump RUNNING	At 1PM06J: • Check 1A RH pump RUNNING	___	___	___
5	Open Train A RH HX discharge crosstie header valve	At 1PM06J: • OPEN 1RH8716A	___	___	___
6	Open RH to hot legs isol valve	At 1PM06J: • OPEN 1SI8840	___	___	___
*7	Stop SI pump 1A	At 1PM06J: • STOP 1A SI PUMP 1A	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*8	Close SI pump 1A to cold legs isol valve	At 1PM06J: • CLOSE 1SI8821A	___	___	___
*9	Open SI pump 1A to hot legs isol valve	At 1PM06J: • OPEN 1SI8802A	___	___	___
*10	Start SI pump 1A	At 1PM06J: • START SI PUMP 1A	___	___	___
*11	Stop SI pump 1B	At 1PM06J: • STOP SI PUMP 1B	___	___	___
*12	Close SI pump 1B to cold legs isol valve	At 1PM06J: • CLOSE 1SI8821B	___	___	___
NOTE:	**Alternate Path starts here**				
*13	Open SI pump 1B to hot legs isol valve	At 1PM06J: • Recognize that 1SI8802B will **NOT** OPEN	___	___	___
*14	Open SI pump 1B to cold legs isol valve	At 1PM06J: • OPEN 1SI8821B			
*15	Start SI pump 1B	At 1PM06J: • START 1B SI PUMP 1B	___	___	___
16	Check SI pumps to hot legs isol valves - OPEN	At 1PM06J: ○ Verify OPEN 1SI8802A • Recognize 1SI8802B NOT OPEN	___	___	___
NOTE: If the candidate closes 1SI8835 at this point it will deadhead the 1B SI pump and result in a failure of the JPM.					

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
17	Place SVAG Valve Bus Feeds at 1PM06J in - TRIP	At 1PM06J: TRIP • TRIP 480V FEED TO BUS 131X1A/X2A (A-Train) • TRIP 480V FEED TO BUS 132X2A/X4A (B-Train)	___	___	___
CUE	This JPM is Complete				

JPM SUMMARY

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

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

JPM Title: Perform Transfer to Hot Leg Recirc (1SI8802B will not OPEN)

JPM Number: CR-2-01-23 Revision Number: 02

Task Number and Title: 4D.EP-15 TRANSFER ECCS to Hot Leg Recirculation

Task Standard: Candidate will perform 1BEP ES-1.4 to re-align Unit 1 for Hot leg recirc. 1SI8802B will fail to open. JPM will end with SI pumps aligned to the A&D Hot legs and B&C cold legs.

K/A Number and Importance: 006A4.02 Ability to manually operate and/or monitor in the control room: ECCS valves (4.2)

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: 1BEP ES-1.4 Revision: 300
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are the Unit 1 NSO

- A large LOCA is in progress
- 1BEP-1 step 19 is in progress
- Conditions have been met to transfer to Hot Leg Recirculation

INITIATING CUE

The Unit Supervisor has directed you to perform 1BEP ES-1.4, Transfer to Hot Leg Recirculation

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

Exelon Nuclear

Job Performance Measure

Letdown Orifice Operation

JPM Number: CR-b-23-2

Revision Number: 11

Date: 10/20/23

Revised By:	Barry Mingus Instructor	10/20/23 Date
Validated By:	Charles Dawson ILT Lead	10/20/23 Date
Approved By:	Austin Wilde Operations Representative	10/20/23 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 8 and 12 below.

See File Copy

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 BOP CV-9 Rev: 10
   Procedure _____ Rev: __
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

Revision Record (Summary)

Revision 10

- Applied new template TQ-JA-150-02 Rev.1
- Verified/ updated KAs and TPOs to current revision
- Validated 03/03/13 by Bill Hochstetter and Rob Lawlor.
- Created from JPM No. N-63

Rev 11

- Added step to place LK0459 in Auto for Ovation mod
- Updated to current procedure Rev
- Modified wording to make operator Unit Assist

SIMULATOR SETUP INSTRUCTIONS

1. Reset to appropriate IC

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. Line up letdown via BOP CV-9 so that 75 gpm is established.
3. Turn on a set of Pzr BU heaters.
4. 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.
5. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO.
- Unit 1 is in Mode 1, 75% power.
- Letdown flow is currently 75 gpm.

INITIATING CUE

- You have been directed to raise letdown flow to 120 gallons per minute and then restore systems to automatic in accordance with BOP CV-9, “Letdown Orifice Isolation”, step 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: 3, 5 & 6

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.

RECORD START TIME: _____

Task Standard: Task is successfully completed when letdown flow is 120 gallons per minute and the CVCS system returned to auto, with all associated alarms addressed.

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Refer to BOP CV-9, Letdown Orifice Operation Note: Step 1 may be performed at any time	o Locate and OPEN BOP CV-9, step F.2	____	____	____
Cue: All prerequisites are met				
NOTE **Provide the examinee with a copy of the BOP CV-9** The following alarms may come in during the evolution. Receipt of alarms is not automatic failure criteria, as long as the examinee takes appropriate corrective action per the applicable BAR. • 1-7-B2 RCP SEAL WTR INJ FLOW LOW • 1-8-C5 LTDWN HX OUTLET TEMP HIGH • 1-9-B1 LP LTDWN REL TEMP HIGH • 1-9-A1 REGEN HX LTDWN TEMP HIGH • 1-9-E2 LTDWN TEMP HIGH • 1-9-D3 CHG LINE FLOW HI LOW				
2. Adjust 1CV121 in MANUAL to compensate for additional letdown flow	At 1PM05J: • Place 1CV121 in Manual • Raise charging flow to about 125 gpm using the raise pushbutton	____	____	____
Note: Candidate may adjust 1CV182 along with 1CV121 to maintain seal injection flows				
*3. Place 1PCV-CV131 to manual and lower letdown pressure to ~180 psig.	At 1PM05J: • PLACE 1CV131 in MANUAL AND • LOWER letdown pressure to ~180 psig by raising output on 1PK-131	____	____	____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE **The examinee may decide that step 4 is NOT required and go to step 5.**				
4. If required, ADJUST 1CC130A/B, as necessary	At 1PM05J: ○ Place 1TK-130 in MANUAL AND ○ RAISE Output	____	____	____
*5. Raise letdown flow from 75 gpm to 120 gpm letdown	At 1PM05J: • SIMULTANEOUSLY OPEN 1CV8149A AND • SIMULTANEOUSLY ADJUST PCV-1CV131 to maintain pressure ~370 psig as indicated on the controller or 1PI-131	____	____	____
*6. Restore 1PCV-CV131 to AUTO	At 1PM05J: • PLACE 1CV131 in AUTO	____	____	____
NOTE **If examinee manipulated 1CC130A/B in manual to control letdown temperature perform step 7. If the valve was not manipulated and temperature is normal, step 7 may be bypassed.**				
7. Ensure 1CC130A/B is maintaining normal letdown temperature of about120 °F.	At 1PM05J: ° Check letdown temp. normal on 1TI-130 • Place 1TK-130 in AUTO	____	____	____

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
8. Adjust 1CV121, in manual to match charging and letdown flow while establishing PZR at program level.	At 1PM05J: ○ Adjust 1CV121 in Manual ○ Verify charging flow is about 12 gpm greater than letdown flow and PZR level is trending to program. • Place 1FK-121 in AUTO	____	____	____
Note: Candidate may adjust 1CV182 along with 1CV121 to maintain seal injection flows				
9. Place _LK0459, Master Pressurizer Level Controller, in auto as directed by Supervisor	• Place 1LK-0459 in AUTO ○ Informs US that 120 gpm letdown flow is in service (and system is restored to automatic).	____	____	____
Cue: This JPM is complete.				

RECORD STOP TIME: _____

JPM SUMMARY

Operator's Name: _____ **Job Title**: ☐ RO ☐SRO

JPM Title: Letdown Orifice Operation

JPM Number: CR-b-23-2 Revision Number: 11

Task Standard: Task is successfully completed when letdown flow is 120 gallons per minute and the CVCS system returned to auto, with all associated alarms addressed.

Task Number and Title: 4C.CV-01 PERFORM lineups of the CVCS

K/A Number and Importance: 004A4.06 3.8

Suggested Testing Environment: Simulator

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

Reference(s):

BOP CV-9 Rev.10 Letdown orifice operation

CRITICAL STEPS (*) 3, 5 & 6

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 20 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

- You are the Unit 1 Assist NSO.
- Unit 1 is in Mode 1, 75% power.
- Letdown flow is currently 75 gpm.

