

Exelon Nuclear

Job Performance Measure

Perform Shutdown Margin Calculations

JPM Number: RA-a

Revision Number: 2

Date: 7/24/2012

Revised By: Bill Hochstetter 7/24/2012
Instructor Date

Validated By: J. Blumenthal 12/11/2015
SME or Instructor Date

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

Revision Record (Summary)

Revision 0

- JPM modified from Byron 2006 NRC ILT JPM

Revision 1

- JPM references updated

Revision 2

- JPM references updated
- Removed time compression and revised JPM so that examinee only needs to call that SDM is NOT met to perform the cooldown.

INITIAL CONDITIONS

1. You are an extra NSO.
2. Unit 1 tripped 5 minutes ago from 100% power. The unit had been at 100% for 2 weeks.
3. Before the trip, Control Bank D was at 220 steps with all rods in proper alignment, bank overlap and sequence.
4. All RCPs are running.
5. All Rod At Bottom lights are lit.
6. Boron concentration is 700 ppm per sample 3 hours ago. No changes to boron concentration have been made.
7. Tave is 557°F, maintained on the steam dumps
8. Reactor average burn-up is 6500 EFPH, MOL.

INITIATING CUE

1. The plant is to be cooled to 500°F.
2. The Unit Supervisor instructs you to perform 1BOSR 1.1.1-1, Shutdown Margin Surveillance and determine if Shutdown Margin is met for post-trip conditions, AND for the proposed cooldown.
3. The examiner will provide approval signatures when required.

This JPM is TIME CRITICAL.

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
<p>NOTE: Provide the examinee with 1BOSR 1.1.1-1, 1BGP-7T1, and BCB-1, Table 1-1a</p>				
<p>CUE: The reactor tripped at _____.</p> <p>(NOTE to Evaluator: Fill in the time as 5 minutes before the JPM start time.)</p>				
<p>1. Refer to 1BOSR 1.1.1-1, Shutdown Margin Surveillance</p>	<ul style="list-style-type: none"> • OPEN 1BOSR 1.1.1-1 • Go to step F.1 			
<p>*2. Post Reactor Trip Assessment</p> <p>Cue: A QNE will prepare an RRD prior to completion of Step F.3</p> <p>Evaluator Note: Sign step F.1.k as the SRO.</p> <p>Record time step F.1.k is requested to be signed.</p> <p>Time signed: _____:_____</p> <p>Critical Time: Is the Start time – Time signed \leq 55 minutes?</p> <p>*YES / NO</p>	<ul style="list-style-type: none"> • Circle Yes in the following steps: • F.1.a - h: Yes • F.1.i: record the time 5 minutes ago • F.1.j: record the time 12 hours from the trip time. • F.1.k: Sign that SDM is acceptable 			

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*3 Assess SDM for Cooldown	<ul style="list-style-type: none"> • F.1.I: Continue at step F.3 for cooldown • F.3.a: Record 700 ppm and date and time of 3 hours ago. • F.3.b: Record 500°F • F.3.c: Using BCB-1, Table 1-1a, 500°F and 700 ppm, determine minimum boron concentration to be 848 ppm. • F.3.d: Request or notify the SRO that the RCS must be borated to at least 848 ppm BEFORE starting the cooldown. 			
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: Perform Shutdown Margin Calculation

JPM Number: RA-a Revision Number: 2

Task Number and Title: R-AM-012 Apply Technical Specification Requirements

K/A Number and Importance: 2.1.25 3.9/4.2

Suggested Testing Environment: Classroom

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

Reference(s):

- 1BOSR 1.1.1-1, Shutdown Margin Surveillance (Rev. 12)
- BCB-1, Table 1-1a (Rev. 11)

CRITICAL STEPS (*) 2 & 3

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 an extra NSO.
2. Unit 1 tripped 5 minutes ago from 100% power. The unit had been at 100% for 2 weeks.
3. Before the trip, Control Bank D was at 220 steps with all rods in proper alignment, bank overlap and sequence.
4. All RCPs are running.
5. All Reactor Trip Breakers are open and all Rod At Bottom lights are lit.
6. Boron concentration is 700 ppm per sample 3 hours ago. No changes to boron concentration have been made.
7. Tave is 557°F, maintained on the steam dumps
8. Reactor average burn-up is 6500 EFPD, MOL.

