

JOB PERFORMANCE MEASURE

Rev. 0, 8/5/2003

TASK TITLE: Perform Process Computer Point Change for AMAG Feedwater Flow Constants JPM No.: A1RO

TPO No: IV.C.CX-07

K&A No.: 2.1.19

K&A IMP: 2.9

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR _____

MATERIALS:

1. Copy of BOP FW-25
2. Operator Aid 2001-0002SIM

GENERAL REFERENCES:

BOP FW-25, Changing Main Feedwater Flow Calibration Constants
Operator Aid 2001-0002 SIM, Unit 1 FW Flow Constants

TASK STANDARDS:

Perform BOP FW-25, Changing Main Feedwater Flow Calibration Constants.

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. Unit 1 is at 99.9% Reactor Power.

INITIATING CUES:

The Unit Supervisor has directed you to reset the AMAG FW flow calibration constants from 1.000 to the Operator Aid 2001-0002SIM values per BOP FW-25 step F.4, on a request from SED. Inform the Unit Supervisor when you are ready for setpoint change verification

CRITICAL ELEMENTS: (*) 7, 8, 9, 10, 11

APPROXIMATE COMPLETION TIME: 12 minutes

NOTE

Provide the candidate with the following:

BOP FW-25, Changing Main Feedwater Flow Calibration Constants

RECORD START TIME _____

1. Review BOP FW-25.

- Review Prerequisites, Precautions, and Limitations and Actions

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Cue: (If asked) The Shift Manager has approved the performance of this procedure.

2. Review the Operator Aid for the simulator "Operator Aid 2001-002 SIM.

- Review information on the operator aid.

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Cue: (If asked) The Unit Supervisor has verified that SED wants setpoints changed to the setpoints on Operator Aid 2001-002 SIM.

3. Calculate current average value is 1.000 and effect on calorimetric power is 100% per BOP FW-25 Step F.4.b.1)

- Calculate the current average feedwater flow constant.

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- Determine current value is 1.00.

4. Calculate new average value is 0.9954 effect on calorimetric power is 99.54% per BOP FW-25 Step F.4.b. 2)

- Calculate the new average feedwater flow constant.

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- Determine new value is 0.9954.

5.	Determine the approximate change in calorimetric power to 100% -99.54% = +0.46%.	<ul style="list-style-type: none"> ◦ Calculate the change in calorimetric power to positive 0.46%. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Evaluate the impact on calorimetric to be conservative, indicated reactor power will decrease.	<ul style="list-style-type: none"> ◦ Determine the value is a positive number. ◦ Determine calorimetric power will decrease and no power reduction will be required. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*7.	Access Point Details screen on the PPC using attachment A of BOP FW-25	<ul style="list-style-type: none"> • Call up the Main Menu on the PPC. • Select option 10, Point Details. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*8.	Change the constant for K8130 using attachment A of BOP FW-25	<ul style="list-style-type: none"> • Enter desired point K8130. • Enter new value 0.9954. ◦ Verify new value accepted. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*9.	Change the constant for K8131 using attachment A of BOP FW-25	<ul style="list-style-type: none"> • Enter desired point K8131. • Enter new value 0.9954. ◦ Verify new value accepted. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*10.	Change the constant for K8132 using attachment A of BOP FW-25	<ul style="list-style-type: none"> • Enter desired point K8132. • Enter new value 0.9954. ◦ Verify new value accepted. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*11. Change the constant for K8133 using attachment A of BOP FW-25

- Enter desired point K8130.
- Enter new value 0.9954.
- Verify new value accepted.



12. Notify Unit Supervisor of completion of changes and ready for setpoint change verification.

Obtain verification of setpoint changes



Cue: The Unit Supervisor acknowledges ready for setpoint change verification.

Cue: This JPM is complete

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

Rev. 0, 8/13/2003

TASK TITLE: Perform Offsite AC Power Availability Surveillance.

JPM No.: A2RO
(N-75b)

TPO No: IV.C.AP-06

K&A No.: 2.2.12

K&A IMP. 3.0

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR _____

MATERIALS:

Copy of 1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance

GENERAL REFERENCES:

1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance (Rev. 4)

TASK STANDARDS:

Correctly perform the steps required to complete the surveillance and determine that Technical Specification compliance is met.

TASK CONDITIONS:

1. You are an extra NSO.
2. Unit 1 is in Mode 3, following a Reactor Trip.

INITIATING CUES:

1. The US has directed you to perform 1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance and report when the surveillance is complete.
2. ACB1424 has been inoperable for 8 hours and LCOARs 1/2BOL 8.1 have been initiated.
3. 345 KV BT 7-10 is out of service with its associated bus disconnects open.
4. Line 0627 is de-energized due to line fault.
5. 345 KV BT 4-5 is open from LBB on 345 KV BT 3-4
6. 345 KV BT 3-7 is open from line fault on Line 0627
7. 345 KV BT 3-4 is open, due to local actions in the switchyard
8. The US has signed and dated the 1BOSR 8.1.1-1 data package cover sheet.