INITIATING CUE

- You have been directed to raise letdown flow to 120 gallons per minute and then restore systems to automatic in accordance with BOP CV-9, “Letdown Orifice Isolation”, step 2.

Performance Measure

Increase SI Accumulator Pressure (1SI8875B fails to close)

JPM Number: CR-3-03-23

Revision Number: Rev 4

Date: 06/15/2021

Developed By:	Benjamin Reyes / *Benjamin Reyes /s/*	10/27/2020
	Instructor: Print / Sign	Date
Reviewed By:	Barry Mingus / *Barry Mingus /s/*	06/02/2021
	SME or Instructor: Print / Sign	Date
Reviewed By:	Peter Leonhardt / *Peter Leonhardt /s/*	08/04/2021
	Operations Representative: Print / Sign	Date
Approved By:	Brian Lewin / *Brian Lewin /s/*	08/04/2021
	Training Department: Print / Sign	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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: BOP SI-8 Revision: 21
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

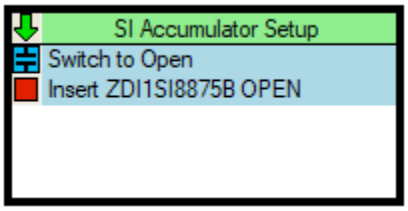
Bill Hines / William Hines /s/		6/23/23
SME / Instructor (Print/Sign)		Date
_____ / _____		_____
SME / Instructor (Print/Sign)		Date
_____ / _____		_____
SME / Instructor (Print/Sign)		Date

Revision Record (Summary)

Revision #	Summary
4	Update JPM to comply with procedure change to identify a dedicated NSO and Compensatory Actions instead of LCO entry for operation of 1SI8875B. Update JPM format to comply with current template TQ-AA-150-J020 Rev 1. This JPM was previously designated as N3a in the exam bank. JPM number format revised to CR-3-03-0 in order to better track JPMs as opposed to changing letter designations based on where placed sequentially on ES-301 forms.
3	Applied new template TQ-JA-150-02 Rev.1 Verified/ updated KAs and TPOs to current revision Changed Non Licensed Operator to Equipment Operator

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-71, Full Power Operations
2. Initiate Smart Scenario:
   - Open SMART SCENARIO (Extreme Ace icon)
   - Open file Scenario 2021 Cert JPMs Group2.ssf
   - Click on the MODE button (near top of screen) and pick EXECUTE
   - Click on the PLAY button (bottom left of screen)
3. Verify the following are included in the Smart Scenario:



4. Ensure 1B SI Accumulator is at 600# and the low pressure alarm is in.
5. Ensure a copy of BOP SI-8 Increasing SI Accumulator Pressure is available for use by the candidate.
6. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 1 NSO Assist

- The unit is in Mode 1 steady state power
- An improper valve lineup resulted in reducing the 1B SI Accumulator pressure to 600 psig
- The improper valve lineup has been corrected
- 1BOL 5.1, Accumulators, has been initiated

INITIATING CUE

- Annunciator 1-5-B2, ACCUM 1B PRESS HIGH LOW, is LIT.
- The Unit Supervisor directs you to restore the 1B SI Accumulator pressure to above Technical Specification limits per BOP SI-8, INCREASING SI ACCUMULATOR PRESSURE.
- The nitrogen tube trailer is aligned per BOP NT-9, NITROGEN TUBE TRAILER CONNECTION/DISCONNECTION

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. **4, 6 & 8**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate raises pressure of 1B SI Accumulator to above the Tech Spec minimum of 602 psig. This JPM includes an alternate action, due to the 1B SI Accumulator vent valve not closing, to take steps to stop the pressure rise in the accumulator by closing 1SI8880 prior to reaching the relief setpoint of 700 psig.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	***All prerequisites have been met.***				
CUE	***(If asked) There are no personnel in CNMT.***				
CUE	***For Step 1, Shift Manager's Permission has been obtained.***				
1	Refer to BOP SI-8, Increasing SI Accumulator Pressure	• LOCATE and OPEN BOP SI-8	___	___	___
2	Align nitrogen tube trailer	DIRECT EO to OPEN: • Nitrogen Tube Trailer Manifold Discharge Valve • 0NT078	___	___	___
CUE	***EO reports the Nitrogen Tube Trailer Manifold Discharge Valve is OPEN.***				
CUE	***EO reports 0NT078 is OPEN.***				
NOTE: The following steps are located at 1PM06J.					
3	VERIFY/CLOSE 1SI943, Accumulator vent control valve	○ VERIFY/CLOSE 1SI943	___	___	___
*4	OPEN 1SI8880, Nitrogen supply isolation valve	• OPEN 1SI8880	___	___	___
5	Assign a dedicated NSO to keep 1SI8875B operable by assigning Compensatory Measures	○ Assign dedicated NSO • Log the dedicated NSO and compensatory measures	___	___	___
CUE	***The Unit NSO will make a log entry of dedicated NSO and Compensatory Measures.***				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*6	OPEN 1SI8875B, 1B Accumulator Vent valve	Start raising accumulator pressure: • OPEN 1SI8875B	___	___	___
NOTE: Candidate may monitor pressure rise with either the Process computer or control board pressure indications.					
7	Monitor pressure increase	• Monitor pressure using ○ 1PI-962 & 963 ○ Process computer	___	___	___
NOTE: Alternate Path JPM starts here. SI pressure will rise quickly. If the candidate is slow to respond to failure of the 1SI8875B, it is likely that SI Accumulator pressure will rise above the high setpoint of 647 psig. This will cause an annunciator alarm to indicate the condition. Exceeding the alarm setpoint is NOT failure criteria in itself. As long as the candidate takes action to limit further rise of the pressure in the accumulator, the JPM may continue.					
*8	CLOSE 1SI8875B, 1B Accumulator Vent valve when accumulator pressure is between 602 and 647 psig.	Stop raising accumulator pressure ○ Attempt to CLOSE 1SI8875B when accumulator pressure is between 602 and 647 psig • Close 1SI8880 to stop pressure increase ○ Inform US of 1SI8875B failure to close	___	___	___
CUE	***This JPM is Complete.***				

JPM SUMMARY

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

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

JPM Title: Increase SI Accumulator Pressure (1SI8875B fails to close)

JPM Number: CR-3-03-23 Revision Number: 04

Task Number and Title: 4C.SI-04 ADJUST SI accumulator pressure

Task Standard: Candidate raises pressure of 1B SI Accumulator to above the Tech Spec minimum of 602 psig. This includes an alternate action, due to the 1B SI Accumulator vent valve not closing, to take steps to stop the pressure rise in the accumulator by closing 1SI8880 prior to reaching the relief setpoint of 700 psig.

K/A Number and Importance:

006 A4.02: Ability to manually operate and/or monitor in the control room: ECCS valves Importance 4.2

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: BOP SI-8 Revision: 21
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are the Unit 1 NSO assist

- The unit is in Mode 1 steady state power
- An improper valve lineup resulted in reducing the 1B SI Accumulator pressure to 600 psig
- The improper valve lineup has been corrected
- 1BOL 5.1, Accumulators, has been initiated

INITIATING CUE

- Annunciator 1-5-B2, ACCUM 1B PRESS HIGH LOW, is LIT.
- The Unit Supervisor directs you to restore the 1B SI Accumulator pressure to above Technical Specification limits per BOP SI-8, INCREASING SI ACCUMULATOR PRESSURE.
- The nitrogen tube trailer is aligned per BOP NT-9, NITROGEN TUBE TRAILER CONNECTION/DISCONNECTION.

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

Exelon Generation

Job Performance Measure

Perform 1BOSR MS-Q1

JPM Number: CR-4S-2-23

Revision Number: 0

Date: 9/26/23

Developed By:	William Hines / William Hines /s/		9/26/23
	Instructor: Print / Sign		Date
Reviewed By:	Barry Mingus / Barry Mingus /s/		9/26/23
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / Austin Wilde /s/		9/26/23
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / Brian Lewin /s/		9/26/23
	Training Department: Print / Sign		Date

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

Exelon Generation

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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: 1BOSR MS-Q1 Revision: 15
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. BH
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below:

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
0	Created non faulted JPM

Exelon Generation

JPM SETUP INSTRUCTIONS

1. 1 Reset the Simulator to IC-65

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. Verify current revisions of the following information is available for the JPM performance:

- 1BOSR MS-Q1 Rev 15

3. Verify the Steam Dump MODE SELECT switch is in the TAVG position

4. Initiate Smart Scenario to block steam flow though the steam dumps via in-field valve closures:
- Open SMART SCENARIO (Extreme Ace icon)
- Open file Scenario CR-d.ssf
- Click on the MODE button (near top of screen) and pick EXECUTE
- Click on the PLAY button (bottom left of screen)

5. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO.
- The unit is in MODE 1.
- Work has been done on the U-1 steam dumps requiring they be stroked using 1BOSR MS-Q1, STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE to verify operability.
    - Turbine 1 Operator is standing by to complete steps in the field as required.
    - It is an EVEN quarter for this surveillance.
    - A timed stroke test is NOT required.