INITIATING CUE

1. The plant is to be cooled to 500°F.
2. The Unit Supervisor instructs you to perform 1BOSR 1.1.1-1, Shutdown Margin Surveillance and determine if Shutdown Margin is met for post-trip conditions, AND for the proposed cooldown.
3. The examiner will provide approval signatures when required.

This JPM is TIME CRITICAL.

Exelon Nuclear

Job Performance Measure

Evaluate Technical Specification Entry Conditions

JPM Number: RA-b

Revision Number: 00

Date: 11/17/2015

Developed By: Robert Peterson 11/17/2015
Instructor Date

Validated By: J. Blumenthal 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>BAR 1-1-B1</u> Rev: <u>2</u>
Procedure <u>BAR 1-1-E5</u> Rev: <u>5</u>
Procedure <u>1BOSR MS-W1</u> Rev: <u>11</u>
Procedure <u>BOP MS-5</u> Rev: <u>19</u>
Procedure <u>BAR 1-5-B2</u> Rev: <u>1</u> |
| <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: |

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

Revision Record (Summary)

Revision 0 Revised format to current standard

Comment	Resolution
New JPM	

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-109 (password: byron2016), 75% power or other compatible reduced power Mode 1 IC.
2. Insert Malfunction PN1986 ON to enable Annunciator Spent Fuel Temperature High Alarm (1-1-B1).
3. Insert Malfunction PA0006 ON for 1D MSIV Standby Accumulator Pressure at 4750 psig to enable MSIV 1D Hyd/Pneu Press Hi/Lo Alarm (1-1-E5)*.
4. Vent 1B SI Accumulator Pressure at 595 psig to enable the low pressure alarm (1-5-B2)*. Open 1SI8875B and throttle open 1SIHCV943 until 1B SI accumulator pressure is 595 psig.
5. Enable the CS Spray Add Tank Lo Level Alarm (1-3-C3) by draining NAOH tank to 80% using 1CS022.
6. Acknowledge all Alarms.
7. Freeze Simulator after acknowledging alarms.
8. Print & Provide Copy of Procedure 1BOSR MS-W1 Rev: 11 and BOP MS-5 Rev: 19 to evaluator.

INITIAL CONDITIONS

1. You are the WEC NSO.
2. The unit is in MODE 1

INITIATING CUE

1. The Unit 1 NSO has taken turnover and has requested that you perform an independent review of the Required Technical Specifications for the existing Alarm conditions on 1PM06J, and provide him your findings.
(Applicable Conditions and Required Actions are not required).

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps 2, 4

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 _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE	This steps in this JPM may be done in any order.				
1	Evaluate Alarm 1-1-B1 SFP Temp Hi <i>CUE: If questioned by the student.</i> <i>SFP Temperature is 150F and no Fuel Moves are in progress.</i> <i>SFP Level is 24'3"</i>	Identify as not Technical Specification related alarm.			
CUE	If requested, provide student copy of 1BOSR MS-W1 and/or BOP MS-5				
2*	Evaluate Alarm 1-1-E5, MSIV 1D Hyd/Pneu Press Hi/Lo <i>CUE: If questioned by the Student:</i> <i>1D MSIV Standby Pressure is 4750 psig</i> <i>Active Pressure is 4950 psig</i>	Identify need to enter 1BOL 7.2, for 1D MSIV Accumulator Standby Pressure Low			
3	Evaluate Alarm 1-3-C3, Spray Add Tank Level Low <i>CUE: If questioned by the student:</i> <i>U1 Spray Add tank level local indication is 80%.</i>	Identify that current Spray Add Tank reading of 80% is above the T.S 3.6.7 required value of 78.6%.			
4*	Evaluate Alarm 1-5-B2, 1B SI Accumulator Pressure Hi/Lo	Identify need to enter 1BOL 5.1 for Accumulator Low Pressure.			
CUE	This JPM is complete.				

