

Exelon Nuclear

Job Performance Measure

Evaluate a Reactivity Change

JPM Number: SA-a

Revision Number: 02

Date: 12/10/2015

Revised By: B. Peterson 12/10/2015
Instructor Date

Validated By: C. Berger 12/11/2015
SME or Instructor Date

Approved By: B. Lewin 12/11/2015
Operations Representative 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.

- | | |
|----------------|---|
| <u> RFP </u> | 1. Task description and number, JPM description and number are identified. |
| <u> RFP </u> | 2. Knowledge and Abilities (K/A) references are included. |
| <u> RFP </u> | 3. Performance location specified. (in-plant, control room, simulator, or other) |
| <u> RFP </u> | 4. Initial setup conditions are identified. |
| <u> RFP </u> | 5. Initiating cue (and terminating cue if required) are properly identified. |
| <u> RFP </u> | 6. Task standards identified and verified by SME review. |
| <u> RFP </u> | 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). |
| <u> RFP </u> | 8. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure <u>OP-AP-300-1004</u> Rev: <u>4</u>
Procedure _____ Rev: _____
Procedure _____ Rev: _____ |
| <u> RFP </u> | 9. Verify cues both verbal and visual are free of conflict. |
| <u> RFP </u> | 10. Verify performance time is accurate |
| <u> RFP </u> | 11. If the JPM cannot be performed as written with proper responses, then revise the JPM. |
| <u> RFP </u> | 12. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below: |

B. Lewin/R. Peterson	12/11/2015
SME / Instructor	Date
SME / Instructor	Date
SME / Instructor	Date

Revision Record (Summary)

Revision 00 Initial revision of JPM

Comment	Resolution

Revision 01 Revised JPM for modification of calculation

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

INITIAL CONDITIONS:

1. Unit 2 is at 50% power, 9100 EFPH, 500 ppm boron, with CB D at 89 steps.
2. Tave is 0.5° less than Tref.
3. The QNE has recommended that Control Bank D be withdrawn 4 steps to control PDMA02 on the desired target, then to perform a reactivity change to match Tave to Tref.
4. The NSO has calculated a reactivity change to move rods then to 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

RECORD START TIME: _____

EVALUATOR NOTE: These steps may be performed in any order.					
STEP	ELEMENT	STANDARD	SAT	UNSAT	CMT#
CUE	Provide completed copy of OP-AP-300-1004 and a copy of the Unit 2 Rema thumbrules				
1	Refer to <ul style="list-style-type: none"> OP-AP-300-1004, Rev 2, Pwr Boration and Dilution Requirements Unit 2 Rema Thumbrules 	In accordance with the provided: <ul style="list-style-type: none"> OP-AP-300-1004, Rev 2, Pwr Boration and Dilution Requirements Unit 2 Rema Thumbrules 	_____	_____	_____
*2	<u>Part 1</u> Review Attachment 1 of OP-AP-300-1004 Determine wrong number of withdrawn rod steps calculated on form Evaluate inaccurate calculation <ul style="list-style-type: none"> Should be 4 steps of Control Bank D at 50% power: Tave-Tref = 2° rise in temperature NOTE: When examinee identifies the deficiency, inform them to review the rest of the calculations	<ul style="list-style-type: none"> Station: Byron Unit: 2 Desired change <ul style="list-style-type: none"> Withdraw Rods 2 steps for PDMA02 control Reason for change <ul style="list-style-type: none"> PDMA02 control Temperature control What is the method & am't for the reactivity change? <ul style="list-style-type: none"> 2 steps withdrawal of CB D Inputs <ul style="list-style-type: none"> Rema thumbrules 	_____	_____	_____
*3	<u>Part 2</u> Review Attachment 1 of OP-AP-300-1004 Determine incorrect reactivity addition calculated on form due to using 100% REMA thumbrules. (Calculation is not required for success) <ul style="list-style-type: none"> +0.3° - 0.5° (current mismatch) = -0.2° 465 gallons PW/1° x 0.2° = 93 gallons dilution 	<ul style="list-style-type: none"> From inaccurate rod withdrawal, and 100% thumbrules, calculation is incorrect which yields an incorrect reactivity calculation Calculation has incorrect dilution value of 93 gallons. It should be a Boration of 37.5 gallons. <ul style="list-style-type: none"> +2° - 0.5° (current mismatch) = +1.5° 25 gallons BA/1° x 1.5° = 37.5 gallons boration Inputs <ul style="list-style-type: none"> Rema thumbrules 	_____	_____	_____
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-a