CRITICAL ELEMENTS: (*) 2, 3, 4, 5, 6, 7, 8, 9

APPROXIMATE COMPLETION TIME: 15 minutes

NOTE

Provide Candidate with a copy of 1BOSR 8.1.1-1 to be used in completing this JPM.

RECORD START TIME_____

NOTE

If this JPM is given on the simulator, only the cues underlined are required to be given to the Candidate. If possible, actual indications should be used for all steps.

The information for performing this is retrieved from 0PM03J, 1PM01J, and 2PM01J. Since the simulator doesn't contain Unit 2 panels and the Candidate will need indications on the status of Unit 2 components, the evaluator will need act as Unit 2 operator providing the information or respond with indications as the operator describes where the indications are located on Unit 2.

1. Check 345 KV line status

At 0PM03J, OBSERVE bus
alive lights, line amps, and
MWs for all 345 KV lines:



**Note: The bus alive light alone is
NOT adequate verification of
bus status.**

- Line 0621
- Line 0627
- Line 0624
- Line 0622

**Cue: All 345 KV lines are
ENERGIZED except for Line
0627**

- CIRCLE 'ENERGIZED'
for Lines 0621, 0622 and
0624
- CIRCLE
'DEENERGIZED' for
Line 0627

*2. Indicate status of disconnects, breakers and SAT links.

Cue: ACBs 2412 & 2422 'GREEN' lights are LIT.

Cue: ACBs 2414 & 2424 'GREEN' lights are LIT.

Cue: *All disconnects indicate closed except for 345 KV BT 7-10 Bus 7 and Bus 10 disconnects which are open.*

Cue: Both units SAT x-tie links are REMOVED

Cue: Both units SAT disconnect links are INSTALLED

INDICATE:



- Open disconnects, breakers and removed SAT links using " O "

- Closed disconnects, breakers and installed SAT links using " X "

Indicate " O " for the following items:

- 345 KV BT 7-10 and associated bus disconnects
- 345 KV BT 3-4
- 345 KV BT 4-5
- 345 KV BT 3-7

*3. Trace single path along dashed lines from any energized offsite power source to Unit ONE SAT banks.

Note: Because of the configuration of the switchyard there is only one available path to credit to Unit 1 to allow a second path for Unit 2

TRACE path correctly on data sheet:



- Line energized, breakers and disconnects closed

*4. Trace second path from second independent power source to Unit TWO SAT banks to verify independent paths exist from offsite power through switchyard to both units SAT banks

TRACE second path correctly on data sheet:



- L0621 and L0622 NOT BOTH used
- Two paths DO NOT overlap

ENTER 'Yes' for step 5 of data sheet D3

*5. Check normal and reserve 345 KV buses energized	VERIFY bus alive light and voltmeter indications for:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cue: 345 KV bus 6 ENERGIZED	<ul style="list-style-type: none"> • 345 KV bus 6 			
Cue: 345 KV bus 13 ENERGIZED	<ul style="list-style-type: none"> • 345 KV bus 13 <p>ENTER 'Yes' for steps 6a and 6b on data sheet D3</p>			
*6. Check normal and reserve power SATs available	VERIFY 'X' and 'Y' winding MW and amps indication for:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cue: SATs 142-1 and 142-2 ENERGIZED	<ul style="list-style-type: none"> • SATs 142-1 and 142-2 			
Cue: <u>SATs 242-1 and 242-2</u> ENERGIZED	<ul style="list-style-type: none"> • SATs 242-1 and 242-2 <p>ENTER 'Yes' for steps 7a and 7b on data sheet D3</p>			
*7. Check ESF buses 141 and 142 energized	CHECK bus alive lights, SAT feeder breaker to bus position and bus voltmeter indication for:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cue: ACB 1412 'GREEN' light is LIT, bus 141 ENERGIZED	<ul style="list-style-type: none"> • Bus 141 			
Cue: ACB 1422 'GREEN' light is LIT, bus 142 ENERGIZED	<ul style="list-style-type: none"> • Bus 142 <p>ENTER 'Yes' for steps 8a and 8b on data sheet D3</p>			

*8. CHECK ESF buses 241 and 242 energized	CHECK bus alive lights, SAT feeder breaker to bus position and bus voltmeter indication for:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Cue: <u>ACB 2412 'GREEN' light is LIT, bus 241 ENERGIZED</u>	• Bus 241
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Cue: <u>ACB 2422 'GREEN' light is LIT, bus 242 ENERGIZED</u>	• Bus 242
ENTER 'Yes' for steps 9a and 9b on data sheet D3	

*9. Check ESF crosstie breakers available	VERIFY position and control power available:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Cue: <u>ACB 1412 'GREEN' light LIT</u>	• ACB 1412
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Cue: <u>ACB 1414 'GREEN' light LIT</u>	• ACB 1414
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Cue: <u>ACB 2412 'GREEN' light LIT</u>	• ACB 2412
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Cue: <u>ACB 2414 'GREEN' light LIT</u>	• ACB 2414
--	------------

Cue: <u>ACB 1422 'GREEN' light LIT</u>	• ACB 1422
--	------------

Cue: <u>ACB 1424 'GREEN' light NOT LIT</u>	• ACB 1424
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Cue: <u>ACB 2422 'GREEN' light LIT</u>	• ACB 2422
--	------------