JPM Stop Time _____

JPM SUMMARY

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

JPM Title: Evaluate Technical Specification Entry Conditions

JPM Number: RA-b Revision Number: 00

Task Number and Title: R-AM-012, Apply Technical Specification Requirements

K/A Number and Importance: 2.2.42 Imp Factor 3.9/4.6

Suggested Testing Environment: Simulator

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

Reference(s):

- BAR 1-1-B1, Rev: 2
- BAR 1-1-E5, Rev: 5
- BAR 1-5-B2, Rev: 1
- BOP MS-5, Rev: 19
- 1BOSR MS-W1, Rev: 11

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 WEC NSO.
2. The unit is in MODE 1

INITIATING CUE

1. The Unit 1 NSO has taken turnover and has requested that you perform an independent review of the Required Technical Specifications for the existing Alarm conditions on 1PM06J, and provide him your findings.
(Applicable Conditions and Required Actions are not required).

Exelon Nuclear

Job Performance Measure

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

JPM Number: RA-c

Revision Number: 0

Date: 11/30/2015

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

Validated By: J. Blumenthal 12/11/2015
SME or Instructor Date

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

Revision Record (Summary)

Revision 0

- Generated New JPM for new RMS System and BCP 400-TCNMT/Routine revision from RA-3 rev 5.

SIMULATOR 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-22
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. Enter indication for Noble gas trend for 1PR11J (1PB111) on RMS as **4.684 E-06**
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

1. You are the Unit 1 Assist NSO.
2. A Unit 1 Containment release is pending.
3. 1RE-PR011 is not in LCOAR.
4. Daily Channel Checks of 1RE-PR001 has been performed Satisfactory per 0BOSR 0.1-0.
5. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. CNMT Purge Effluent (1(2)PR01J Source/Channel Check) has been completed and has been reviewed as Satisfactory.

INITIATING CUE

You have been instructed to perform Section 4 of BCP 400-TCNMT/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, 7, 8, 9, 10, 11, 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.

RECORD START TIME: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p><u>NOTE</u></p> <p>If this JPM is performed on the simulator, only the <u>underlined</u> cue needs to be provided to the examinee.</p> <p>To initiate this JPM, hand the partially completed BCP 400-TCNMT/ROUTINE and Pre-Release Permit Report to the examinee.</p>				
<p>1. Refer to the partially completed BCP 400-TCNMT/ROUTINE</p> <p>Cue: (if asked) Section 2 and 3 have been completed along with the RETDAS Gaseous Release Rate printouts.</p>	<p>◦ REVIEW BCP 400-TCNMT/ROUTINE for completeness up to Section 4</p>	_____	_____	_____
<p>2. Complete daily channel checks</p> <p>Cue: <u>The daily channel check of 1RE-PR001 has been performed satisfactorily</u></p>	<p>◦ VERIFY/COMPLETE the daily channel check on 1RE-PR001</p>	_____	_____	_____
<p>3. Perform Source/Channel check</p> <p>Cue: <u>1BOSR 11.b.6-1 has been completed and reviewed satisfactorily.</u></p>	<p>◦ PERFORM the 1PR01J source/channel check</p>	_____	_____	_____
<p>4. Noble gas trend for 1PR11J (1PB111)</p> <p>Note: Current Reading is _ Report reading is 4.684 E-06</p> <p>Cue (if necessary): The current value has not increased by >10% from the prior value.</p>	<p>◦ VERIFY noble gas trend from 1PB111 has not increased by >10% from current reading on Gaseous Pre-release Permit Report</p>	_____	_____	_____
<p>5. "As Found" setpoints of 1RE-PR001</p> <p>Note: The High alarm setpoint is 4.83 E-04</p> <p>Note: The Alert alarm setpoint is 2.42 E-04</p>	<p>At the RMS, RECORD "As Found" setpoints of 1RE-PR001 Gas Channel:</p> <p>◦ High alarm setpoint</p> <p>◦ Alert alarm setpoint</p>	_____	_____	_____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*6. RMS supervisory mode	At the RMS: <ul style="list-style-type: none"> • PLACE RMS in Supervisory Mode 			
*7. Select monitor	At the RMS, Grid 2: <ul style="list-style-type: none"> ○ SELECT 1PB101 			
*8. Select high alarm setpoint channel	At the RMS: <ul style="list-style-type: none"> • SELECT “Channel ITEMS” • SELECT “9” 			
*9. High alarm setpoint Note: The setpoint to be entered is 5.86 E-04 Cue: <u>Your request for verification is acknowledged, please continue.</u>	At the RMS: <ul style="list-style-type: none"> • ENTER high alarm setpoint on 1PB101 ○ SELECT “Save” ○ SELECT “Yes” • RECORD new value • Request verification 			
*10. RMS supervisory mode Note: This step may be met per step 6 above.	At the RMS: <ul style="list-style-type: none"> ○ VERIFY/PLACE RMS in Supervisory Mode 			
*11. Select monitor Note: This step may be met per step 7 above.	At the RMS, Grid 2: <ul style="list-style-type: none"> ○ VERIFY/SELECT 1PB101 			