INITIATING CUE

- The Unit Supervisor instructs you to perform 1BOSR MS-Q1, STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE, steps to verify operability.

- The Shift Manager has given his permission and the cover sheet has been signed.

- An assessment of On Line Risk for this activity has been completed.

- Inform the Unit Supervisor when you have completed 1BOSR MS-Q1, STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE.

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: **5, 6, 10, and 13**

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:	JPM Sequence #: of

Task Standard:

Task is successfully completed when applicant adjusts Steam Dump demand, in manual, from 0 to100%, and back to 0% per 1BOSR MS-Q1, UNIT ONE STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1	Refer to 1BOSR MS-Q1 UNIT ONE STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE	Refer to 1BOSR MS-Q1	☐	☐	___
2	Reads SURVEILLANCE OVERVIEW	• Determines subsections F.1, F.2 and F.4 are applicable ○ Marks section F.3 as N/A ○ Marks section F.5 as N/A	☐	☐	___
3	Verify all applicable Prerequisites, Precautions, Limitations and Actions are satisfactorily addressed	• Verify all applicable Prerequisites, Precautions, Limitations and Actions are satisfactorily addressed			
CUE: All Prerequisites are met					
4	Records Unit mode and Average Rx power	• On Page 4, Records: Unit Mode • 1 Average Rx power: • ~88%	☐	☐	___
***5**	PLACE 1PK-507, MS Hdr Press Cont, in MANUAL with 0% demand	• At 1PM02J places 1PK-507, MS Hdr Press Cont, in MANUAL by depressing the 'M' button • Sets demand to 0% by depressing the down arrow on the right side of the controller.	☐	☐	___

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

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*6	Place Steam Dumps in STM PRESS mode	• At 1PM02J, PLACE the Steam Dump MODE SELECT switch in the STM PRESS position.	☐	☐	___
7	Locally **CLOSE** Steam Dump Valve 1MS004A-H and J-M, Upstream Isolation Valves, for valves being cycled:	• Directs EOs to locally close: ● 1MS003A ● 1MS003G ● 1MS003B ● 1MS003H ● 1MS003C ● 1MS003J ● 1MS003D ● 1MS003K ● 1MS003E ● 1MS003L ● 1MS003F ● 1MS003M	☐	☐	___
CUE: EO reports1MS003A thru M are all closed.					
8	**ISOLATE** Condenser Steam Dump Spray for the valves being cycled by performing one of the following: Locally **CLOSE** ●1CB006 or ● 1CB038A ● 1CB038G ● 1CB038B ● 1CB038H ● 1CB038C ● 1CB038J ● 1CB038D ● 1CB038K ● 1CB038E ● 1CB038L ● 1CB038F ● 1CB038M	• Directs EOs to locally close ○ 1CB006 or ○ 1CB038 A-M	☐	☐	___
CUE: EO reports1CB006 (or 1CB038A-M) is/are closed. (Whichever the candidate requested)					
9	At 1PM02J, **VERIFY** the 1MS004A – 1MS004M CLOSED lamps are ILLUMINATED.	• VERIFIES the 1MS004A, B, C, D, E, F, G, H, J, K, L and M, CLOSED lamps are ILLUMINATED.	☐	☐	___
*10	**RAISE** the 1PK-507, MS Hdr Press Cont, demand signal to 100%.	• Depresses UP arrow on the right side of the 1PK-507 controller until demand equals 100%.	☐	☐	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
11	At 1PM02J, **VERIFY** the 1MS004A -1MS004M CLOSED lamps are NOT ILLUMINATED for valves being cycled.	• VERIFIES the 1MS004A, B, C, D, E, F, G, H, J, K, L and M, CLOSED lamps are NOT ILLUMINATED	☐	☐	___
12	At 1PM02J, **VERIFY** the 1MS004A - 1MS004M, OPEN lamps are ILLUMINATED for valves being cycled.	• VERIFIES the 1MS004A, B, C, D, E, F, G, H, J, K, L and M, OPEN lamps are ILLUMINATED	☐	☐	___
***13**	**LOWER** the 1PK-507, MS Hdr Press Cont, demand signal to 0%.	• Depresses DOWN arrow on the right side of the 1PK-507 controller until demand equals 0%.	☐	☐	___
14	At 1PM02J, **VERIFY** the 1MS004 – 1MS004M OPEN lamps are NOT ILLUMINATED for valves being cycled.	• VERIFIES the 1MS004A, B, C, D, E, F, G, H, J, K, L and M, OPEN lamps are NOT ILLUMINATED	☐	☐	___
15	At 1PM02J, **VERIFY** the 1MS004A - 1MS004M CLOSED lamps are ILLUMINATED.	• VERIFIES the 1MS004A, B, C, D, E, F, G, H, J, K, L and M, CLOSED lamps are ILLUMINATED	☐	☐	___
CUE:	**This JPM is complete.**				

JPM Stop Time: _____

Exelon Generation

JPM SUMMARY

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

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

JPM Title: Perform 1BOSR MS-Q1

JPM Number: RA-4S-2-23 Revision Number: 0

Task Number and Title: 4C.DU-01 OPERATE the Steam Dump System in various modes

Task Standard: Task is successfully completed when applicant adjusts Steam Dump demand, in manual, from 0 to100%, and back to 0% per 1BOSR MS-Q1, UNIT ONE STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE.

K/A Number and Importance: 041A4.02 Ability to manually operate and/or monitor in the control room: Steam dump / cooldown valves.

Importance: 3.6

Suggested Testing Environment: Simulator or Classroom

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

Reference(s):

Procedure: 1BOSR MS-Q1 Revision: 15

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____

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

INITIAL CONDITIONS

- You are the Unit 1 Assist NSO.
- The unit is in MODE 1.
- Work has been done on the U-1 steam dumps requiring they be stroked using 1BOSR MS-Q1, STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE to verify operability.
    - Turbine 1 Operator is standing by to complete steps in the field as required.
    - It is an EVEN quarter for this surveillance.
    - A timed stroke test is NOT required.

INITIATING CUE

- The Unit Supervisor instructs you to perform 1BOSR MS-Q1, STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE, steps to verify operability.

- The Shift Manager has given his permission and the cover sheet has been signed.

- An assessment of On Line Risk for this activity has been completed.

- Inform the Unit Supervisor when you have completed 1BOSR MS-Q1, STEAM DUMP VALVE OPERABILITY QUARTERLY SURVEILLANCE.

Performance Measure

Start RCFC's in Low Speed (SX Valves Not Open)

JPM Number: CR-5-01-23

Revision Number: Rev 1

Date: 06/25/2023

Developed By:	Barry Mingus / *Barry Mingus /s/*	06/23/2023	
	Instructor: Print / Sign	Date	
Reviewed By:	Bill Hines / *Bill Hines /s/*	06/23/2023	
	SME or Instructor: Print / Sign	Date	
Reviewed By:	Austin Wilde / *Austin Wilde /s/*	06/23/2023	
	Operations Representative: Print / Sign	Date	
Approved By:	Brian Lewin / *Brian Lewin /s/*	07/31/2023	
	Training Department: Print / Sign	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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: 1BEP-0 Att B Revision: 306
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

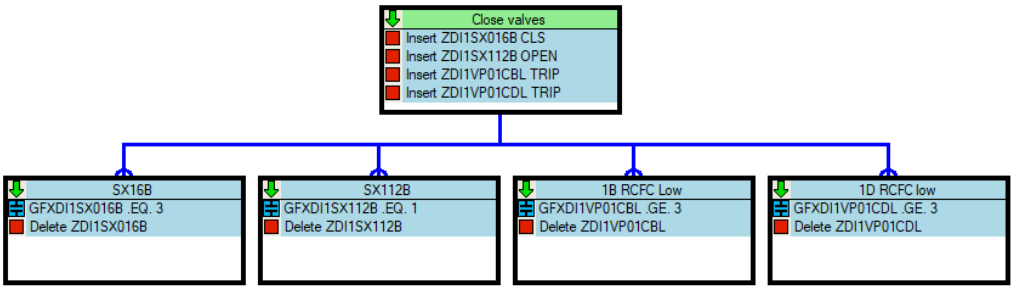
_____ / _____ _____
SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
1	– Revised for current JPM template and procedure rev
0	– New JPM