Cue: <u>ACB 2424 'GREEN' light LIT</u>	• ACB 2424
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ENTER 'Yes' for steps 10a through 10e and steps 10g through 10h on data sheet D4

ENTER NO' for step 10f on data sheet D4

10. Report to Unit Supervisor completion of surveillance.	◦ Inform Unit Supervisor of completion of 1BOSR 8.1.1-1.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Cue: <u>The Unit Supervisor acknowledges completion of 1BOSR 8.1.1-1.</u>

Cue: <u>This JPM is completed</u>

RECORD STOP TIME

COMMENTS:

JOB PERFORMANCE MEASURE

Rev. 0, 8/20/2003

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

JPM No.: A3RO
(N-100a)

TPO No: IV.C.GW-01

K&A No.: 2.3.9

K&A IMP: 3.9/3.9

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR _____

MATERIALS:

1. Copy of BCP 400-TCNMT/ROUTINE completed for Unit 1 up to and including Section 2
2. Ensure that either the 0A or 0B Aux Building Exhaust Fan is in operation.
3. RM11 Supervisory Key

GENERAL REFERENCES:

BCP 400-TCNMT/ROUTINE, Gaseous Effluent Release Form Type: Routine
Containment Release (Rev. 11)

TASK STANDARDS:

Take the actions necessary to perform Section 3 of BCP 400-TCNMT/ROUTINE

TASK CONDITIONS:

1. You are the Unit 1 Assist NSO.
2. A Unit 1 containment release is pending.
3. 1PR11J is INOPERABLE

INITIATING CUES:

You have been instructed to perform Section 3 of BCP 400-TCNMT/ROUTINE in
preparation for this release commencing at step 3.1.1.3.

CRITICAL ELEMENTS: (*) 6, 7, 10, 11, 12

APPROXIMATE COMPLETION TIME: 15 minutes

RECORD START TIME _____

NOTE

- If this JPM is performed on the simulator, only the underlined cue need to be provided to the trainee.
- To initiate this JPM, hand the partially completed BCP 400-TCNMT/ROUTINE to the trainee.

- | | | | | |
|---|---|--------------------------|--------------------------|--------------------------|
| 1. Refer to the partially completed BCP 400-TCNMT/ROUTINE | ◦ REVIEW BCP 400-TCNMT/ROUTINE for completeness up to Section 3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|---|--------------------------|--------------------------|--------------------------|

NOTE

Step 2 and 3 of the JPM are provided in case the Candidate wishes to verify previously completed steps and may be marked N/A if the Candidate initiates the Release Package at step 3.1.1.3 as cued.

- | | | | | |
|--------------------------------|--|--------------------------|--------------------------|--------------------------|
| 2. Instrumentation operability | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--------------------------------|--|--------------------------|--------------------------|--------------------------|

Cue: *The daily channel check of 1RE-PR001 was previously performed and was satisfactory*

- VERIFY/COMPLETE the daily channel check on 1RE-PR001
- PERFORM the 1PR01J source/channel check

- | | | | | |
|--|--|--------------------------|--------------------------|--------------------------|
| 3. Review Check Source test surveillance of 1PR01J | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|--|--------------------------|--------------------------|--------------------------|

Cue: *Another RO had just completed the check source test surveillance 10 minutes ago*

- Perform Check Source test of 1PR01J
- Review Surveillance for completion

- | | | | | |
|------------------------------|--|--------------------------|--------------------------|--------------------------|
| 4. Noble gas trend on 1PR11J | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------------------------------|--|--------------------------|--------------------------|--------------------------|

Cue: *1RE-PR011J is inoperable (provided as initial condition)*

- VERIFY noble gas trend
- MARK step N/A

5. "As Found" setpoints of 1RE-PR001

RECORD "As Found" setpoints of 1RE-PR001gas channel:

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- High alarm setpoint
- Alert alarm setpoint

NOTE

Provide the candidate with the RM11 Supervisory Key as the Unit Supervisor

*6. RM-11 supervisory mode

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Cue: *RM-11 is in the supervisory mode of operation*

- PLACE RM-11 in Supervisory Mode

*7. Select monitor

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Cue: *1PB101 has been selected*

- SELECT 1PB101 and DEPRESS the SEL key

NOTE

Step 8 and 9 of the JPM may NOT be performed as allowed by a NOTE in the Release Package and the operator may mark the Release Package steps 3.1.1.7 and 3.1.1.8 as N/A.

8. Select HIGH alarm setpoint channel

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Cue: The channel item key has been pressed

- DEPRESS Channel Item key
- KEY IN "9"
- DEPRESS the SEL key

Cue: *"9" has been keyed in*

Cue: *The select key has been pressed*

9. High alarm setpoint verification.



Cue: *The HIGH alarm setpoint has been verified.*

- ENTER the HIGH alarm setpoint on 1PB101 per Step 2.5
- RECORD the HIGH alarm setpoint value

NOTE

The Alternate path starts during the manipulation of the setpoints in the RM-11, Step 11 in the JPM.