Revision Number: 02

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 Imp Factor 4.6

Suggested Testing Environment: Classroom

Alternate Path: Yes No **SRO Only:** Yes No **Time Critical:** Yes No

Reference(s):

- OP-AP-300-1004, Rev 4, Pwr Boration and Dilution Requirements
- Unit 2 Rema Thumbrules

Actual Testing Environment: Simulator Control Room In-Plant Other

Testing Method: Simulate Perform

Estimated Time to Complete: 15 minutes

Actual Time Used: _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

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

Comments: _____

Evaluator's Name: _____ (Print)

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

JOB PERFORMANCE MEASURE

INITIAL CONDITIONS:

1. Unit 2 is at 50% power, 9100 EFPH, 500 ppm boron, with CB D at 89 steps.
2. Tave is 0.5° less than Tref.
3. 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.
4. The NSO has calculated a reactivity change to move rods then to 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 2 steps for PDMA02 control
Dilute to raise Tave (0.2°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 93 gallons Dilution

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 2 steps raises temp 0.3°F.

Then dilute to raise temperature by 0.2°F: 465 gals/°F x (0.2°F) = 93 gals dilution.

Joe Rowe

Preparer
(RO)

P Chech

Reviewer
(RO/SRO)

Approver
(SRO)

Shift Manager Notified: Yes No

Exelon Nuclear

Job Performance Measure

Minimum Shift Staffing

JPM Number: SA-b

Revision Number: 2

Date: 7/20/2010

Revised By: R. F. Peterson 7/20/2010
Instructor Date

Validated By: S. Harvey 12/11/2015
SME or Instructor Date

Approved By: B. Lewin 12/11/2015
Operations Representative Date

Revision Record (Summary)

Revision 1

- Put in current JPM Format
- Clarified the intent of the question and limited to asking for recommendations for desired staffing levels.

Revision 2

- Added requirement to validate TS manning and Administrative manning to JPM.

INITIAL CONDITIONS

1. You are the Shift Manager.
2. Unit 1 is in Mode 5 and Unit 2 is in Mode 1 at 100% power.
3. The following qualified people are inside the Protected Area as members of the oncoming shift operating crew: (Assume that **All LISTED** personnel have the same shift rotation)

<u>Name</u>	<u>Qual</u>	<u>Position</u>	<u>Name</u>	<u>Qual</u>	<u>Position</u>	<u>Name</u>	<u>Qual</u>	<u>Position</u>
Joe		SRO/SM	Sam		NSO	Mary	FB	EO
Bill	FC	SRO	Dave		NSO	Ted	EC	EO
Tom	FC	SRO	Ron	FB	EO	Bob		RP
Andy		SRO	Alan	FB	EO	Terry		Chem
Arnie		SRO/STA	Sally	FB	EO	Karla	EC	Chem
			Tim		EO			

FC: Fire Chief qualified FB: Fire Brigade qualified EC: Emerg Comm qualified

INITIATING CUES:

DETERMINE if the crew meets the Desired staffing levels per BAP 320-1, and if not, do staffing levels meet Tech Spec Minimum staffing levels.

If staffing levels are not met **DETERMINE**:

- number of people in any given position needed to fill to the Tech Spec Minimum.
- number of people in any given position needed to fill to the Desired staffing levels.
- actions required to meet oncoming Shift Manning requirements.