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-78,or equivalent
2. Initiate Smart Scenario:
   - Open SMART SCENARIO (Extreme Ace icon)
   - Open file Scenario CR-e.ssf
   - Click on the MODE button (near top of screen) and pick EXECUTE
   - Click on the PLAY button (bottom left of screen)
   - Verify setup conditions for CR-e automatically load
3. Verify the following are included in the Smart Scenario:



4. Ensure a copy of 1BEP 0 attachment B is available for use by the candidate.
5. This completes the setup for this JPM.

INITIAL CONDITIONS

1. You are the Unit 1 Assist NSO.
2. Unit 1 had an automatic Safety Injection Actuation.

INITIATING CUE

1. The Unit Supervisor directs you to perform 1BEP-0, Attachment B Step 4 to Verify RCFC's are running in Accident Mode.

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. **4, 6, & 7**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate will complete the alignment of RCFCs in accident mode by closing 1SX112B and opening 1SX016B. Candidate will start RCFCs 1VP01CB and 1VP01CD in low speed.

ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1. Refer to 1BEP-0, Reactor Trip or Safety Injection, Attachment B	• LOCATE and 1BEP-0, Reactor Trip or Safety Injection, Attachment B Step 4	___	___	___
2. Check Group 2 RCFC Accident Mode Status Lights.	• Group 2 RCFC Accident Mode Status Lights are NOT lit	___	___	___
NOTE: Alternate path begins here.				
3. Stop any RCFC running in High Speed.	• Stop all RCFC's running in High Speed (all are stopped)	___	___	___
***4.** Close CNMT chiller inlet and outlet valves.	○ 1SX112A /1SX114A are closed • Close1SX112B /1SX114B	___	___	___
5. Open CNMT chiller bypass valves.	• 1SX147A is OPEN • 1SX147B is OPEN	___	___	___
***6.** Open RCFC inlet and outlet valves.	○ 1SX016A is OPEN • Open 1SX016B ○ 1SX027A is OPEN ○ 1SX027B is OPEN	___	___	___
***7.** Start all RCFC's in Low Speed.	• 1VP01C1 & 1VP01CC are running • Start 1VP01CB and 1VP01CD	___	___	___
Cue: This JPM is completed.				

JPM SUMMARY

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

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

JPM Title: Start RCFC's in Low Speed (SX Valves Not Open)

JPM Number: C5-5-01-23 Revision Number: 1

Task Number and Title: 4C.VP-06 STARTUP a RCFC

Task Standard: Candidate will complete the alignment of RCFCs in accident mode by closing 1SX112B and opening 1SX016B. Candidate will start RCFCs 1VP01CB and 1VP01CD in low speed.

K/A Number and Importance:

022 A4.01: Ability to manually operate and/or monitor in the control room: CCS fans. Importance 3.6 / 3.6

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: 1BEP 0 Attachment B Revision: 306
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

1. You are the Unit 1 Assist NSO.
2. Unit 1 has had an automatic Safety Injection Actuation.

INITIATING CUE

2. The Unit Supervisor directs you to perform 1BEP-0, Attachment B Step 4 to Verify RCFC's are running in Accident Mode.

Performance Measure

Reclose Ring Bus At Power

JPM Number: CR-6-03-23

Revision Number: Rev 1

Date: 06/15/2021

Developed By:	Benjamin Reyes / *Benjamin Reyes /s/*	10/28/2020
	Instructor: Print / Sign	Date
Reviewed By:	Barry Mingus / *Barry Mingus /s/*	07/16/2021
	SME or Instructor: Print / Sign	Date
Reviewed By:	Peter Leonhardt / *Peter Leonhardt /s/*	08/04/2021
	Operations Representative: Print / Sign	Date
Approved By:	Brian Lewin / *Brian Lewin /s/*	08/04/2021
	Training Department: Print / Sign	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. BH
2. Knowledge and Abilities (K/A) references are included. BH
3. Performance location specified. (in-plant, control room, simulator, or other) BH
4. Initial setup conditions are identified. BH
5. Initiating cue (and terminating cue if required) are properly identified. BH
6. Task standards identified and verified by instructor or SME review. BH
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BH
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BH
9. Verify the procedure(s) referenced by this JPM reflects the current revision:
   Procedure: BOP SY-8 Revision: 28
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
10. Verify cues both verbal and visual are free of conflict. BH
11. Verify performance time is accurate. BH
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BH

Bill Hines / William Hines /s/		7/17/23
SME / Instructor (Print/Sign)		Date
_____ / _____		_____
SME / Instructor (Print/Sign)		Date
_____ / _____		_____
SME / Instructor (Print/Sign)		Date

Revision Record (Summary)

Revision #	Summary
1	Revised for new JPM template, current revision of procedure. Made editorial corrections. Verified no substantive changes requiring revalidation
0	Developed new for 21-1 ILT Certification Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-78. There is no Smart Scenario for this 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. Verify both OCB 4-5 Control Switches in PTL.
3. 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.
4. Ensure a copy of BOP SY-8 Placing a 345KV Oil Circuit Breaker in Service is available for use by the candidate.
5. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 1 Assist NSO

- The unit is in Mode 1 steady state power
- A fault had occurred on L0621 during the previous shift
- ComEd has corrected the fault and the clearance order has been lifted.
- 345KV Breaker OCB 5-6 is closed
- 345KV Breaker OCB 4-5 is open, Equipment Status Tags (EST) have been removed.

INITIATING CUE

The Unit Supervisor directs you to restore the 345KV Switchyard Ring Bus by closing 345KV Breaker OCB 4-5 per BOP SY-8 PLACING A 345KV OIL CIRCUIT BREAKER IN SERVICE.

The EO in the switchyard has completed all required actions in BOP SY-8 PLACING A 345KV OIL CIRCUIT BREAKER IN SERVICE Steps 1 through 9.

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. **1, 2, & 3**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Applicant successfully closes the OCB 4-5 from 1PM01J.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: The Main Power Transformer Disconnect is CLOSED. Close operations for this breaker must be performed at 1PM01J.					
CUE	***The Unit Supervisor informs you that all Prerequisites are complete.***				
NOTE: The following actions are required to take place at 1PM01J in order to be successful. The candidate may take time to review Precautions, Limitations and Actions, and Steps 1 – 10.					
***1**	VERIFY switch position at 0PM03J will not interfere • OCB 4-5 control switch NOT in PULL OUT • Synchroscope switch is OFF	• VERIFY/PLACE OCB 4-5 Control Switch at 0PM03J to AFTER TRIP ○ VERIFY Synchroscope switch is OFF	___	___	___
NOTE: The following actions are required to take place at 1PM01J in order to be successful.					
NOTE: Checking the RUNNING and INCOMING voltages and equal loading on all three phases prior to closing the breaker is referred to in the Limitations and Actions of the procedure (L&A #4).					
***2**	PLACE the Main Transformer Feed to 345KV Sync switch to the ON position for OCB 4-5	• PLACE the Main Transformer Feed to 345KV Sync switch to the ON position for OCB 4-5 ○ CHECK RUNNING and INCOMING voltages are equal ○ CHECK loading on all three phases are equal ○ CHECK Synchroscope indicating the 12 o'clock postion	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*3	CLOSE the 345KV Breaker OCB 4-5	• PLACE Control Switch for 345KV Breaker OCB 4-5 to CLOSED at 1PM01J	___	___	___
NOTE: The six trip coil monitoring lights will only be lit when the breaker is closed. It would be acceptable for the candidate to check these as an indication that the breaker is CLOSED. The direction for the candidate to check the loading on all three phases after restoring power is located in the Limitations and Actions portion of the procedure (L&A #5).					
4	VERIFY Breaker 4-5 CLOSED	• DIRECT EO to LOCALLY observe CLOSED indication for OCB 4-5 • CHECK POLE DISAGREEMENT annunciator 0-35-C5 BLUE SYS BRKR POLE DISAGREEMENT NOT lit ○ CHECK six trip coil lights lit for OCB 4-5 on 0PM03J	___	___	___
CUE	***EO reports that 345KV Breaker OCB 4-5 CLOSED.***				
5	PLACE the Main Transformer Feed to 345KV Swyd Sync switch to OFF	• PLACE the Main Transformer Feed to 345KV Swyd Sync switch to OFF	___	___	___
6	Match targets of the corresponding breaker on 0PM03J	• PLACE the Control Switch for 345KV Breaker OCB 4-5 to After Close on 0PM03J	___	___	___
CUE	***This JPM is Complete.***				

JPM SUMMARY

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

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

JPM Title: Reclose Unit 1 345KV Ring Bus (At Power)

JPM Number: CR-6-03-23 Revision Number: 1

Task Number and Title: 4C.AP-03, Remotely Operate a 345KV Breaker

Task Standard: Applicant successfully closes the OCB 4-5 from 1PM01J.