The candidate should inform the SRO of the Rad Monitor problem when the monitor indicates a failure and secure performance of the task. Step 12 in the JPM is the SRO notification.

*10. Select ALERT alarm channel



Cue: The channel item key has been pressed

Cue: *“10” has been keyed in*

Cue: *The select key has been pressed*

- DEPRESS Channel Item key
- KEY IN “10”
- DEPRESS the SEL

*11. Alert alarm setpoint



Cue: *The ALERT alarm setpoint has been entered*

Cue: *Several seconds have passed and the new ALERT alarm setpoint is displayed*

- ENTER the ALERT alarm setpoint on 1PB101 per Step 2.5
- RECORD the new ALERT alarm setpoint value

*12. Notify the US of the radiation monitor problem.

Cue: *The Unit Supervisor has been notified of the 1PR01J radiation monitor failure.*

- Identify the 1PR01J radiation monitor failure and inform the Unit Supervisor.



Cue: *This JPM is completed*

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

Rev 0, 5/12/2003

TASK TITLE: Perform Offsite Notification (NARS form transmittal)
for Alert classification

**JPM No.: A4 RO
(N-923a)**

TPO No: IV.F.ZP-14

K&A No.: 2.4.43

K&A IMP. 2.8/3.5

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE _____

LOCATION: IN PLANT _____

SIMULATOR _____

MATERIALS:

1. EP-MW-114-100, MWROG OFFSITE NOTIFICATIONS (rev. 2)
2. Completed and approved NARS Form ready for transmittal

GENERAL REFERENCES:

EP-MW-114-100, MWROG OFFSITE NOTIFICATIONS (rev. 2)

TASK STANDARDS:

Transmit the completed NARS form within 15 minutes of the initiating cue using the NARS notification system

TASK CONDITIONS:

1. You are the Unit 2 Assist NSO.
2. 1BEP-3 is in progress.
3. Unit 2 Unit Supervisor is performing Status Tree monitoring.
4. The Emergency Director (SM) has classified an ALERT.

INITIATING CUES:

A NARS form has been filled out and approved. The Emergency Director has directed you to transmit the initial NARS form per EP-MW-114-100 MWROG OFFSITE NOTIFICATIONS.

This is a time critical JPM for NARS notification

CRITICAL ELEMENTS: (*)

2, 3, 4, 5 and 6

APPROXIMATE COMPLETION TIME: 15 minutes

CRITICAL TIME PORTION: 15 * minutes

RECORD START TIME _____

NOTE

EXAMINER NOTE: Record a clock time value on NARS form in block 4 "Accident Classified" of approximately 2 minutes prior to handing form to candidate and today's date.

Provide the candidate a copy of an Emergency Director approved NARS form ready for transmittal (Candidate Copy).

AND

Provide the candidate a copy of EP-MW-114-100 rev. 2.

1. Initiate the NARS transmittal.
 - Refer to EP-MW-114-100 step 4.2 and Attachment 1, NARS Form ☐ ☐ ☐
 - Determine that CODE 20 must be used on the NARS phone.

NOTE

Have the candidate simulate/describe the use of the NARS phone unless the JPM is performed on the Simulator, then actual usage is optional.

NOTE

ALTERNATE PATH begins here with the need to complete the notification using commercial telephone line

<p>*2. Establish communications with required agencies.</p>	<p>Establish communications as follows:</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Note: Have the candidate describe which phone to use if not given in the simulator or MCR.</p>	<ul style="list-style-type: none"> Pick up the BLACK NARS phone. 			
<p>Cue: <u>There is no dial tone and phone doesn't respond to dialing code.</u></p>	<p>No dial tone</p> <ul style="list-style-type: none"> Determine need to use commercial line. 			
<p>*3. Perform NARS transmittal using commercial phone line to Illinois EMA</p>	<p>Call on commercial phone line:</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Cue: <i>(Provide the following response to commercial telephone line call)</i></p> <p><u>This is Illinois EMA</u></p>	<ul style="list-style-type: none"> Dial (217) 782-7860 on commercial line for Illinois EMA 			
<p>Note: IDNS (NOT Required for time critical notification and would be a separate phone call)</p>	<ul style="list-style-type: none"> Read standby message inserting "Byron Control Room" 			
<p>Note: Messages must include "Byron Control Room"</p>	<ul style="list-style-type: none"> Read Roll call message inserting "Byron Control Room". 			
<p>Cue: <i>(provide the following response for roll call)</i></p> <p><u>Illinois EMA</u></p>	<ul style="list-style-type: none"> Take roll call. <p>Mark box for Illinois EMA on page 2 of NARS form.</p>			
<p>*4. Record time and date message was initiated.</p> <p>Roll call completion time_____</p>	<ul style="list-style-type: none"> Record the time and date on the NARS Form under "Initial Roll Call Complete" heading on page 2. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE

The critical time of 15 minutes is determined from the classification time to the initial roll call is complete: Roll call completion time ____ minus classification time ____ = ____ * (LESS than 15 minutes.)

*5. Verbally transmit the NARS form information.

- Transmit NARS form blocks 1-10 over the commercial telephone line using the procedure directed communication standards.