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*12. Select Alert alarm setpoint channel	At the RMS: <ul style="list-style-type: none"> • VERIFY/SELECT "Channel ITEMS" • SELECT "10" 			
*13. Select Alert alarm channel Note: The setpoint to be entered is 3.14 E-04. Cue: Your request for verification is acknowledged, please continue.	At the RMS: <ul style="list-style-type: none"> • ENTER Alert alarm setpoint on 1PB101 <ul style="list-style-type: none"> ○ SELECT "Save" ○ SELECT "Yes" • RECORD new value <ul style="list-style-type: none"> ○ Request verification 			
14. Place the RMS in Normal Mode	At the RMS: <ul style="list-style-type: none"> ○ PLACE the RMS in NORMAL MODE 			
15. Aux building exhaust fan status	At OPM02J: <ul style="list-style-type: none"> ○ ENSURE the 0A <u>OR</u> 0B Aux Building Exhaust Fan is in operation 			
16. Turn in Package for approval Cue: <u>The US will continue at step 5.</u> Cue: <u>This JPM is completed.</u>	Hand in Release package to Unit Supervisor for approval.			

RECORD STOP TIME: _____



JPM SUMMARY

Operator's Name: _____ **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-c Revision Number: 0

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

K/A Number and Importance: Generic 2.3.5 2.9/2.9

Suggested Testing Environment: Simulator

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

Reference(s):

- BCP 400-TCNMT/ROUTINE, Gaseous Effluent Release Form Type: Routine Containment Release (Rev. 27)

CRITICAL STEPS (*) 6, 7, 8, 9, 10, 11, 12 & 13

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 Assist NSO.
2. A Unit 1 Containment release is pending.
3. 1RE-PR011 is not in LCOAR.
4. Daily Channel Checks of 1RE-PR001 has been performed Satisfactory per 0BOSR 0.1-0.
5. 1BOSR 11.b.6-1, Radioactive Gaseous Effluent Monitoring Instrumentation Surv. CNMT Purge Effluent (1(2)PR01J Source/Channel Check) has been completed and has been reviewed as Satisfactory.