K/A Number and Importance:

062 A4.01: Ability to manually operate and/or monitor in the control room: All breakers (including available switchyard) Importance 3.3/3.1

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: BOP SY-8 Revision: 28

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 12 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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are the Unit 1 Assist NSO

- The unit is in Mode 1 steady state power
- A fault had occurred on L0621 during the previous shift
- ComEd has corrected the fault and the clearance order has been lifted.
- 345KV Breaker OCB 5-6 is closed
- 345KV Breaker OCB 4-5 is open, Equipment Status Tags (EST) have been removed.

INITIATING CUE

The Unit Supervisor directs you to restore the 345KV Switchyard Ring Bus by closing 345KV Breaker OCB 4-5 per BOP SY-8 PLACING A 345KV OIL CIRCUIT BREAKER IN SERVICE.

The EO in the switchyard has completed all required actions in BOP SY-8 PLACING A 345KV OIL CIRCUIT BREAKER IN SERVICE Steps 1 through 9.

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

Performance Measure

Remove an Area Radiation Monitor from Service

JPM Number: CR-7-03-23

Revision Number: Rev 03

Date: 06/02/2021

Developed By:	Benjamin Reyes / *Benjamin Reyes /s/*	10/29/2020
	Instructor: Print / Sign	Date
Reviewed By:	Barry Mingus / *Barry Mingus /s/*	06/02/2021
	SME or Instructor: Print / Sign	Date
Reviewed By:	Peter Leonhardt / *Peter Leonhardt /s/*	08/04/2021
	Operations Representative: Print / Sign	Date
Approved By:	Brian Lewin / *Brian Lewin /s/*	08/04/2021
	Training Department: Print / Sign	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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

   Procedure: 1BOSR XPT-17 Revision: 5
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: BM

Barry Mingus / Barry Mingus /s/	6/23/23
SME / Instructor (Print/Sign)	Date
_____ / _____	_____
SME / Instructor (Print/Sign)	Date
_____ / _____	_____
SME / Instructor (Print/Sign)	Date

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

Revision Record (Summary)

Revision #	Summary
3	Applied current revision of template TQ-AA-150-J020. Change JPM designator, this JPM was previously utilized as CR-d on 2017 Cert Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-76. There is no Smart Scenario for this 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. Ensure the handout of 1BOSR XPT-17 Movable Incore Detector Functional Checkout Following Refueling is available for use by the candidate.
4. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 1 Assist NSO

- Unit 1 is in Mode 1
- Unit 1 will be performing a functional check of the Moveable Incore Detector System

INITIATING CUE

The Unit Supervisor directs you to remove the Seal Table Monitor Radiation Monitor 1RE-AR003 from service per 1BOSR XPT-17.

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. **3, 4 & 9**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate will place RMS console in Supervisor mode and select monitor 4AS303Cndiddate will then select monitor item and change the value of channel 3 to 'OUT', Task is successfully completed when the candidate selects 'SAVE', removing the Seal Table Monitor 1RE-AR003 from service.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: Provide the candidate with a copy of 1BOSR XPT-17, Unit One Moveable Incore Detector Functional Checkout Following Refueling. The candidate may review the Prerequisites, Precautions, and Limitations and Actions.					
1	Refer to 1BOSR XPT-17, Unit One Moveable Incore Detector Functional Checkout Following Refueling	• LOCATE and OPEN 1BOSR XPT-17	___	___	___
CUE	***All prerequisites are complete.***				
2	VERIFY there are no personnel in containment	• VERIFY there are no personnel in containment	___	___	___
CUE	***Unit Supervisor states that there are no personnel in containment.***				
NOTE: Steps 3 & 4 can be done in either order. Candidate may select the channel prior to taking the RMS to Supervisor mode to ensure proper channel selection prior to being able to make changes. 4AS303 can be found on Grid 4 or Grid 6.					
*3	PLACE the RMS console in Supervisor Mode	• PLACE the RMS console in Supervisor Mode	___	___	___
*4	SELECT Channel 4AS303	• SELECT Channel 4AS303	___	___	___
5	SELECT CHANNEL ITEMS	• SELECT CHANNEL ITEMS	___	___	___
6	RECORD the "As Found" status of the Seal Table Monitor, 1RE-AR003, Channel Item 16	• CIRCLE Channel Item 16 IN	___	___	___
7	SELECT Channel Item 16 value field	• SELECT Channel Item 16 value field	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
8	NOTIFY Unit NSO and Unit Supervisor of expected alarm on the RMS	• NOTIFY Unit NSO and Unit Supervisor of expected alarm on the RMS	___	___	___
CUE	***Unit Supervisor and Unit 1 NSO acknowledge pending alarm.***				
NOTE: The candidate may comment on the Seal Table Monitor being inoperable after the next action. Acknowledge as the US. Candidate may prepare for annunciator response by referring to the AR/PR BAR and communicating with the Unit Supervisor and Unit NSO. Acknowledge communications accordingly. These communications are not required as Passing criteria for this JPM.					
*9	SELECT OUT as the NEW value in the Channel 3 IN/OUT SERVICE REQUEST popup display and SELECT Save.	• SELECT OUT as the NEW value in the Channel 3 IN/OUT SERVICE REQUEST popup display and SELECT Save in the RMS	___	___	___
10	VERIFY Channel Item 16 updated.	• VERIFY Channel Item 16 updated.	___	___	___
11	PLACE the RMS console in Normal Mode.	• PLACE the RMS console in Normal Mode	___	___	___
CUE	***This JPM is Complete.***				

JPM SUMMARY

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

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

JPM Title: Remove an Area Radiation Monitor from Service

JPM Number: CR-7-03-23 Revision Number: 03

Task Number and Title: 4C.AR-03: OPERATE the Radiation Monitoring System

Task Standard: Candidate will place RMS console in Supervisor mode and select monitor 4AS303Cndiddate will then select monitor item and change the value of channel 3 to 'OUT', Task is successfully completed when the candidate selects 'SAVE', removing the Seal Table Monitor 1RE-AR003 from service.

K/A Number and Importance:

073A4.02 : Ability to manually operate and/or monitor in the control room: RMS control panel Importance 3.6

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: 1BOSR XPT-17 Revision: 5
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are the Unit 1 Assist NSO

- Unit 1 is in Mode 1
- Unit 1 will be performing a functional check of the Moveable Incore Detector System

INITIATING CUE

The Unit Supervisor directs you to remove the Seal Table Monitor Radiation Monitor 1RE-AR003 from service per 1BOSR XPT-17.

Performance Measure

Start standby CW pump per BOP CWS-1
(discharge valve fails to open)

JPM Number: CR-8-01-23

Revision Number: Rev 01

Date: 06/28/2023

Developed By:	Barry Mingus / *Barry Mingus /s/*		06/28/2023
	Instructor: Print / Sign		Date
Reviewed By:	Bill Hines / *Bill Hines /s/*		06/29/2023
	SME or Instructor: Print / Sign		Date
Reviewed By:	Austin Wilde / *Austin Wilde /s/*		06/29/2023
	Operations Representative: Print / Sign		Date
Approved By:	Brian Lewin / *Brian Lewin /s/*		07/31/2023
	Training Department: Print / Sign		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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

   Procedure: BOP CW-1 Revision: 46
   Procedure: BAR 1-17-C13 Revision: 3
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

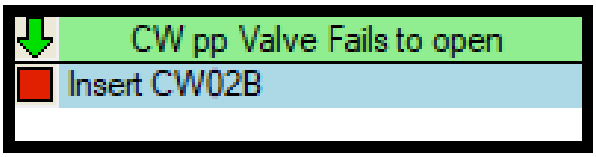
Revision #	Summary
1	Revised to current JPM template and procedure Revs. Updated naming convention, IC and smart scenario.
0	New JPM developed for the NRC 2019-2 exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the Simulator to IC-63

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. Ensure Circulating Water Pumps 1A and 1C are in operation with discharge valves 1CW001A and 1CW001C throttled to maintain an indicated pump discharge pressure of 38-50 psid.
3. Initiate Smart Scenario:
   - Open SMART SCENARIO (Extreme Ace icon)
   - Open file Scenario CR-h.ssf
   - Click on the MODE button (near top of screen) and pick EXECUTE
   - Click on the PLAY button (bottom left of screen)
4. Verify the following are included in the Smart Scenario:



5. Verify CW Pump/Motor bearing temperatures (TR30 CW Pumps page 2 of 3) are trending on computer (prerequisite C.3).
6. 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.
7. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Unit 1 Assist NSO.