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*6. Record block 11 data

In block 11:

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- Mark [A]
- Record candidate's name.
- Record outside phone number.

Cue: (If asked) outside line # is (815)-234-8811

Note: If NOT asked other acceptable outside phone numbers could include:

**(815) 406-3806 or 3807
(815) 406-2202**

7. Record the time and date the message was transmitted.

- Record in block 11 current time and date.

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8. Enter block 12 data

Cue: John Smith

- Request name of Illinois EMA representative. ☆ ☐ ☐
- Record under 'NAME'.
- Record Illinois EMA in 'ORGANIZATION' box.
- List time/date.

9. Perform final roll call.

Cue: *(provide the following response for roll call):*

Illinois EMA

- Perform final roll call ☐ ☐ ☐
- Document roll call on page 2 of NARS form.

10. Ask if there are any questions and clarify as needed

Cue: No questions on information.

- Ask if there are any questions and clarify as needed. ☐ ☐ ☐

Note: When candidate reports completion of NARS transmittal to Emergency Director (SM):

Cue: *THIS COMPLETES THIS JPM.*

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

Rev. 0, 8/19/2003

TASK TITLE: Perform Shutdown Margin Calculations

JPM No.: A1aSRO
(S-979a)

TPO No: IV.C.GP-03

K&A No.: 2.1.25

K&A IMP. 3.1

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR _____

MATERIALS:

Copy of completed 1BOSR 1.1.1-1 with signed cover sheet
U-1 COLR

GENERAL REFERENCES:

1. 1BOSR 1.1.1-1, Shutdown Margin Surveillance (Rev. 8)
2. BCB-1, Table 1-1, Byron Unit 1 Cycle 11A Minimum Required Boron Concentration (ppm) for Shutdown Margin as a Function of Temperature and Burnup (Rev. 22)
3. Unit 1 Core Operating Limits Report

TASK STANDARDS:

Perform the actions necessary to complete a shutdown margin surveillance while shutdown

TASK CONDITIONS:

1. You are the Unit 1 Unit Supervisor.
2. The Unit is in Mode 3 following a Tech Spec shutdown
3. RCS temperature is at 557°F and stable.
4. All control rods are inserted.
5. Boron concentration is 1092 ppm.
6. Reactor average burn-up is 6500 EFPD, MOL (per RRD).
7. Unit shutdown was 8 hours ago.
8. Decision has been made to go to Mode 4.
9. Bounding temperature is 557°F to 320°F
10. A shutdown margin calculation is needed for the 9 to 19 hours timeframe since shutdown for the cooldown.

INITIATING CUES:

The Unit 1 Assist NSO has just completed 1BOSR 1.1.1-1, Shutdown Margin Surveillance.

The Shift Manager directs you to perform a review of the Shutdown Margin Surveillance.

CRITICAL ELEMENTS: (*) 4, and 5

APPROXIMATE COMPLETION TIME: 20 minutes

RECORD START TIME _____

NOTE

Supply the trainee with a completed copy of 1BOSR 1.1.1-1.

JPM task conditions and initiating cues provide the values for core average burn-up (6500), RCS Temp (557), RCS boron concentration (1092 ppm), and all control rods (operable).

1. Refer to completed 1BOSR 1.1.1-1, Shutdown Margin Surveillance

- Review the information in the completed 1BOSR 1.1.1-1

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Note: Based on step F.1a and the time since shutdown there is a current SDM, step F.3 is the appropriate step to start the surveillance.

Cue: All prerequisites are met

2. Present conditions

Review present condition information:

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- Time and date
- Core average burnup
- RCS average temperature

Cue: (If Asked) The last RCS boron sample was 1 hour ago

- RCS boron concentration
- Total inoperable control rods
- Required SDM from COLR

Note: Required SDM from COLR is 1.3% $\Delta K/K$ = 1300 pcm

3. Bounding assumptions

Cue: *The Shift Manager decided that the bounding core average temperature will be between 557°F and 320 °F*

NOTE: The most limiting core temperature will be 320°F

- Review bounding core average temperature
- Review most limiting core average temperature
- Review bounding time and date

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*4. Review Minimum Required Boron and Identify incorrect value used in step F.5.a.

NOTE: The minimum required Boron value should be '1287 ppm'. The value used in the surveillance was for 557°F.

- Minimum Required Boron and Identify incorrect value used in step F.5.a.
- Identify correct value from 1BCB Table 1-1 for 320°F.

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*5. Determine predicted shutdown margin inadequate for proposed time frame.

- Determine shutdown margin calculation does not meet minimum requirement and rest of surveillance needs to be completed.

☐ ☐ ☐

6. Notify RO and SM of error

Cue: *The RO and Shift Manager acknowledge procedure error and need to re-perform surveillance*

Cue: *This JPM is completed*

- Notify RO of error and need to complete surveillance.
- Notify Shift Manager of surveillance error and shutdown margin is indeterminate at this point for cooldown.