All Work Hour Rules have been determined to be in compliance.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

RECORD START TIME: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1. Refer to BAP 320-1, Shift Staffing Cue: Provide a copy of BAP 320-1 and BAP 320-1T1 after correct procedure has been determined. The staffing determination can be determined in any order.	Determines that BAP 320-1 is needed to make determination.	_____	_____	_____
2. Review Desired Staffing requirement for Shift Manager.	Determine that minimum Desired Staffing and TS Staffing for Shift Manager <u>IS</u> satisfied.	_____	_____	_____
3. Review Desired Staffing requirement for Unit Supervisor.	Determine that minimum Desired Staffing and TS Staffing for Unit Supervisor <u>IS</u> satisfied.	_____	_____	_____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p>4. Review Desired Staffing requirement for WEC.</p> <p>Note: The candidate should determine that the WEC SRO is not required for TS minimum manning and should be used to meet minimum NSO TS Manning.</p>	<p>Determine that minimum Desired Staffing for WEC</p> <p><u>IS</u> satisfied.</p>	<p>_____</p>	<p>_____</p>	<p>_____</p>
<p>5. Review Desired Staffing requirement for FS/Fire Brigade Chief.</p>	<p>Determine that minimum Desired Staffing for FS</p> <p><u>IS</u> satisfied.</p>	<p>_____</p>	<p>_____</p>	<p>_____</p>
<p>*6. Review Desired Staffing requirement for NSO.</p>	<p>Determine that minimum Desired Staffing for NSO's</p> <p><u>IS NOT</u> satisfied.</p> <p>2 more are desired.</p> <p>Determine that minimum TS Staffing for NSO's</p> <p><u>IS</u> satisfied (an SRO is used to fill TS staffing levels)</p>	<p>_____</p>	<p>_____</p>	<p>_____</p>
<p>7. Review Desired Staffing requirement for STA.</p>	<p>Determine that minimum Desired Staffing for STA</p> <p><u>IS</u> satisfied.</p>	<p>_____</p>	<p>_____</p>	<p>_____</p>
<p>*8. Review Desired Staffing requirement for EO (SSD/FB).</p>	<p>Determine that minimum Desired Staffing for EO's</p> <p><u>IS NOT</u> satisfied.</p> <p>2 more SSD EO's are desired.</p> <p>Determine that minimum TS Staffing for EO's</p> <p><u>IS</u> satisfied (3 SSD EO's needed, with 0 FB needed)</p>	<p>_____</p>	<p>_____</p>	<p>_____</p>

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*9. Review Desired Staffing requirement for RP.	Determine that minimum Desired Staffing for RP <u>IS NOT</u> satisfied. 1 more is desired. Determine that minimum TS Staffing for RP <u>IS</u> satisfied (1 RP required)	 _____ _____	 _____ _____	 _____ _____
10. Review Desired Staffing requirement for Chemistry.	Determine that minimum Desired Staffing for Chemistry <u>IS</u> satisfied.	 _____	 _____	 _____
11. Review Desired Staffing requirement for Emergency Communicator.	Determine that minimum Desired Staffing for Emergency Communicator <u>IS</u> satisfied – the extra Chemistry person (or any qualified station staff person)	 _____	 _____	 _____
12. Determine need to fill positions with offgoing shift. Cue: Ask candidate on what actions are needed to meet immediate manning requirements for the oncoming shift?	Determine that the oncoming crew will not be able to fill all of the positions of BAP 320-1T1 with qualified individuals -AND- Determine that personnel from the current shift will be held over to fill all required positions until callout relief is in the Protected Area	 _____ _____	 _____ _____	 _____ _____
CUE: The JPM is complete.				