- Unit 1 is in Mode 1.
- BOP CW-1, Circulating Water System Startup is in progress for the start of the third CW pump.
  - All Prerequisites have been met for the start of the 1B CW pump.
  - Steps F.2.a thru F.2.h have been completed and an equipment operator is standing by at the pump.

INITIATING CUE

The Unit Supervisor has just directed you to start the 1B CW pump per BOP CW-1, Circulating Water System Startup.

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. **2 & 5**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Task is successfully completed when the 1B CW pump is tripped, in accordance with the abnormal response procedure, after the discharge valve does not open upon a start per BOP CW-1.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	Provide the candidate with a marked-up copy of BOP CW-1, CIRCULATING WATER SYSTEM STARTUP.				
CUE	(If requested) All Prerequisites have been met for the start of the 1B CW pump. Steps F.2.a thru F.2.h have been completed.				
NOTE:	Candidate may notify security and/or IT of impending CW pump start. Respond with "Security (or IT) has been notified".				
1	Refer to BOP CW-1, CIRCULATING WATER SYSTEM STARTUP.	• LOCATE and OPEN BOP CW-1.	___	___	___
***2**	START 1CW01B, 1B CW Pump.	At 1PM03J: • START 1CW01B, 1B CW Pump.	___	___	___
NOTE:	**Alternate Path Begins Here as 1CW001B does not open.**				
NOTE:	Examinee may trip the pump at any time after realizing that the discharge valve is NOT going open.				
NOTE:	Annunciator 1-17-C13, CW PUMP RUNNING WITH DSCH VLV CLOSED, will actuate 145 seconds after the CW pump breaker closes.				
3	VERIFY 1CW001B, 1B CW Pp Dsch Vlv, is opening.	At 1PM03J: ○ VERIFY 1CW001B is - Opening. • Determine 1CW001B is not opening.	___	___	___
NOTE:	Candidate may attempt (unsuccessfully) to open 1CW001B with the control switch.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
4	THROTTLE 1CW001B, 1B CW Pp Dsch Vlv.	At 1PM03J: • THROTTLE 1CW001B, 1B CW Pp Dsch Vlv, to an indicated pump discharge pressure of 38 - 50 psid • Determine 1CW001B WILL NOT Open.	___	___	___
CUE	(If requested of local operator) 1CW001B CW pump discharge valve is not opening.				
***5**	Trip 1CW01B, 1B CW Pump.	At 1PM03J: • Trip 1CW01B, 1B CW Pump.	___	___	___
CUE	This JPM is complete.				

JPM SUMMARY

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

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

JPM Title: Start standby CW pump per BOP CW-1(discharge valve fails to open)

JPM Number: CR-8-01-23 Revision Number: 01

Task Number and Title: 4C.CW-01, Startup the Circulating Water System

Task Standard: Task is successfully completed when the 1B CW pump is tripped, in accordance with the abnormal response procedure, after the discharge valve does not open upon a start per BOP CW-1.

K/A Number and Importance:

075A4.02: Ability to manually operate and/or monitor in the control room: Circulating water pump Importance 3.1

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure:	BOP CW-1	Revision:	46
Procedure:	BAR 1-17-C13	Revision:	3
Procedure:		Revision:	
Procedure:		Revision:	

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are the Unit 1 Assist NSO.

- Unit 1 is in Mode 1.
- BOP CW-1, Circulating Water System Startup is in progress for the start of the third CW pump.
  - All Prerequisites have been met for the start of the 1B CW pump.
  - Steps F.2.a thru F.2.h have been completed and an equipment operator is standing by at the pump.

INITIATING CUE

The Unit Supervisor has just directed you to start the 1B CW pump per BOP CW-1, Circulating Water System Startup.

Performance Measure

Local Operation of SG PORV

JPM Number: IP-4P-01-23

Revision Number: Rev 11

Date: 06/29/2023

Developed By:	Barry Mingus / *Barry Mingus /s/*	06/29/2023	
	Instructor: Print / Sign	Date	
Reviewed By:	Bill Hines / *Bill Hines /s/*	06/29/2023	
	SME or Instructor: Print / Sign	Date	
Reviewed By:	Austin Wilde / *Austin Wilde /s/*	06/29/2023	
	Operations Representative: Print / Sign	Date	
Approved By:	Brian Lewin / *Brian Lewin /s/*	07/31/2023	
	Training Department: Print / Sign	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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

   Procedure: BOP MS-6 Revision: 10
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

Revision #	Summary
11	Revised to current revision of JPM template. Verified procedure is current and correct for JPM.
10	This JPM has been modified from the Bank JPM N083. Updated the JPM to current template TQ-AA-150-J020. JPM number format has been revised to better track JPMs as opposed to changing letter designations based on where placed sequentially on ES-301 forms. Added a Task Performance Standard. Updated the referenced procedure to the current revision. Revised the setup instructions to reflect the changes.
09	Apply new template TQ-JA-150-02 Rev.1 Verified / updated KAs and TPOs to current revision Verified / updates procedure references Change NLO to EO Made changes listed in validation comments.

JPM SETUP INSTRUCTIONS

1. This is an In-Plant JPM written to be performed on either Unit 1 or Unit 2.
2. ENSURE a current revision of BOP MS-6, LOCAL MANUAL OPERATION OF THE STEAM GENERATOR POWER OPERATED RELIEF VALVES.
3. This completes the setup for this JPM.

INITIAL CONDITIONS

You are an EO.

- The control room has been evacuated.
- The NSO at the RSP is unable to operate the _A SG PORV (_MS018A).

INITIATING CUE

The NSO at the RSP directs you to crack open the _A SG PORV (_MS018A) per BOP MS-6, then wait for further instructions.

An extra EO is available to operate breakers in the Aux Building.

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. **4 - 6, 8, 10 - 12**

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 candidate 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.

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

JPM Start Time: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate simulates operating the _A SG PORV (_MS018A) per BOP MS-6, by removing power, equalizing pressures across the 3-way valve, then using the handle to manually crack open the valve.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE: PORV rooms are NO RADIO ZONES. Ensure all radios and cell phones are off / No Transmit /Airplane Mode for both examiner and the candidate. Candidate may pick up the Handle to demonstrate where it goes and how it is operated. DO NOT allow candidate to connect the handle to plant equipment. Ensure the candidate does NOT actually reposition anything associated with this JPM. SIMULATE ONLY!					
NOTE: This step may be performed at any time.					
1	Refer to BOP MS-6.	• LOCATE and OPEN BOP MS-6.	___	___	___
CUE	Provide a copy of BOP MS-6, LOCAL MANUAL OPERATION OF THE STEAM GENERATOR POWER OPERATED RELIEF VALVES.				
NOTE: The candidate may request to contact the Control Room with a “First Check” to ensure they are at the correct location. If that is done provide the following CUE: First check with Control Room acknowledged.					
NOTE: MCC_31X2B is located in the electrical penetration area 414' S-12 for Unit 1, and 414' S-24 for Unit 2. The extra EO may be used in lieu of physically going to breaker location.					
2	Open breaker for _MS018A.	• OPEN breaker for _MS018A at MCC _31X2B Compt B1-A.	___	___	___
CUE	**Breaker for _MS018A at MCC _31X2B Compartment B1-A is OPEN.**				
3	Establish communications with the RSP.	• ESTABLISH communications between safety valve room and RSP.	___	___	___
CUE	**Communications have been established between the valve area and the RSP.**				

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

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
***4**	Align PORV Hand Pump Isolation Valve.	• OPEN _MS185A.	___	___	___
CUE	**_MS185A is in the position you described.**				
***5**	Align PORV Hand Pump Isolation Valve.	• OPEN _MS186A.	___	___	___
CUE	**_MS186A is in the position you described.**				
***6**	Align PORV Hand Pump Isolation Valve.	• OPEN _MS187A.	___	___	___
CUE	**_MS187A is in the position you described.**				
7	Verify/Move the 3 position valve.	• VERIFY 3-position valve to NEUTRAL.	___	___	___
CUE	**3-position valve is in the position you described. ('N' position - NEUTRAL).**				
***8**	Loosen the two set screws.	• Loosen the two set screws.	___	___	___
CUE	**Setscrews are loose.**				
9	CHECK local pressure gauges.	• CHECK local pressure gauges (3).	___	___	___
CUE	**Pressures drop, then stabilize, and are now equal.**				
***10**	Tighten two set screws.	• Tighten two set screws.	___	___	___
CUE	**Setscrews are retightened.**				
***11**	Position valve handle to open.	• MOVE 3-position handle to OPEN position (handle left).	___	___	___
CUE	**Handle is in the position you described.**				
***12**	Open _A SG PORV.	• OPERATE hand pump to crack open valve.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	**_MS018A has moved off its closed seat.**				
13	Contact NSO at RSP.	• Contact NSO at RSP.	___	___	___
CUE	**The NSO directs you to leave the _A SG PORV in its current position and await further instructions.**				
CUE	**This JPM is completed.**				

JPM SUMMARY

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

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

JPM Title: Local Operation of SG PORV

JPM Number: IP-4P-01-23 Revision Number: 11

Task Number and Title: 4C.MS-06: DUMP Steam through the S/G PORVs.