☐ ☐ ☐

RECORD STOP TIME _____

COMMENTS:

TASK TITLE: Initiate a LCOAR. (SRO)

JPM No.: A.1.b SRO

TPO No.: AM-295

K&A No.: 2.1.12

K&A IMP. 4.0

TRAINEE: _____

DATE: _____

The Trainee PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____

SIMULATE: _____

LOCATION: IN PLANT _____

SIMULATOR: _____

MATERIALS:

1BOL 8.6, LCOAR Battery Parameters – Operating Tech Spec LCO #3.8.6 (Rev. 3)

GENERAL REFERENCES:

1. BAP 1400-6, Technical Specification Limiting Conditions for Operation Action Requirements (LCOAR) (Rev. 26)
2. 1BOL 8.6, LCOAR Battery Parameters – Operating Tech Spec LCO #3.8.6 (Rev. 3)

TASK STANDARDS:

Take the actions necessary to initiate a LCOAR and determine the action for 125 VDC ESF Battery charging at 4 amps with 1 battery cell at 2.05 Volts

TASK CONDITIONS:

1. You are the Unit Supervisor.
2. The unit is at 100% steady state power, all conditions normal.
3. No other LCOARs have been initiated in the past 14 days.

INITIATING CUES:

1. Results from a Battery Surveillance have determined that 1 cell on DC Battery 111 has a cell voltage of 2.05 and the 111 Battery Charger is charging at 4 amps on Float.
2. Initiate the required LCOAR.

CRITICAL ELEMENTS: (*) 2, 3, 4, 7

APPROXIMATE COMPLETION TIME: 14 minutes

RECORD START TIME _____

- | | | | | |
|---|------------------------------|--------------------------|--------------------------|--------------------------|
| 1. Refer to BAP 1400-6, Technical Specification Limiting Conditions for Operation Action Requirements (LCOAR) | ◦ LOCATE and OPEN BAP 1400-6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|------------------------------|--------------------------|--------------------------|--------------------------|

NOTE: Step 1 of this JPM is optional

- | | | | | |
|--|---|--------------------------|--------------------------|--------------------------|
| *2. Identify LCO 3.8.6 not satisfied and proper LCOAR is 1BOL 8.6, LCOAR Battery Parameters – Operating Tech Spec LCO #3.8.6 | • Determine 125 VDC Battery inoperability addressed by LCO 3.8.6 and LCOAR 1BOL 8.6 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|--|---|--------------------------|--------------------------|--------------------------|

NOTE: Copies of LCOARs are located in the main control room on Unit 2 side of center desk or can be printed from ECF.

NOTE

Provide the candidate with a copy of 1BOL 8.6, LCOAR Battery Parameters – Operating Tech Spec LCO #3.8.6 after completion of step 2 of the JPM.

- | | | | | |
|-------------------------------------|-----------------------|--------------------------|--------------------------|--------------------------|
| *3. Refer to Section A of 1 BOL 8.6 | ENTER into Section A: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|-------------------------------------|-----------------------|--------------------------|--------------------------|--------------------------|

Cue: Notification occurred 5 minutes ago

NOTE: Closed bullet items are critical parts of this step.

- Time/Date
- By
- Title
- Present mode
- Initiating event (words that describe battery cell and charger amps condition)

*4. Safety function determination



Cue: *There are no other inoperable or degraded support or supported equipment on any B train equipment*

- PERFORM SFD
- Indicate NO in Section C

5. Signed by Shift Manager



Cue: The shift manager, Rich Williams, has been notified of the LCOAR entry.

- NOTIFY SM

Cue: *Log entry made stating that this is an “unplanned entry”*

- ENTER “unplanned” in LOG

6. CRs, work requests, and CO



Cue: *A CR is being written against the Battery Parameters for DC Battery 111 by an extra NSO, work request number is 03002345.*

- WRITE CR

*7. Section D of 1BOL 8.6

COMPLETE LCOAR Table
page 5:



**NOTE: Other admin actions
directed in BAP 1400-6 but
not required by this jpm
include:**

- Update inop status board
- Unit train board update
- Log entry

- Review all Conditions
in Condition table.
 - CIRCLE Condition A.
 - CIRCLE Condition B
 - CIRCLE Condition F.
- ENTER notification
Time/Date AND sign for
each Condition
statement entered.
(A, B, F on pages 6 & 8)
- Determine Immediate
action to Declare
Battery 111 inoperable
and enter LCO 3.8.4
Condition statement.

Cue: This JPM is completed

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

Rev. 0, 8/13/2003

TASK TITLE: Review Offsite AC Power Availability Surveillance.

JPM No.: A2 SRO
(S-975b)

TPO No: IV.C.AP-06

K&A No.: 2.2.12

K&A IMP. 3.4

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR _____

MATERIALS:

1. Completed copy of 1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance
2. Completed copy of 1BOL 8.1 for ACB 1424 INOPERABILITY

GENERAL REFERENCES:

1BOSR 8.1.1-1, Normal and Reserve Offsite AC Power Availability Weekly Surveillance (Rev. 4)

TASK STANDARDS:

Review the completed Surveillance 1BOSR 3.8.1.1 Rev.4, Normal and Reserve Offsite AC Power Availability Weekly Surveillance and DETERMINE it was not performed correctly and would pass the acceptance criteria if reperformed.