RECORD STOP TIME: _____



JPM SUMMARY

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

JPM Title: Minimum Shift Staffing

JPM Number: SA-b Revision Number: 1

Task Number and Title: S-AM-029 Ensure Minimum Shift Staffing and Authorize Additional Shift Staffing as Necessary

K/A Number and Importance: 2.1.5 3.9

Suggested Testing Environment: Classroom

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

Reference(s):

- BAP 320-1, Rev 19, Shift Staffing
- BAP 320-1T1

CRITICAL STEPS (*) 6, 8 & 9

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

1. You are the Shift Manager.
2. Unit 1 is in Mode 5 and Unit 2 is in Mode 1 at 100% power.
3. The following qualified people are inside the Protected Area as members of the oncoming shift operating crew: (Assume that **All LISTED** personnel have the same shift rotation)

<u>Name</u>	<u>Qual</u>	<u>Position</u>	<u>Name</u>	<u>Qual</u>	<u>Position</u>	<u>Name</u>	<u>Qual</u>	<u>Position</u>
Joe		SRO/SM	Sam		NSO	Mary	FB	EO
Bill	FC	SRO	Dave		NSO	Ted	EC	EO
Tom	FC	SRO	Ron	FB	EO	Bob		RP
Andy		SRO	Alan	FB	EO	Terry		Chem
Arnie		SRO/STA	Sally	FB	EO	Karla	EC	Chem
			Tim		EO			

FC: Fire Chief qualified FB: Fire Brigade qualified EC: Emerg Comm qualified

INITIATING CUES:

DETERMINE if the crew meets the Desired staffing levels per BAP 320-1, and if not, do staffing levels meet Tech Spec Minimum staffing levels.

If staffing levels are not met **DETERMINE**:

- number of people in any given position needed to fill to the Tech Spec Minimum.
- number of people in any given position needed to fill to the Desired staffing levels.
- actions required to meet oncoming Shift Manning requirements.

All Work Hour Rules have been determined to be in compliance.

Exelon Nuclear

Job Performance Measure

Initiate a LCOAR

JPM Number: SA-c

Revision Number: 0

Date: 11/30/2015

Revised By:	<u>Robert Peterson</u> Instructor	<u>11/30/2015</u> Date
Validated By:	<u>Shane Harvey</u> SME or Instructor	<u>12/11/2015</u> Date
Approved By:	<u>Brian Lewin</u> Facility Representative	<u>12/11/2015</u> 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.

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 BAP 1400-6 Rev: 33
Procedure 1BOL 7.2 Rev: 6
Procedure BAR 1-1-E5 Rev: 5
Procedure 1BOSR MS-W1 Rev: 11
Procedure BOP MS-5 Rev: 19
9. Verify cues both verbal and visual are free of conflict.
10. Verify performance time is accurate
11. If the JPM cannot be performed as written with proper responses, then revise the JPM.
12. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

Revision Record (Summary)

Revision 0

Comment	Resolution
Modified SA3 Rev. 0	Changed component that is in LCOAR

INITIAL CONDITIONS

1. You are the Unit 1 Unit Supervisor.
2. Unit 1 is in MODE 1
3. MSIV 1D Hyd/Pneu Press Hi/Lo Alarm (1-1-E5) is LIT.
4. 5 minutes ago that the TR Operator reports that 1D MSIV Standby Nitrogen Pressure is 4750 psig.
5. IR 1234567 has been written to document the issue.
6. No other LCOARs or DELs exist on Unit 1.

INITIATING CUE

Evaluate condition and Initiate the LCOAR paperwork as necessary.

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 1a, 3, 4, 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.

RECORD START TIME: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p>NOTE Once the student demonstrates the ability to locate referenced procedure provide the student with a copy of the procedure.</p>				
<p>1. Refer to BAP 1400-6, Technical Specification Limiting Conditions for Operation Action Requirements (LCOAR)</p>	<p>◦ LOCATE and OPEN BAP 1400-6</p>	_____	_____	_____
<p>*1.a Evaluate required LCOAR entry</p> <ul style="list-style-type: none"> ◦ T.S 3.7.2 and/or Bases ◦ 1BOL 7.2 ◦ BAR 1-1-E5 ◦ 1BOSR MS-W1 ◦ BOP MS-5 	<ul style="list-style-type: none"> • Identify that 1BOL 7.2 LCOAR entry is required. ◦ Utilize references as required 	_____	_____	_____
<p>2. Refer to 1BOL 7.2, LCOAR Main Steam Isolation Valves (MSIVs) – Tech Spec LCO # 3.7.2</p>	<p>◦ LOCATE and OPEN 1BOL 7.2</p>	_____	_____	_____
<p>*3. Section A of 1BOL 7.2</p> <p>Note: Notification occurred 5 minutes ago per initiating Cue.</p>	<p>ENTER into Section A:</p> <ul style="list-style-type: none"> • Time/Date: Today/5 minutes ago • By: Candidate’s name • Title: Unit Supervisor • Present mode: 1 • Initiating event: Initiating event: 1MS001D Standby Pneumatic Pressure <4800 psig. • Condition: A 	_____	_____	_____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*4. Safety function determination Cue: All other MSIVs pass operability.	PERFORM SFD <ul style="list-style-type: none"> • Indicate No in Section C • Sign Coversheet • Indicate NO on coversheet for invalidating current SFD 	_____	_____	_____
4.a LCO 3.0.6 Evaluation Note: Acceptable if left Blank or may be placekept.	Placekeep OR Leave Blank	_____	_____	_____
5. Update DEL	○ Check "N/A" box	_____	_____	_____
6. Determine Planned or Unplanned	○ Mark UNPLANNED on coversheet	_____	_____	_____
NOTE Examinee may inform SM of entry at this time, however, the SM Notified and time/date is typically completed after Peer Check received by another SRO.				
7. Related WRWO block Note: IR # will be recorded here	<ul style="list-style-type: none"> • List IR # 1234567 	_____	_____	_____
8. Fill in Related Clearance Orders Note: Acceptable if left Blank	○ N/A OR Leave Blank	_____	_____	_____
9. Was an IR written?	○ Check "Yes" box	_____	_____	_____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*10.LCOAR TABLE of 1BOL 7.2 Cue: This JPM is completed.	COMPLETE LCOAR Table: <ul style="list-style-type: none"> ◦ CIRCLE Condition A • ENTER notification Time/Date <u>AND</u> sign Condition A 	_____	_____	_____

RECORD STOP TIME: _____



JPM SUMMARY

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

JPM Title: Initiate a LCOAR. (SRO)

JPM Number: SA-c (Mod from SA3) Revision Number: 0

Task Number and Title: 8E.TS-007 ENSURE compliance with all applicable Tech Spec Action Statements.

K/A Number and Importance: 2.2.23 4.6

Suggested Testing Environment: Simulator

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

Reference(s):

- BAP 1400-6, Technical Specification Limiting Conditions for Operation Action Requirements (LCOAR) (Rev 33)
- 1BOL 7.2, LCOAR Main Steam Isolation Valves (MSIVs) Tech Spec LCO # 3.7.2 (Rev 6)
- BAR 1-1-E5, MSIV 1D HYD/PNEU Press High/Low (Rev 5)
- 1BOSR MS-W1, Unit One MSIV Checks Weekly Surveillance (Rev 11)
- BOP MS-5, MSIV Accumulator Operability Check (Rev 19)

CRITICAL STEPS (*) 1a, 3, 4, 10

Actual Testing Environment: Simulator Control Room In-Plant Other

Testing Method: Simulate Perform

Estimated Time to Complete: 15 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

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

Comments: _____

Evaluator's Name: _____ (Print)

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

INITIAL CONDITIONS

1. You are the Unit 1 Unit Supervisor.
2. Unit 1 is in MODE 1.
3. MSIV 1D Hyd/Pneu Press Hi/Lo Alarm (1-1-E5) is LIT.
4. 5 minutes ago that the TR Operator reports that 1D MSIV Standby Nitrogen Pressure is 4750 psig.
5. IR 1234567 has been written to document the issue.
6. No other LCOARs or DELs exist on Unit 1.

INITIATING CUE

Evaluate condition and Initiate the LCOAR paperwork as necessary.

Exelon Nuclear

Job Performance Measure

Review Liquid Release Package

JPM Number: SA d

Revision Number: 02

Date: 10/18/2013

Developed By: Robert Peterson 10/18/2013
Instructor Date

Validated By: S. Harvey 12/11/2015
SME or Instructor Date

Approved By: B. Lewin 12/11/2015
Operations Representative Date

INITIAL CONDITIONS

You are the Unit Supervisor.

A Liquid Radwaste Release Form BCP 400-TWX01 is currently being processed.

You have the Liquid Release Package and it is completed up to step 7.5 for your approval.

INITIATING CUES

You are to review BCP 400-TWX01 and ensure it has been completed properly to authorize the liquid release.

TASK STANDARDS:

1. Determine that section 6.8.5 Rad Monitor Setpoints were incorrectly chosen.
2. Determine that the signature is missing for the Radiation Protection Supervisor in section 5.9 .
3. Determine that section 6.16.1 is incorrectly indicating the wrong release path (0WX001 is recorded instead of 0WX630).
4. Determine that step 6.16.10 is missing a verification initial.

RECORD START TIME: _____

EVALUATOR NOTE: These steps may be performed in any order.					
STEP	ELEMENT	STANDARD	SAT	UNSA T	CMT#
1	Refer to BCP 400-TWX01, Liquid Radwaste Release Form.	Determine procedure is completed up to step 8.5 where the Field Supervisor is to review Release Package to ensure it is completed properly.	---	---	---
*2.	Determine that the Rad Protection Supervisor did not sign step 5.9.	STEP 5.9 The Rad Protection Supervisor signature is missing.	---	---	---
*3	Determine that the Rad Monitor Setpoints are incorrect.	STEP 6.8.5 Alert and High Alarm Setpoints are reversed.	---	---	---
*4	Determine that the NSO recorded the wrong release flow path in step 6.16.1.	STEP 6.16.1 NSO recorded the incorrect flow path. Should be 0WX001 NOT 0WX630.	---	---	---
*5	Determine the verification blank for step 6.16.10 is not initialed.	STEP 6.16.10 The Verification Blank is not initialed for the Rad Monitor setpoints.	---	---	---
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: Review Liquid Release Package

JPM Number: SA d Revision Number: 01

Task Number and Title: S-HP-001 Authorize Liquid Rad Waste Release

K/A Number and Importance: GEN 2.3.6, Imp Factor 2.0/3.8

Suggested Testing Environment: Classroom

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

Reference(s):

- BCP 400-TWX01 Rev 65
- Chemistry Sample results from 0WX01T
- Radiation Protection analysis for a Liquid Release Package

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: _____

Exelon Nuclear

Job Performance Measure

Classify Event and Fill Out a NARS Form (Loss of Required Vital DC in Mode 5)

JPM Number: SA-e

Revision Number: 00

Date: 11/30/2015

Revised By: R. F. Peterson 11/30/2015
Instructor Date

Validated By: S. Harvey 12/11/2015
SME or Instructor Date

Approved By: B. Lewin 12/11/2015
Operations Representative Date

INITIAL CONDITIONS

1. You are the Shift Emergency Director.
2. The Unit 1 Supervisor has provided you with information related to a Unit 1 event and informed you to perform an Emergency Plan evaluation.

PLANT CONDITIONS:

1. Unit 1 is shutdown in **MODE 5** preparing for refueling.
2. DC bus 111 is currently Out of Service (De-Energized) for a Planned Bus Outage.
3. DC Bus 112 just experienced a loss of Vital DC Power, indicated by voltage readings of 0VDC at DC112.
4. DC112 Feed Breaker is tripped and cannot be reclosed.
5. Electrical Maintenance Technicians and Engineering are currently in the EM Shop reviewing prints and developing a Troubleshooting plan.

INITIATING CUE

1. Perform an Emergency Plan evaluation and fill out the NARS form for transmittal for the plant conditions provided
2. **This is a time critical JPM.**

JPM START TIME: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p><u>NOTE</u></p> <p>The completion of Step 2 fulfills the critical time portion of this JPM.</p>				
<p>1. Refer to Exelon Nuclear – Radiological Emergency Plan Annex for Byron Station.</p> <p>Note: This step may be performed at any time</p>	<ul style="list-style-type: none"> ○ Locate and Open, EP-AA-1002 Addendum 3, Classification of Emergencies 	_____	_____	_____
<p>*2. Classify the Event utilizing Section 3, Classification of Emergencies.</p> <p>Critical portion stop time _____</p>	<ul style="list-style-type: none"> • Classify event as Unusual Event, from CU3 Loss of Required DC power for 15 Minutes or Longer (<108VDC on unit 125VDC batter busses 111 and 112) 	_____	_____	_____
<p>Time from start to Classification = _____ minutes</p>	<p>ϕ ≤ 15 minutes</p>	_____	_____	_____
<p>3. Obtain NARS form, EP-MW-114-100-F-01, Nuclear Accident Reporting System (NARS).</p> <p>Note: Step 3 may be performed at any time</p>	<ul style="list-style-type: none"> ○ Obtain NARS form. 	_____	_____	_____
<p><u>NOTE</u></p> <p>Provide the examinee with a copy of the NARS form.</p>				

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p>4. Refer to EP-MW-114-100, MWROG Offsite Notifications, to complete NARS form.</p> <p>Note: Step 4 is optional and may be performed at any time</p>	<p>◦ Locate and Open, EP-MW-114-100, MWROG Offsite Notifications, Section 4.1, to complete NARS form.</p>	_____	_____	_____
<p>NOTE</p> <p>Provide the examinee with Wind Speed and Wind Direction cues after examinee has explained where to obtain the information from the computer or from the main control board.</p>				
<p>*5. Fill out NARS form according to instructions, EP-MW-114-100, Section 4.1, Completing the NARS Form.</p> <p>Cue: The wind direction on AM004 is 286°.</p> <p>Cue: The wind speed on AM001 is 16 meters/sec.</p> <p>Cue: An SRO has provided a peer check and signed the "Verified With:" section.</p>	<ul style="list-style-type: none"> • Fill out NARS form according to instructions, EP-MW-114-100, Section 4.1 Completing the NARS Form. • BLOCKS 2 thru 9 must be filled correctly to meet the critical portion of filling out the NARS form. (See attached KEY). ◦ Block 10 should be filled in "None" ◦ Verified with another SRO peer check 	_____	_____	_____
<p>CUE: The JPM is complete.</p>				

JPM STOP TIME: _____



JPM SUMMARY

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

JPM Title: Classify Event and Fill Out a NARS Form Earthquake

JPM Number: SA-a Revision Number: 00

Task Number and Title: 8F.ZP-008 CLASSIFY/RECLASSIFY Emergency Action Levels

K/A Number and Importance: 2.4.41 4.6

Suggested Testing Environment: Simulator

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

Reference(s):

- EP-MW-114-100 (Rev 16), Midwest Region Offsite Notifications
- EP-MW-114-100-F-01 (Rev. H) Nuclear Accident Reporting System (NARS) Form
- EP-AA-1002 Addendum 3 (Rev 0) Emergency Action Levels for Byron Station
- EP-AA-1002 (Rev 34) Exelon Nuclear Radiological Emergency Plan Annex for Byron Station

CRITICAL STEPS (*) 2 & 5

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:** _____