Task Standard: Candidate simulates operating the A SG PORV (MS018A) per BOP MS-6, by removing power, equalizing pressures across the 3-way valve, then using the handle to manually crack open the valve.

K/A Number and Importance:

E13EA1.06 Ability to operate and/or monitor the following as they apply to Steam Generator Overpressure: SGS Importance 3.5

Suggested Testing Environment: In-Plant

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

Reference(s):

Procedure: BOP MS-6 Revision: 10
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 21 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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are an EO.

- The control room has been evacuated.
- The NSO at the RSP is unable to operate the _A SG PORV (_MS018A).

INITIATING CUE

The NSO at the RSP directs you to crack open the _A SG PORV (_MS018A) per BOP MS-6, then wait for further instructions.

An extra EO is available to operate breakers in the Aux Building.

Performance Measure

Perform a local emergency start of the 1B AF pump (Start with Bypass)

JPM Number: IP-4S-1-23

Revision Number: Rev 3

Date: 05/25/2023

Developed By:	Barry Mingus / *Barry Mingus /s/*	05/23/2023	
	Instructor: Print / Sign	Date	
Reviewed By:	Bill Hines / *Bill Hines /s/*	05/24/2023	
	SME or Instructor: Print / Sign	Date	
Reviewed By:	Austin Wilde / *Austin Wilde /s/*	05/24/2023	
	Operations Representative: Print / Sign	Date	
Approved By:	Brian Lewin / *Brian Lewin /s/*	07/31/2023	
	Training Department: Print / Sign	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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

   Procedure: 1BOA ELEC-5 Revision: 108
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

Revision #	Summary
3	Updated to current procedure revisions and JPM template. No operational changes. IP-4S-2-23 is same JPM for unit 2.
2	Modified to return Start with bypass. New rev due to template and procedural changes.
1	Applied new template TQ-AA-150-J020, Modified Alternate Path deleting Start With Bypass actions. Corrected task number and added title.
0	Created from JPM No. N-56A (modified).

INITIAL CONDITIONS

You are an Equipment Operator.

- The unit has just tripped in conjunction with an electrical fire in the unit's Remote Shutdown Panel.
- The 1A AF pump is OOS for maintenance and the 1B AF pump did not automatically start, and will not manually start with the MCR switch.

INITIATING CUE:

The Shift Manager has just directed you to initiate a local emergency start of the 1B AF pump using 1BOA ELEC-5, Attachment D.

Inform the Shift Manager when complete.

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. **11, 14**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: Candidate attempts a local start of the 1B Aux Feed pump on each battery bank, and when that fails, starts the 1B AF pump from the 364' elevation using 'Start with Bypass'

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	Provide the Candidate with a copy of 1BOA ELEC-5, Attachment D.				
1	Locate the 1B AF pump.	On 383' Aux Bldg: • LOCATE 1B AF pump	___	___	___
NOTE:	JPM steps 2 and 3 may be performed in any order. If candidate walks down the area beforehand, cue that there are no abnormal indications.				
NOTE:	Steps should be executed by the candidate pointing (use of laser pointer is recommended) to the applicable control switches and explaining to the evaluator the specific switch manipulation required.				
NOTE:	There may be an EST on the JW Isol. Valve C/S. If candidate inquires, state that if you have to operate that C/S adhere to the instructions on the EST.				
2	Verify/Start associated Aux Lube Oil Pump	• Pump lube oil pump • 1AF01PB-A (outside pump room 383 L15)	___	___	___
CUE:	When candidate indicates the correct switch (1AF01PB-A) is in the correct position (start) then CUE: as **"the switch is in the position you selected."**				
CUE:	When candidate verifies, then report **"Good oil pressure and flows exist."**				
3	Verify/Start Gearbox Lube Oil Pump	• Gearbox lube oil pump • 1AF01PB-C (inside pump room 383 L16)	___	___	___
CUE:	When candidate indicates the correct switch (1AF01PB-C) is in the correct position (start) then CUE: as **"the switch is in the position you selected."**				
CUE:	When candidate verifies, then report **"Good oil pressure and flows exist."**				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
4	Place ENGINE START switch in - MAN	At 1AF01J: • PLACE ENGINE START Switch to MAN.	___	___	___
CUE:	When candidate indicates the correct switch (1HS-AF175) is in the correct position (MAN) then CUE: as **"the switch is in the position you selected."**				
5	Check Air Box Tripped annunciator NOT LIT.	At 1AF01J: • CHECK Diesel Air Box Trip annunciator NOT LIT.	___	___	___
CUE:	**Air Box Trip Annunciator is NOT LIT.**				
6	Momentarily depress the RESET button.	At 1AF01J: • DEPRESS and RELEASE the Reset button.	___	___	___
CUE:	**The RESET button was depressed and released.**				
NOTE:	The candidate may inform the Control Room about impending start. As the evaluator, acknowledge the communication(s).				
7	Depress the 1B AF Pump START pushbutton.	At 1AF01J: • DEPRESS the Start button • VERIFY the engine starts	___	___	___
CUE:	**NO engine sounds are heard.**				
8	Try to start the 1B AF pump with the other battery bank.	At 1AF01J: • SELECT other battery bank	___	___	___
CUE:	When candidate indicates the correct switch (1HS-AF167) is in the alternate position (i.e. If it was in "A", it is now moved to "B") then CUE: as "**A/B switch in is the position you selected.**"				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
9	Reset the engine trips	At 1AF01J • DEPRESS and RELEASE the Reset button	___	___	___
CUE:	**The Reset pushbutton has been depressed and released.**				
10	Start the engine	At 1AF01J • DEPRESS the Start button • VERIFY the engine starts within 60 seconds	___	___	___
CUE:	**NO engine sounds are heard.**				
NOTE:	IF the following step is NOT completed, the 1B AF pump will NOT start from the 364' control switch and the candidate should be given the CUE: "**the RUN light is NOT LIT**" after the REMOTE EMERGENCY START with BYPASS is attempted.				
***11**	Place ENGINE START switch in AUTO	At 1AF01J: • PLACE ENGINE START Switch to AUTO	___	___	___
CUE:	**The component you indicated is in the position you described**				
NOTE:	THIS BEGINS THE ALTERNATE PATH				
12	Place REMOTE EMERGENCY START switch in START	At 1AF03J (364' M16): • Place REMOTE EMERGENCY START switch in START	___	___	___
CUE:	**The component you indicated is in the position you described**				
13	Verify RUN light is LIT within 60 seconds	At 1AF03J (364' M16): • Verify RUN light is LIT within 60 seconds	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	**RUN light is NOT lit**				
***14**	Place REMOTE EMERGENCY START switch in START WITH BYPASS	At 1AF03J (364' M16): • Place REMOTE EMERGENCY START switch in START WITH BYPASS	___	___	___
CUE:	**The component you indicated is in the position you described**				
15	Verify RUN light is LIT within 60 seconds	At 1AF03J (364' M16): • Verify RUN light is LIT within 60 seconds	___	___	___
CUE:	**(IF step 11 is NOT complete) RUN light is NOT LIT. (Must return to Step 11)**				
CUE:	**(IF step 11 is completed) RUN light is LIT. (Continue on to step 16)**				
16	Monitor 1B AF pump operation	○ Monitor engine performance ○ Inform Shift Manager that task is complete	___	___	___
CUE:	**BOP AF-7T1 will be completed by another EO who will monitor the pump**				
CUE:	**This JPM is complete.**				

JPM SUMMARY

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

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

JPM Title: Perform a local emergency start of the 1B AF pump (Start with Bypass)

JPM Number: IP-4S-1-23 Revision Number: 01

Task Number and Title: 4D.OA-35 ESTABLISH Emergency Control of Safe Shutdown Equipment

Task Standard: Candidate attempts a local start of the 1B Aux Feed pump on each battery bank, and when that fails, starts the 1B AF pump from the 364' elevation using 'Start with Bypass'

K/A Number and Importance: 061A2.04 Ability to (a) predict the impacts of the following on the Auxiliary/Emergency Feedwater System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: AFW pump failure or improper operation Importance: 4.1/4.0

Suggested Testing Environment: In-Plant

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

Reference(s):

Procedure: 1BOA ELEC-5 Revision: 108
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 20 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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

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

INITIAL CONDITIONS

1. You are an Equipment Operator.

2. The unit has just tripped in conjunction with an electrical fire in the unit's Remote Shutdown Panel.

3. The 1A AF pump is OOS for maintenance and the 1B AF pump did not automatically start, and will not manually start with the MCR switch.