TASK CONDITIONS:

1. You are the WEC SRO.
2. Unit 1 is in Mode 3 following a Reactor trip 35 minutes ago coincident with a line fault on Line 0627.

INITIATING CUES:

1. ACB1424 has been INOPERABLE for 8 hours.
2. 345 KV BT 7-10 is out of service with its associated bus disconnects open.
3. Line 0627 is de-energized due to line fault.
4. 345 KV BT 4-5 is open from LBB on 345 KV BT 3-4.
5. 345 KV BT 3-7 is open from line fault on Line 0627.
6. 345 KV BT 3-4 is open, due to local actions in the switchyard.

7. 1BOSR 8.1.1-1 has just been handed to you by an RO reporting that the surveillance did NOT pass due to the status of ACB 1424.
8. Review 1BOSR 8.1.1-1 for completion and determine any appropriate additional Tech Spec actions for the Shift Manager.

CRITICAL ELEMENTS: (*) 2, 3

APPROXIMATE COMPLETION TIME: 15 minutes

NOTE

Provide Candidate with a copy of completed 1BOSR 8.1.1-1 to be used in completing this JPM with a signed cover sheet and NSO signature and completion time.

RECORD START TIME _____

NOTE

If this JPM is given on the simulator, only the cues underlined are required to be given to the Candidate. If possible, actual indications should be used for all steps.

- | | | | | |
|--|--------------------------------|--------------------------|--------------------------|--------------------------|
| 1. Review completed Offsite Sources. ° | Review completed 1BOSR 8.1.1-1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | Surveillance data sheets. | | | |

Cue: (if asked) The surveillance was performed for LCO 3.8.1 Condition A, Required Action A.1 once per 8 hour performance which is required in 36 minutes.

- | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|
| *2. Determine surveillance completion error, step 5 improperly performed. | • Determine Unit 2 Offsite source improperly utilized Line 0622. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--|--------------------------|--------------------------|--------------------------|

Note: IF the candidate decides at this point to stop and return the surveillance to the RO for reperformance, THEN provide the following cue.

Cue: The Shift Manager requests determination if the surveillance would pass if properly reperformed.

*3. Determine Surveillance step 5 is met based on availability of Line 0624 as Offsite source to Unit 2.

Cue: *The Shift Manager acknowledges surveillance would pass if properly reperformed and no additional Tech Spec actions are required.*

- Determine surveillance would pass using available Line 0624 through BT 10-11 and BT 11-12, except for pre-existing inoperability on ACB 1424.

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4. Direct RO to reperform surveillance due to the initial performance error on Data Sheet D2.

Cue: *RO acknowledges error and will immediately reperform the surveillance.*

- Direct RO to reperform surveillance

☐☐☐

RECORD STOP TIME _____

COMMENTS:

JOB PERFORMANCE MEASURE

Rev. 0, 8/25/2003

TASK TITLE: Review and Approved Liquid Release

JPM No.: A.3 SRO
(S-941)

TPO No: VIII.C.HP-001

K&A No.: 2.3.6

K&A IMP: 3.1

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: IN PLANT _____ SIMULATOR _____

MATERIALS:

1. Copy of BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T completed up to Section 7.
2. Copy of completed 0BOSR 11.a.5-1, Source Check of Liquid Radwaste Effluent Monitor 0PR01J Surveillance

GENERAL REFERENCES:

1. BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T.
2. 0BOSR 11.a.5-1, Source Check of Liquid Radwaste Effluent Monitor 0PR01J Surveillance.

TASK STANDARDS:

Perform supervisory review and approval of BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T.

TASK CONDITIONS:

1. You are the Unit 1 Supervisor.
2. A Liquid Release of 0WX01T is pending.
3. 0PR01J is in LCOAR but functioning following maintenance. This release package has been prepared as the Post Maintenance Testing for the 0PR01J.
4. The Unit 1 Assist NSO has just placed the release package in your in box stating that it is ready for approval.

INITIATING CUES:

The Shift Manager has directed you to review the release package and perform Section 7 of BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T.

Inform the Shift Manager when the release can be initiated.

CRITICAL ELEMENTS: (*) 2

APPROXIMATE COMPLETION TIME: 20 minutes

NOTE

Provide the candidate with the following copies;

- Partially completed BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T completed up to Section 7
- Completed 0BOSR 11.a.5-1, Source Check of Liquid Radwaste Effluent Monitor 0PR01J Surveillance.

RECORD START TIME _____

- | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|
| 1. Refer to partially completed BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T completed up to Section 7. | Review BCP 400-TWX01 Liquid Radwaste Release Form for Release Tank 0WX01T completed up to Section 7 for completion | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--|--------------------------|--------------------------|--------------------------|

- | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|
| *2. Review Step 6.9.5 and 6.17.10 and Identify wrong HIGH alarm setpoint indicated. | • Identify from review that Step 6.17.10 does NOT reflect proper HIGH alarm setpoint for 0PR01J. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--|--------------------------|--------------------------|--------------------------|

Note: The correct HIGH alarm is 1.23E-04 micro Curies/ml. The setpoint was incorrectly set at 1.24E-03 micro Curies/ml.