INITIATING CUE

1. You have been instructed to perform Section 4 of BCP 400-TCNMT/ROUTINE in preparation for this release.



Exelon Nuclear

Job Performance Measure

Activate Everbridge Notification

JPM Number: RA-d

Revision Number: 00

Date: 11/17/2015

Developed By: Robert Peterson 11/17/2015
Instructor Date

Validated By: J. Blumenthal 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> </u>
RFP | 1. Task description and number, JPM description and number are identified. |
| <u> </u>
RFP | 2. Knowledge and Abilities (K/A) references are included. |
| <u> </u>
RFP | 3. Performance location specified. (in-plant, control room, simulator, or other) |
| <u> </u>
RFP | 4. Initial setup conditions are identified. |
| <u> </u>
RFP | 5. Initiating cue (and terminating cue if required) are properly identified. |
| <u> </u>
RFP | 6. Task standards identified and verified by SME review. |
| <u> </u>
RFP | 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). |
| <u> </u>
RFP | 8. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure <u>EP-AA-112-100-F-06</u> Rev: R <u> </u> |
| <u> </u>
RFP | 9. Verify cues both verbal and visual are free of conflict. |
| <u> </u>
RFP | 10. Verify performance time is accurate |
| <u> </u>
RFP | 11. If the JPM cannot be performed as written with proper responses, then revise the JPM. |
| <u> </u>
RFP | 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 Revised format to current standard

Comment	Resolution
New JPM	

SIMULATOR SETUP INSTRUCTIONS

1. Ensure the Paragon computer is logged into Byrtraining with Everbridge icon on desktop.
2. Ensure Procedures and Screen Shots are printed and available for JPM.

INITIAL CONDITIONS

1. You are the WEC NSO.
2. The SM has declared an ALERT condition for Unit 1, and has assigned you to activate the ERO on site.

INITIATING CUE

1. Activate the ERO using Everbridge on the World Wide Web.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* **Denotes critical steps (4, 5, 6, 7, 8, 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 _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	Provide copy of EP-AA-112-100-F-06 to examinee as this would be provided by the Emergency Director.				
1	Refer to EP-AA-112-100-F-06.	Locate and read EP-AA-112-100-F-06.			
2	Circle or otherwise indicate Byron Member ID and password.	Circle 828536611 for ID and password.			
3	Circle or otherwise indicate appropriate Activation Scenario.	Circle Scenario 1.			
4*	Open Everbridge shortcut from the computer desktop or via the internet address www.everbridge.net	Everbridge application open on the computer.			
CUE	<p><u>CAUTION:</u></p> <p>Tell examinee to log out of Everbridge, then take their hand away from the mouse.</p> <p>**DO NOT continue making entries in Everbridge, as this may ACTIVATE the system.</p>				
CUE	Provide the examinee Screen Shot #1 (Login Screen), tell the examinee to record the appropriate data and describe the actions they will take on the provided Screen Shots.				
5*	Type in Byron ID.	Type 828536611 in Member ID.			
6*	Type in Password.	Type 828536611 in Password.			
7*	Select "Enter" or "Go".	Swap screen to Scenario List.			
CUE	Provide the examinee Screen Shot #2 (Scenario Screen), tell the examinee describe the actions they will take on the provided Screen Shots.				
8*	Examinee discusses which Scenario would be selected.	Examinee would select "Scenario 1, Actual Event Response to Facility For Alert"			

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	Provide the examinee Screen Shot #3 (Active Scenario Screen), tell the examinee describe the actions they will take on the provided Screen Shots.				
9*	Verify "Active Scenario Broadcasts" is displayed	Examinee will "send message".			
10*	VERIFY call to the MCR from the ERO notification system has been received within 10 minutes of activation.	Verifies call to MCR has been received.			
CUE	A call to MCR from ERO Notification System was received by the Unit 2 Assist NSO one minute after the System was activated.				
11	RECORD time the confirmation call was received.	Time is recorded.			
12	INFORM Shift Emergency Director that ERO has been activated.	SED/SM is informed			
CUE	The Shift Emergency Director acknowledges the activation of the ERO.				
CUE	This JPM is complete.				

JPM Stop Time _____

JPM SUMMARY

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

JPM Title: Activate Everbridge Notification

JPM Number: RA-d Revision Number: 00

Task Number and Title: R-ZP-002, Operate the EP communication systems

K/A Number and Importance: 2.4.43 Imp Factor 3.2/3.8

Suggested Testing Environment: Simulator

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

Reference(s):

- EP-AA-112-100-F-06 (rev R)

Actual Testing Environment: Simulator Control Room In-Plant Other

Testing Method: Simulate Perform

Estimated Time to Complete: 10 minutes

Actual Time Used: _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

1. You are the WEC NSO.
2. The SM has declared an ALERT condition for Unit 1, and has assigned you to activate the ERO on site.

INITIATING CUE

1. Activate the ERO using Everbridge on the World Wide Web.

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 2, 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 4750 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 4 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"> 4 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: 1

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.

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, how many people in any given position would be needed to fill the desired staffing levels.

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 for Shift Manager is satisfied.			
3. Review Desired Staffing requirement for Unit Supervisor.	Determine that minimum Desired Staffing for Unit Supervisor is satisfied.			
4. Review Desired Staffing requirement for WEC.	Determine that minimum Desired Staffing for WEC is satisfied.			
5. Review Desired Staffing requirement for FS/Fire Brigade Chief.	Determine that minimum Desired Staffing for FS is satisfied.			
*6. Review Desired Staffing requirement for NSO.	Determine that minimum Desired Staffing for NSO's is NOT satisfied. 2 more are desired.			
7. Review Desired Staffing requirement for STA.	Determine that minimum Desired Staffing for STA is satisfied.			

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*8. Review Desired Staffing requirement for EO.	Determine that minimum Desired Staffing for EO's is NOT satisfied. 2 more are desired.			
*9. Review Desired Staffing requirement for RP.	Determine that minimum Desired Staffing for RP is NOT satisfied. 1 more is desired.			
10. Review Desired Staffing requirement for Chemistry.	Determine that minimum Desired Staffing for Chemistry is satisfied.			
11. Review Desired Staffing requirement for Emergency Communicator.	Determine that minimum Desired Staffing for Emergency Communicator is satisfied – the extra Chemistry person (or any station staff person)			
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, how many people in any given position would be needed to fill the desired staffing levels.

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

SIMULATOR SETUP INSTRUCTIONS

1. Reset to IC-18, 75% power or other compatible reduced power Mode 1 IC.
2. Insert Malfunction for 1D MSIV Accumulator Active and Standby Pressures at 4750 psig to enable MSIV 1D Hyd/Pneu Press Hi/Lo Alarm (1-1-E5)*.
3. Acknowledge all Alarms.
4. Freeze Simulator after acknowledging alarms.
5. Print & Provide Copy of Procedures to evaluator.
 - 1BOL 7.2 (rev 6)
 - BAR 1-1-E5 (rev 5)
 - 1BOSR MS-W1 (rev 11)
 - BOP MS-5 (rev 19)
6. Intent is to run this JPM in conjunction with NSO Admin JPM RAb, but it is not required.

INITIAL CONDITIONS

1. You are the Unit 1 Unit Supervisor.
2. The unit is in MODE 1
3. Power reduction for an upcoming refueling outage has been placed on hold for engineering testing.

INITIATING CUE

1. The Unit 1 Assist NSO notified you 5 minute ago that the TR Operator reports that 1D MSIV Standby Nitrogen Pressure is 4750 psig.
2. IR 1234567 has been written to document the issue.
3. No other LCOARs or DELs exist on Unit 1.
4. 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	COMPLETE LCOAR Table: <ul style="list-style-type: none"> ◦ CIRCLE Condition A • ENTER notification Time/Date <u>AND</u> sign Condition A 	_____	_____	_____
11. Directs Restore MSIV actuator train to OPERABLE status in 7 days. Note: Acceptable if SRO does not take immediate action to initiate correction in condition. CUE: The WEC SRO is briefing the TR Operator to restore 1MS001D Standby Nitrogen Pressure to within operable pressure.	<ul style="list-style-type: none"> ◦ 1MS001D directed to be restored to Operable in 7 days. 	_____	_____	_____
13.Review LCO 3.3.2 Note: Acceptable if SRO does not review this TS for applicability as the conditions do not warrant operability review.	<ul style="list-style-type: none"> ◦ LCO 3.3.2 conditions D, F & G are met. Both trains of Manual and Automatic MS Isolation are operable. 	_____	_____	_____
13. Peer check prior to SM review Cue: <u>A second SRO has provided a peer check.</u>	<ul style="list-style-type: none"> ◦ BAP 1400-6 for Peer check ◦ Get an additional SRO to Peer check the BOL package 	_____	_____	_____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
14. Signed by Shift Manager Cue: <i>The shift manager acknowledges LCOAR entry and review request.</i> Cue: This JPM is completed.	° NOTIFY SM	_____	_____	_____

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. The unit is in MODE 1
3. Power reduction for an upcoming refueling outage has been placed on hold for engineering testing.

INITIATING CUE

1. The Unit 1 Assist NSO notified you 5 minute ago that the TR Operator reports that 1D MSIV Standby Nitrogen Pressure is 4750 psig.
2. IR 1234567 has been written to document the issue.
3. No other LCOARs or DELs exist on Unit 1.
4. 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

Revision Record (Summary)

Revision 00 Initial revision of JPM

Revision 01 Updated format

Revision 02 Procedure revised, and release numbers and RM setpoints were changed.

Comment	Resolution

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.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

*** Denotes critical steps 2, 3, 4 & 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.

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	UNSAT	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:** _____

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.

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

Revision Record (Summary)

Revision 00

- New JPM

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.**

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM START TIME: _____

<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>$\phi \leq 15$ 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:** _____

Nuclear Accident Reporting System (NARS) Form

UTILITY MESSAGE NO. 1

STATE MESSAGE NO. N/A

1. STATUS

- [A] ACTUAL
- [X] DRILL/EXERCISE

2. STATION

- [A] BRAIDWOOD [C] CLINTON
- [X] BYRON [D] DRESDEN

- [E] LASALLE [G] ZION
- [F] QUAD CITIES

3. ONSITE CONDITION

- [A] UNUSUAL EVENT
- [B] ALERT
- [C] SITE AREA EMERGENCY
- [D] GENERAL EMERGENCY
- [E] RECOVERY
- [F] TERMINATED

4. ACCIDENT CLASSIFIED

TIME (3[A-E]): NOW
 DATE (3[A-E]): TODAY
 EAL#: CU3

ACCIDENT TERMINATED

TIME (3[F]): N/A
 DATE (3[F]): N/A

5. RELEASE STATUS

- [X] NONE
- [B] OCCURRING
- [C] TERMINATED

6. TYPE OF RELEASE

- [X] NOT APPLICABLE
- [B] GASEOUS
- [C] LIQUID

7. WIND DIR

286
 (DEGREES FROM)

8. WIND SPEED

- [A] METERS/SEC.: 16
- [B] MILES/HR.: N/A

9. RECOMMENDED ACTIONS

UTILITY RECOMMENDATION

[X] NONE (UE, Alert and SAE Only)

(GE Only)

[B] SHELTER ILLINOIS SUB-AREAS: _____
 AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

[C] SHELTER IOWA SUB-AREAS: _____
 AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

[D] EVACUATE ILLINOIS SUB-AREAS: _____
 AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

[E] EVACUATE IOWA SUB-AREAS: _____
 AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

STATE RECOMMENDATION

- [F] NONE
- [G] SHELTER SUB-AREAS: _____
- [H] EVACUATE SUB-AREAS: _____
- [I] RECOMMEND POTASSIUM IODIDE (KI) PER PROCEDURES
- [J] COMMENCE RETURN OF PUBLIC
- [K] OTHER _____

10. ADDITIONAL INFORMATION NONE

Verified With: <u>PEER CHECK</u>	Approved By: <u>NAME</u>
----------------------------------	--------------------------

11. TRANSMITTED BY:

NAME

PHONE NUMBER

TIME/DATE

[A] EXELON: _____

[B] STATE: _____

[C] COUNTY: _____

12. RECEIVED BY:

NAME

ORGANIZATION

TIME/DATE

Braidwood
(UE, Alert, SAE, escalated GE(s),
Termination and Recovery)
NARS Code 20

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>

(Only if NARS #1 is a GE)
NARS Code 38

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	# Grundy Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Kankakee Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Will County Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>
<input type="checkbox"/>	Grundy Co. EMA	<input type="checkbox"/>
<input type="checkbox"/>	Kankakee Co. EOC	<input type="checkbox"/>
<input type="checkbox"/>	Will Co. EOC	<input type="checkbox"/>

ROLL CALL
Initial Roll Call Complete:

(time / date)

Clinton
(UE, Alert, Site Area and escalated
General Emergencies)
NARS Code 98

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>

(Only if NARS #1 is a GE)
NARS Code 36

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	# DeWitt Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>
<input type="checkbox"/>	DeWitt Co. EOC	<input type="checkbox"/>

LaSalle
(UE, Alert, SAE, escalated GE(s),
Termination and Recovery)
NARS Code 20

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>

(Only if NARS #1 is a GE)
NARS Code 25

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	# Grundy Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# LaSalle Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>
<input type="checkbox"/>	Grundy Co. EMA	<input type="checkbox"/>
<input type="checkbox"/>	LaSalle Co. ESDA	<input type="checkbox"/>

Byron
(UE, Alert, SAE, escalated GE(s),
Termination and Recovery)
NARS Code 20

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>

(Only if NARS #1 is a GE)
NARS Code 37

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	** Ogle Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	** Rochelle Police	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>
<input type="checkbox"/>	Ogle Co. ESDA	<input type="checkbox"/>
<input type="checkbox"/>	Ogle Co. EOC	<input type="checkbox"/>

Dresden
(UE, Alert, SAE, escalated GE(s),
Termination and Recovery)
NARS Code 20

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>

(Only if NARS #1 is a GE)
NARS Code 22

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	# Grundy Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Kendall Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Will County Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>
<input type="checkbox"/>	Grundy Co. EMA	<input type="checkbox"/>
<input type="checkbox"/>	Kendall Co. EOC	<input type="checkbox"/>
<input type="checkbox"/>	Will Co. EOC	<input type="checkbox"/>

Quad Cities
(UE, Alert, SAE, escalated GE(s),
Termination and Recovery)
NARS Code 43

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	# Iowa EMD	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>
<input type="checkbox"/>	Scott Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	Clinton Co. EOC	<input type="checkbox"/>
<input type="checkbox"/>	Scott Co. EOC	<input type="checkbox"/>

(Only if NARS #1 is a GE)
NARS Code 23

<u>Initial</u>		<u>Final</u>
<input type="checkbox"/>	# Illinois EMA	<input type="checkbox"/>
<input type="checkbox"/>	# Iowa EMD	<input type="checkbox"/>
<input type="checkbox"/>	# Clinton Co. EOC	<input type="checkbox"/>
<input type="checkbox"/>	# Rock Island Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Whiteside Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Scott Co. Sheriff	<input type="checkbox"/>
<input type="checkbox"/>	# Scott Co. EOC	<input type="checkbox"/>
<input type="checkbox"/>	Whiteside Co. ESDA	<input type="checkbox"/>
<input type="checkbox"/>	Rock Island ESDA	<input type="checkbox"/>
<input type="checkbox"/>	Illinois REAC	<input type="checkbox"/>

Commercial numbers:
IERMA 217-782-7860
(QC only)
Iowa HSEMD 515-281-3231

NOTES: # Indicates that this agency is required to be notified within 15 minutes.
** Only one needs to answer for notification.

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:

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

INITIATING CUE

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