INITIATING CUE

The Shift Manager has just directed you to initiate a local emergency start of the 1B AF pump using 1BOA ELEC-5, Attachment D.

Inform the Shift Manager when complete.

Performance Measure

Purge the Main Control Room from the Remote Shutdown Panel (0B Train)

JPM Number: IP-8-02-23

Revision Number: Rev 00

Date: 06/15/2021

Developed By:	Benjamin Reyes / *Benjamin Reyes /s/*	Instructor: Print / Sign	10/23/2020 Date
Reviewed By:	Barry Mingus / *Barry Mingus /s/*	SME or Instructor: Print / Sign	06/012/2021 Date
Reviewed By:	Peter Leonhardt / *Peter Leonhardt /s/*	Operations Representative: Print / Sign	08/04/2021 Date
Approved By:	Brian Lewin / *Brian Lewin /s/*	Training Department: Print / Sign	08/04/2021 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. BM
2. Knowledge and Abilities (K/A) references are included. BM
3. Performance location specified. (in-plant, control room, simulator, or other) BM
4. Initial setup conditions are identified. BM
5. Initiating cue (and terminating cue if required) are properly identified. BM
6. Task standards identified and verified by instructor or SME review. BM
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). BM
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. BM
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

   Procedure: BOP VC-7 Revision: 4
   Procedure: 1BOA PRI-5 Revision: 111
   Procedure: _____ Revision: _____
   Procedure: _____ Revision: _____

10. Verify cues both verbal and visual are free of conflict. BM
11. Verify performance time is accurate. BM
12. If the JPM cannot be performed as written with proper responses, then revise the JPM. N/A
13. When JPM is initially validated, sign and date JPM cover page. For subsequent validations, sign and date below: _____

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

_____ / _____ _____
SME / Instructor (Print/Sign) Date

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

Revision Record (Summary)

Revision #	Summary
00 (2023)	Updated to current JPM template. No procedure rev changes. No JPM changes.
0	This JPM developed from LORT Bank JPM N36u revision 10.

JPM SETUP INSTRUCTIONS

1. The following materials will be needed:
   - Reference drawing of Panel 1PL05JA as no entry will be made into cabinet for evaluation performance.
   - A copy of the current revision of BOP VC-7, PURGE OF THE CONTROL ROOM WITH 100% OUTSIDE AIR.

INITIAL CONDITIONS

You are an extra NSO

- The control room has been evacuated due to a fire
- The control room HVAC is operating normally with no safeguards or radiation signals present
- 0B VC train is in operation

INITIATING CUE

The fire is now fully extinguished. the Unit Supervisor directs you to initiate a purge of the main control room from the MCR HVAC Train B Remote Shutdown Panel in accordance with BOP VC-7

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. **2 & 3**

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 candidate 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: _____ JPM Sequence #: _____ of _____

Task Standard: The task is satisfactorily met when the MCR has been purged by taking the HVAC control switch to local, the system taken to purge.

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	***When the candidate acknowledges the Initiating Cue, provide a copy of BOP VC-7, PURGE OF THE CONTROL ROOM WITH 100% OUTSIDE AIR.***				
1	Refer to BOP VC-7 (step F.3), Purge of the Control Room with 100% Outside Air	○ Locate and open BOP VC-7	___	___	___
CUE	***All prerequisites have been met.***				
CUE	***If requested; the necessary key was obtained during performance of 1BOA PRI-5, CONTROL ROOM INACCESSIBILITY UNIT 1.***				
NOTE:	When Local Panel 1PL05JA has been identified, have candidate refer to the reference drawing of Panel 1PL05JA for simulation of following steps.				
****2***	Take LOCAL control	At 1PL05JA: • PLACE MCR Train B Max Outside Air Dmpr Transfer Switch in LOCAL	___	___	___
CUE	***The switch that you have manipulated is in the position that you have indicated.***				
****3***	Place the Control Room HVAC System in the Purge Mode	At 1PL05JA: • PLACE and HOLD MCR Train B Max Outside Air Dmpr control switch in PURGE	___	___	___
CUE	***The switch that you have manipulated is in the position that you have indicated.***				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
4	ENSURE the dampers shift to their PURGE positions	At 1PL05JA: ○ ENSURE the following dampers shift to their PURGE positions as follows: ○ 0VC04Y, MCR Max Outside Air Dmpr, indicates OPEN. ○ 0VC02Y, MCR Exh Dmpr to Turb Bldg, indicates OPEN. ○ 0VC03Y, MCR Rtrn Air Fan Outlt Dmpr, indicates CLOSED.	___	___	___
CUE ***CUE*** ***CUE***	***0VC04Y 'RED' light is LIT, 'GREEN' light is EXTINGUISHED.*** ***0VC02Y 'RED' light is LIT, 'GREEN' light is EXTINGUISHED.*** ***0VC03Y 'RED' light is LIT, 'GREEN' light is EXTINGUISHED.***				
5	RETURN Purge Control Switch to the AUTO position	At 1PL05JA: ○ RELEASE MCR Max Outside Air Dmpr control switch ○ VERIFY MCR Max Outside Air Dmpr control switch returns to AUTO	___	___	___
CUE	***The switch that you have manipulated is in the position that you have indicated***				
NOTE:	In order to check damper position from the RSP in the next step, the transfer switch must be taken to LOCAL. The switch would be in LOCAL if Attachment A of 1BOA PRI-5 was performed.				
6	Check MCR outside air dampers	At 1PL05JA: ○ CHECK OPEN: ○ 0VC16Y ○ 0VC282Y	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	***If requested; the transfer switch was previously placed in Local during performance of 1BOA PRI-5, CONTROL ROOM INACCESSIBILITY UNIT 1.***				
CUE	***0VC16Y 'GREEN' light is LIT, 'RED' light is EXTINGUISHED.*** ***0VC282Y 'GREEN' light is LIT, 'RED' light is EXTINGUISHED.***				
7	Restore REMOTE control	At 1PL05JA: PLACE the MCR Train A/B Max Outside Air Dmpr Transfer Switch in the REMOTE position	___	___	___
CUE	***The switch that you have manipulated is in the position that you have indicated.***				
CUE	***This JPM is complete.***				

JPM SUMMARY

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

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

JPM Title: Purge the Main Control Room from the Remote Shutdown Panel (0B Train)

JPM Number: IP-8-02-23 Revision Number: 00

Task Number and Title: R-VC-006 Shift VC system to various alignments

Task Standard: The task is satisfactorily met when the MCR has been purged by taking the HVAC control switch to local, the system taken to purge.

K/A Number and Importance:

068AA1.24, Ability to operate and/or monitor the following as they apply to Control Room Evacuation: Auxiliary shutdown panel Importance 4.2

Suggested Testing Environment: In-Plant

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

Reference(s):

Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____
Procedure: _____ Revision: _____

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

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 25 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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR 4282419).

Evaluator's Name (Print): _____ **Date**: _____

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

INITIAL CONDITIONS

You are an extra NSO

- The control room has been evacuated due to a fire
- The control room HVAC is operating normally with no safeguards or radiation signals present
- 0B VC train is in operation

INITIATING CUE

The fire is now fully extinguished. the Unit Supervisor directs you to initiate a purge of the main control room from the MCR HVAC Train B Remote Shutdown Panel in accordance with BOP VC-7

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