Information from steps 5.4.1. 3. B., 5.8, and 6.9.5 was transposed to step 6.17.10 for the HIGH alarm setpoint for 0PR01J.

- | | | | | |
|---|--|--------------------------|--------------------------|--------------------------|
| 3. Refuse to sign for release approval until error has been resolved. | ◦ Notify NSO of error and direct correction/ re-performance of step 6.17.10. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--|--------------------------|--------------------------|--------------------------|

Cue: NSO acknowledges and will correct the release monitor setpoint error.

Cue: This JPM is complete.

RECORD STOP TIME _____

JOB PERFORMANCE MEASURE

Rev. 0, 8/21/2032

TASK TITLE: Classify Event and Fill Out a NARS Form
(LOCA)

JPM No.: A4SRO
(S-916)

TPO No: 8F.ZP-008

K&A No.: 2.4.41

K&A IMP: 4.1

TRAINEE: _____

DATE: ____/____/____

The Trainee: PASSED _____ this JPM

TIME STARTED: _____

FAILED _____

TIME FINISHED: _____

EVALUATION METHOD: PERFORM _____ SIMULATE _____

LOCATION: OTHER _____ SIMULATOR _____

MATERIALS:

1. Copy of EP-MW-114-100, Attachment 1
2. Key for NARS Form

GENERAL REFERENCES:

1. EP-MW-114-100 (Rev 2), MWROG Offsite Notifications (Attachment 1, Nuclear Accident reporting System – NARS)
2. EP-AA-1002 (Rev 15) Exelon Nuclear Radiological Emergency Plan Annex for Byron Station (Section 3, Classification of Emergencies)

TASK STANDARDS:

Perform an Emergency Plan evaluation for highest accident classification and associated EAL and fill out NARS form.

TASK 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.

INITIATING CUES (Also see Plant Conditions, next page):

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.**

CRITICAL ELEMENTS: (*) 2 & 5

CRITICAL COMPLETION TIME: 15 minutes

APPROXIMATE TOTAL COMPLETION TIME: 20 minutes

PLANT CONDITIONS:

- Unit 1 is Mode 5
- Unit 2 is at full power.
- During movement of a 5500 pound load past the Spent Fuel Pool, the lifting and restraining devices failed and the object slid into the spent fuel pool. Several spent fuel assemblies were observed to have significant damage and level in the spent fuel pool was decreasing when personnel evacuated the area.
 - Both 0RE-AR055 and 0RE-AR056 Fuel Handling Incident Area Radiations monitors are in High Alarm.
 - Unit 1 WRGM release channel 1PF430 indicates 1.66 E+06 microCi/sec
 - Unit 2 WRGM release channel 2PF430 indicates 1.48 E+06 microCi/sec

RECORD START TIME _____

NOTE

The completion of Step 2 fulfills the critical time portion of this JPM.

1. Refer to Exelon Nuclear – Radiological Emergency Plan Annex for Byron Station.

- Locate and Open, EP-AA-1002 Section 3, Classification of Emergencies



Note: This step may be performed at any time

PERFORMANCE CHECKLIST	STANDARDS	SAT	UNSAT	N/A
<p>*2. Classify the Event utilizing Section 3, Classification of Emergencies.</p> <p>Cue: (if asked) The reading on 1PR30J = 1.66E+06 microCuries/Sec. and increasing slowly.</p> <p>Cue: (if asked) The reading on 2PR30J = 1.48E+06 microCuries/Sec. and increasing slowly.</p> <p>Note: The time critical portion of this JPM is measured from the time the cues are provided to the time entered in Box 4 of the NARS form, this must be less than or equal to 15 minutes.</p> <p>Critical portion stop time _____</p>	<ul style="list-style-type: none"> Classify event as SITE AREA EMERGENCY, from RS1 Effluent Monitor value in excess of 3.1E+06 microCuries/Sec. release rate through Aux Building Vent stacks 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3. Obtain NARS form, page 10 and 11 of EP-MW-114-100, 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. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE

Provide the examinee with a blank copy of the NARS form.

<p>4. Refer to EP-MW-114-100, MWROG Offsite Notifications, to complete NARS form.</p> <p>Note: Step 4 may be performed at any time</p>	<ul style="list-style-type: none"> Locate and Open, EP-MW-114-100, MWROG Offsite Notifications, Section 4.1, to complete NARS form. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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PERFORMANCE CHECKLISTSTANDARDSSATUNSATN/A

*5. Fill out NARS form according to instructions, EP-MW-114-100, Attachment 1 Nuclear Accident Reporting System (NARS).

Cue: *(if asked) The wind direction on the PPDS is 190°.*

Cue: *(if asked) The wind speed on the PPDS is 13 meters/sec.*

Cue: *This completes this JPM*

- Fill out NARS form according to instructions, EP-MW-114-100, Attachment 1 Nuclear Accident Reporting System (NARS).

- BLOCKS 2 thru 9 must be filled in correctly to meet the critical portion of filling out the NARS form. (See attached KEY).

☐☐☐

RECORD STOP TIME_____

COMMENTS: