Job Performance Measure Perform 1BwOS RF-1							
JPM Number: <u>R-113</u>							
	Revision Number: <u>151</u>						
	Date: <u>03 / 28 / 2016</u>						
Developed By:	Eric Steinberg Instructor	<u>03/28/2016</u> Date					
Validated By:	Dan Burton SME or Instructor	<u>04/22/2016</u> Date					
Reviewed By:	Kevin Lueshen Operations Representative	<u>04/22/2016</u> Date					
Approved By:	Eric Steinberg Training Department	<u>04/26/2016</u> Date					

Braidwood R-113 rev 151 JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

 1.	Task description and number, JPM descripti	on and number are identified.					
 2.	Knowledge and Abilities (K/A) references are included.						
 3.	Performance location specified. (in-plant, co	ntrol room, simulator, or other)					
 4.	Initial setup conditions are identified.						
 5.	Initiating cue (and terminating cue if required	d) are properly identified.					
 6.	Task standards identified and verified by SM	1E review.					
 7.	7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).						
 8.	8. If an alternate path is used, the task standard contains criteria for successfu completion.						
 9.	Verify the procedure(s) referenced by this JF Procedure <u>1BwOS RF-1</u> Rev: <u>14</u> Procedure <u>Rev:</u> Rev: <u></u> Procedure <u>Rev:</u> <u></u>	PM reflects the current revision:					
 10.	Verify cues both verbal and visual are free o	f conflict.					
 11.	Verify performance time is accurate						
 12.	If the JPM cannot be performed as written w revise the JPM.	ith proper responses, then					
13. When JPM is initially validated, sign and date JPM cover page. Subvalidations, sign and date below:							
	SME / Instructor	Date					
	SME / Instructor	Date					
	SME / Instructor	Date					

Revision Record (Summary)

Revision 151, New RO admin JPM for ILT 151 NRC exam.

Braidwood SIMULATOR SETUP INSTRUCTIONS

- 1. Reset the simulator to IC 21
- NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently.
- 2. Verify PPC screens are not setup with PC002 and PC003 data present.
- 3. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
- 4. This completes the setup for this JPM.
- 5. To repeat, ensure PPC screens are not setup with PC002 and PC003 data present.

Braidwood INITIAL CONDITIONS

- 1. Unit 1 is 100% power.
- 2. The 1RF008 flow indicator is spiking and suspected to be failing.
- 3. A leak rate was just completed in support of 1BwOS RF-1 step 5a.
- 4. The identified leak rate of 0.15 GPM and an unidentified leak rate of 0.035 GPM.

INITIATING CUE

- 1. You are the unit 1 admin NSO.
- Using the 8 hours for PC002 (L2001) and PC003 (L2002) provided, the unit supervisor directs you to perform 1BwOS RF-1, Unit One Containment Floor Drain Monitoring System Non Routine Surveillance, steps 1 through 9.
- 3. Report the results to the unit supervisor when step 9 is complete.

Provide 1BwOS RF-1 and data print out once examinee acknowledges the cue.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time:

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*1	Determine initial total leakage.	 Record starting date and time on Table A. Determine TOTAL LEAKAGE into sump per appendix A: Find and Record the low level date, and time. Find and Record the high level, date, and time. Calculate the level change for each channel: High – Low L2001 28.845-28.423=0.422 +/- 0.1. L2002 28.573-28.187=0.386 +/- 0.1. Calculate the time change: End time – start time. 8 hours or 480 minutes. Calculate the RF sump total leakage for each indicator: Level change/time change L2001 0.015 +/- 0.01. L2002 0.014 +/- 0.01. 			
2	Record data on table A.	 Record total leakage from appendix A on table A. Determine time requirement for next total leakage determination: Add 72 hours to time the leakage was recorded and record on table A. Record the unidentified leak rate from the leak rate. surveillance. Record the flow instrument used to track leakage. Record the flow reading used to track leakage. 			

<u>STEP</u>	<u>ELEMENT</u>		<u>STANDARD</u>	SAT	UNSAT	Comment Number
*3	Determine Limit #1.	•	Subtract the unidentified leak rate from 0.8 GPM: 0.8035=0.765. Add the leakage determined from step 7 to the sum from the previous step 0.765+0.015=0.78 +/01. Determine if Limit #1 > 15 GPM. Record the results as limit #1 on table A.			
*4	Determine Limit #2	•	Subtract 0.2 GPM from the flow determined in step 7: .015-0.2=-0.185 +/01. Record the results as limit #2 on table A.			
5	Report the results to the Unit Supervisor.	0	Results reported to US.			
CUE	Another operator will continue to That completes this JPM.	trer	nd data.			

JPM Stop Time:

JPM SUMMARY

Operator's Name:	Emp. ID#	# :	_
Job Title: □EO ⊠RO □SRO	🗆 FS 🗌 STA/IA 🗌 SR	O Cert	
JPM Title: <u>Perform 1BwOS RF-1</u> JPM Number: <u>R-113</u> Task Number and Title: <u>4C.AM-05</u> K/A Number and Importance: <u>0160</u> Suggested Testing Environment: <u>S</u> Alternate Path: □ Yes ⊠No S Reference(s): 1BwOS RF-1, rev 1 MONTIORING SYS Specification 3.4.15	Revision Number: <u>Perform Common Shiftly ar</u> <u>00G2.1.19 3.9</u> <u>imulator</u> RO Only: □Yes ⊠No 4, UNIT ONE CONTAINME STEM NON ROUTINE SUR 5, Leakage Detection Instrum	<u>151</u> nd Daily Operati Time Critical: ENT FLOOR DR VEILLANCE. Te mentation.	ng Surveillance. ⊡Yes ⊠No RAIN echnical
Actual Testing Environment: 🖂	Simulator	om 🗌 In-Pla	nt 🗌 Other
Testing Method: Simulate	Perform		
Estimated Time to Complete: 20 m	inutes Actual Tir	ne Used:	_ minutes
EVALUATION SUMMARY: Were all the Critical Elements perfe	ormed satisfactorily?	□Yes	□ No
The operator's performance was e contained within this JPM and has	valuated against standards been determined to be:	Satisfactory	Unsatisfactory
Comments:			
		7	
Evaluator's Name (Print):		_	
Evaluator's Signature:		_ Date:	

APPENDIX A

OBTAINING TOTAL LEAKAGE FROM A COMPUTER TERMINAL

- 1. OBTAIN a computer trend of the Containment Floor Drain Sump Level as follows:
 - a. START applicable computer trending program.
 - b. VERIFY computer trend is for Braidwood Station Unit 1.
 - c. OBTAIN trend for "L2001".
 - d. OBTAIN trend for "L2002".

1.0 NOTE

In the following step, the sump level trend must be stable for a minimum of two hours, however a longer time period is preferable to give more accurate results. Verify no maintenance activities are in-progress that adds water into the RF sump.

- e. USE the slide bar to obtain exact level and time value in the following steps.
- 2. CALCULATE the RF SUMP TOTAL LEAKAGE as follows:
 - a. FIND the first level change from the right of the computer screen that either indicates the sump was pumped down or stable input for at least the previous two hours.
 - b. RECORD the level and the time of the level reading for each channel:

L2001 LOW LEVEL: 28.423	TIME: 8 hours ago	DATE: Today
L2002 LOW LEVEL: 28.187	TIME: 8 hours ago	DATE: Today

c. FIND the current level reading for the sump.

Braidwood APPENDIX A (Contd)

2.		d.	RECORD the	e current level and th	e time of the lev	el rea	ding for each channel:
			L2001 HIGH	LEVEL: 28.845	TIME: NOW_		DATE: Today
			L2002 HIGH	LEVEL: 28.573	TIME: NOW_		DATE: Today
	e.	CALCUL	ATE the level change	e for each channel:			
			L2001:	28.845 HIGH (2.d)	28.423 LOW (2.b)	= ,4 L	422 +/1 EVEL DIFF
			L2002:	28.573 HIGH (2.d)	28.187 LOW (2.b)	= .; L	386 +/1 EVEL DIFF
	f.	CALCUL	ATE the time change	(in minutes) for each level diff	erence:		
			L2001:	_ NOW TIME (2.d)	8 hours ago TIME (2.b)	= 4 T	80 min TME DIFF
			L2002:	NOW - TIME (2.d)	8 hours ago TIME (2.b)	= 4 T	80 min TME DIFF
	g.	CALCUL	ATE the RF SUMP T	OTAL LEAKAGE for each cha	nnel using the following	equation	:
			<u>LEVEL DIFF</u> TIME DIFF (<u>(2.e)</u> x 17.56 2.f)	= TOTAL L	.EAKA	AGE

- L2001: (<u>.422 +/- .1</u>) x 17.56 = .015 +/- .01 gpm (480)
- L2002: (<u>.386 +/- .1</u>) x 17.56 = .014 +/- .01 gpm (<u>480</u>)

(Final)

Braidwood DATA SHEET

UNIT ONE CONTAINMENT FLOOR DRAIN MONITORING SYSTEM NON ROUTINE SURVEILLANCE

TABLE A

F.1	SURVEILLANCE START TIME/DATE	Today's date and current time
F.2	TOTAL LEAKAGE	.015 +/01 GPM
F.3	TIME/DATE TOTAL LEAKAGE DETERMINED	Current time
F.4.b	NEXT TOTAL LEAKAGE DETERMINATION DUE	Current time plus 72 hours (3 days)
F.5.b	UNIDENTIFIED RCS LEAK RATE (PER 1BwOSR 3.4.13.1)	.035 GPM
F.6	FLOW INSTRUMENT BEING USED	L2001
F.7	FLOW READING	.015 +/01
F.8.d	LIMIT #1 (0.8 GPM - STEP F.5.b + STEP F.7)	.78 +/01
F.9.b	LIMIT #2 (STEP F.7 - 0.2)	-0.185 +/01

TABLE B

Flow Instrument Being Used

DATE	TIME	INDICATED FLOW	≤ LIMIT #1	≥ LIMIT #2	DATE	TIME	INDICATED FLOW	≤ LIM	IT #1	≥LIM	IT #2
			DY DN					ΠY	□ N	ΠY	
			DY DN	DY DN				ΠY	ΠN	ΠY	
			DY DN	DY DN				ΠY	□ N	ΠY	
				DY DN				ΠY	□ N	ΠY	
			DY DN					ΠY	ΠN	ΠY	ΠN
			DY DN	DY DN				ΠY	□ N	ΠY	
			DY DN	DY DN				ΠY	□ N	ΠY	
			DY DN	DY DN				ΠY	□ N	ПΥ	
				DY DN				ΠY	□ N	ΠY	
			DY DN	DY DN				ΠY	□ N	ΠY	
			DY DN	DY DN				ПΥ	□ N	ΠY	
			DY DN	DY DN				□ Y	□ N	ΠY	
			DY DN	DY DN				ПΥ	□N	ΠY	
								ΠY	ΠN	ΠY	
			DY DN	DY DN				ΠY		ΠY	



INITIAL CONDITIONS

- 1. Unit 1 is 100% power.
- 2. The 1RF008 flow indicator is spiking and suspected to be failing.
- 3. A leak rate was just complete with an identified leak rate of 0.15 GPM and an unidentified leak rate of 0.035 GPM.

INITIATING CUE

- 1. You are the unit 1 admin NSO.
- 2. Using the 8 hours for PC002 (L2001) and PC003 (L2002) provided, the unit supervisor directs you to perform 1BwOS RF-1, Unit One Containment Floor Drain Monitoring System Non Routine Surveillance, steps 1 through 9.
- 3. Report the results to the unit supervisor when step 9 is complete.



JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

<u>NOTE:</u> All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

 1.	Task description and number, JPM description	on and number are identified.
 2.	Knowledge and Abilities (K/A) references are	e included.
 3.	Performance location specified. (in-plant, cor	ntrol 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 SM	E review.
 7.	Critical steps meet the criteria for critical step asterisk (*).	os and are identified with an
 8.	If an alternate path is used, the task standard completion.	d contains criteria for successful
 9.	Verify the procedure(s) referenced by this JF Procedure <u>1BwOSR 3.2.4.1</u> Rev: <u>9</u>	PM reflects the current revision:
 10.	Verify cues both verbal and visual are free of	f conflict.
 11.	Verify performance time is accurate	
 12.	If the JPM cannot be performed as written wirevise the JPM.	ith proper responses, then
 13.	When JPM is initially validated, sign and date validations, sign and date below:	e JPM cover page. Subsequent
	SME / Instructor	Date
	SME / Instructor	Date

SME / Instructor

Date

Revision Record (Summary)

- **Revision 151,** Revision includes current revisions of referenced procedures and current revision of TQ-AA-150-J020 JPM Template.
- **Revision 151a,** updated JPM to include pictures of NIs and operator aid. This eliminated the error trap of having multiple attachments that had to be hand out at different times based on operator actions.

Braidwood simulator setup instructions

- 1. Not required if pictures will be used, if not continue with step 2
- 2. Reset the simulator to IC-21 or equivalent 100% power IC.
- 3. Simulator needs to run for at least 10 minutes.
- 4. Ensure PPC screens are not set up to go to calorimetric screen with options filled in.
- 5. Ensure rods in auto.
- 6. Verify that the NIS front panel detector currents are equal to the values recorded below, prior to each occurrence of this JPM.
- 7. 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.
- 8. This completes the setup for this JPM.

Answer KEY

Date: TODAY	Time: NOW					
Channel	N41	N42	N43	N44		
Is the channel operable?	XY DN	🗵 Y 🗆 N	XY 🗆 N	🗵 Y 🗆 N		
Instrument reading	100%	100%	100%	100%		
UP	PER DETECTOR	S (A)				
Present upper detector current	190 +/-10	185+/-10	190+/-10	185+/-10		
100% upper detector current	194	179	192	186		
Normalized detector current	. 979	1.03	. 990	. 995		
	+/06	+/06	+/06	+/06		
Average normalized current	999 +/05					
Upper power tilt ratio (¢≤1.02)	¢.980	<mark>¢ 1.03</mark> 4)	¢ .991	¢.996		
	+/01	+/01	+/01	+/01		
LO	WER DETECTOR	S (B)				
Present lower detector current	170+/-10	150+/-10	165+/-10	165+/-10		
100% lower detector current	170	153	165	168		
Normalized detector current	1.00	. 980	1.00	. 982		
	+/06	+/06	+/06	+/06		
Average normalized current		.990 +	-/1			
Lower power tilt ratio (¢≤1.02)	¢ 1.010	¢.989	¢ 1.010	¢.991		
	+/01	+/01	+/01	+/01		

INITIAL CONDITIONS

- 1. You are an extra NSO.
- 2. Unit 1 is at full power.
- 3. All four NIS detector power meters read 100% reactor power.

INITIATING CUE

- 1. The US has directed you to perform, the weekly QPTR calculation using NIS meters per 1BwOSR 3.2.4.1.
- 2. Digital voltmeter will not be used for this surveillance.
- 3. The process computer is inoperable only for the purpose of this surveillance.

Provide student copy of 1BwOSR 3.2.4.1 and inform them that all prerequisites, precautions, limitations and actions are met. Answer key available in setup instructions.

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>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number		
1	Indicate the applicability of this surveillance on Data Sheet D-3.	Determine NIS meters must be used to perform this surveillance and INDICATE on Data Sheet D-3:					
		CHECK 7-day block.					
2	Record Date and Time on Data Sheet D-3.	RECORD Date and Time on data sheet D-3.					
3	Record power range NIs operability status.	 On Data Sheet D-3, RECORD the following for power range NIs 41-44: 'Y' block checked for each channel indication reliable. 100% (or present power reading from each channel at 1PM07.I) 					
CUE	If asked, the Unit has NO LCOAF	Rs in progress at this time.					
CUE	Provide the examinee with the att and lower detector currents to rec	tached pictures of N-41, N-42, N-43 cord readings from.	3 and I	N-44 u	pper		
NOTE: JPM steps 4 through 8 may be done for the upper section then repeated for the lower detectors or steps 4 and 5 may be recorded for both upper and lower detectors before proceeding to step 6.							

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*4	Record each present detector current reading from 1PM07J on Data Sheet D-3.	All present Upper and Lower Detector Currents recorded within ± 10 μamps of actual values on Data Sheet D-3. (Procedural Adherence) UPPERS: • N41 190 • N42 185 • N43 190 • N44 185 LOWERS: • N41 170 • N42 150 • N43 165 • N44 165			
CUE	Provide the examinee with the attached operator aid page for N-41, N-42, N-43 and N-44 upper and lower normalized detector currents.				
NOTE	Prior to commencing this JPM, the actual readings should be logged here				

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
5	Record 100% Detector Currents from Operator Aid Book on data Sheet D-3.	Record the 100% Detector Currents from the Operator Aid Book for each upper and lower detector on Data Sheet D-3: <i>(Procedural Adherence)</i> UPPERS: • N41 <u>194</u> • N42 <u>179</u> • N43 <u>192</u> • N44 <u>186</u> LOWERS: • N41 <u>170</u> • N42 <u>153</u> • N43 <u>165</u> • N44 <u>168</u>			
*6	Using the D-3 Data Sheet, perform the calculations to obtain the normalized detector currents and log them on the data sheet. (Key for data sheet D-3 available on setup sheet)	Calculate the Normalized Detector Currents for each detector by dividing its present detector current reading by the 100% detector current value from the operator aid and log on the D- 3 Data Sheet: (Procedural Adherence) • Each Upper • Each Lower			

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*7	Using the D-3 Data Sheet, perform the calculations to obtain the average normalized currents and log them on the data sheet. (Key for data sheet D-3 available on setup sheet)	Calculate the Average Normalized Current by summing the upper (lower) normalized detector currents and dividing by 4 and log on the D-3 Data Sheet: (Procedural Adherence) • Upper Average • Lower Average			
*8	Using the D-3 Data Sheet, perform the calculations to determine the QPTR for each detector and log them on the data sheet. (Key for data sheet D-3 available on setup sheet)	Determine the QPTR for each detector by dividing each Normalized Detector Current by the Average Normalized Current and log on the D-3 data sheet: (Procedural Adherence) • Each Upper • Each Lower			
*9	Identify N42 Upper Detector QPTR is unacceptable.	 Determine if QPTR is acceptable: Identify N42 Upper Detector QPTR is >1.02 and is unacceptable. (Regulatory Compliance) Immediately notify the Shift Manager or Designee to initiate LCOAR (1BwOL 3.2.4). 			
CUE	As SM, acknowledge the required	d initiation of LCOAR 1BwOL 3.2.4			

JPM Stop Time: _____

JPM SUMMARY

Operator's Name:	Emp. ID#:
Job Title: 🗌 EO	□ RO □SRO □ FS □ STA/IA □ SRO Cert
JPM Title: <u>Perform</u> JPM Number: <u>R-10</u> Task Number and T K/A Number and In Suggested Testing Alternate Path: Reference(s): 1Bw Ope	a QPTR Calculation w/o Process Computer 2 Revision Number: 151 Fitle: R-RK-003, Perform a QPTR calc and Evaluate TS limits nportance: 015000G2.1.7, 4.4 Environment: Simulator Yes No SRO Only: □Yes No Time Critical: □Yes No vOSR 3.2.4.1, Rev. 9, Unit One Quadrant Power Tilt Ratio Calculation Erator Aid for 100% Power NIS Detector Currents
Actual Testing En	vironment: Simulator Control Room In-Plant Other
Testing Method:	🗌 Simulate 🖂 Perform
Estimated Time to	Complete: 22 minutes Actual Time Used: minutes
EVALUATION SUI Were all the Critica	MMARY: I Elements performed satisfactorily? ☐ Yes ☐ No
The operator's perf contained within th Comments :	ormance was evaluated against standards s JPM and has been determined to be:
Evaluator's Name	: (Print)
Evaluator's Signa	ture: Date:









INITIAL CONDITIONS

- 1. You are an extra NSO.
- 2. Unit 1 is at full power.

INITIATING CUE

1. The US has provided you a copy of, and directed you to perform, the weekly QPTR calculation using NIS meters per 1BwOSR 3.2.4.1. The process computer is inoperable only for the purpose of this surveillance.

Jc Identify leak i	Job Performance Measure Identify leak isolation point from station drawings.				
JPM Number: <u>R-204</u>					
	Revision Number: <u>151</u>				
	Date: <u>03 / 29 / 2016</u>				
Developed By:	Eric Steinberg Instructor	<u>03/29/2016</u> Date			
Validated By:	Dan Burton SME or Instructor	<u>04/22/2016</u> Date			
Reviewed By:	Kevin Lueshen Operations Representative	<u>04/22/2016</u> Date			
Approved By:	Eric Steinberg Training Department	<u>04/26/2016</u> _{Date}			

Braidwood R-204 rev 151 JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

 1.	Task description and number, JPM description and number are identified.
 2.	Knowledge and Abilities (K/A) references are included.
 3.	Performance location specified. (in-plant, control room, simulator, or other)
 4.	Initial setup conditions are identified.
 5.	Initiating cue (and terminating cue if required) are properly identified.
 6.	Task standards identified and verified by SME review.
 7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
 8.	If an alternate path is used, the task standard contains criteria for successful completion.
 9.	Verify the procedure(s) referenced by this JPM reflects the current revision: Procedure <u>0BwOA SEC-4</u> Rev: <u>103</u> Procedure <u>M-55-sheet 2A</u> Rev: <u>AW</u> Procedure <u>M-55-sheet 2D</u> Rev: <u>K</u>
 10.	Verify cues both verbal and visual are free of conflict.
 11.	Verify performance time is accurate
 12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
 13.	When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:
	SME / Instructor Date

SME / Instructor

Date

SME / Instructor

Date

Revision Record (Summary)

Revision 151, Updated to current revisions of the procedures and TQ-AA-150-J020 template.

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

Braidwood simulator setup instructions

- 1. Not required, but if used set up any at power IC.
- 2. Ensure the simulator ready to run checklist is complete.
- 3. Ensure all required procedures and prints are cleaned and put away.
- 4. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
- 5. This completes the setup for this JPM.

Braidwood INITIAL CONDITIONS

- 1. You are an extra NSO.
- 2. BOTH units are at 100% power.
- 3. An EO was re-positioning 2FW094, MAIN FEEDWATER H.P. CLEANUP LINE FLOW CONTROL VALVE, to adjust Steam Generator Blowdown Hotwell Pump discharge pressure.
- 4. An instrument air line broke at the 1" to $\frac{1}{2}$ " reducer upstream of the 2FW094, HP FLUSH LINE FLOW CONT VLV.
- 5. The EO reports the header goes into 401' elevation overhead and the EO cannot trace the header back to an isolation valve.
- 6. The crew entered 0BwOA SEC-4 LOSS OF INSTRUMENT AIR UNIT 0 due to dropping instrument air pressure and is currently at step 6.c.
- 7. Instrument air pressure is 87 psig and stable.

INITIATING CUE

1. The US has directed you to determine an acceptable isolation point that will allow the unit to remain at power. Report your recommendation to the US.

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>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1	Refer to 0BwOA SEC-4. (table A page 15 for unit 2 turbine building)	 Refers to 0BwOA SEC-4, table A. Determine 0IA907 valve is on P&ID M-55-2A. 			
CUE	When P&ID is located in the books on back table in simulator (or in the classroom), provide examinee a copy of P&ID M-55 sheet 2A. If performed in the classroom, confirm where the examinee would locate the drawing (EDMS is also acceptable) and provide P&ID M-55 sheet 2A.				n), wing
2	Refer to P&ID M-55 sheet 2A. (pipe will transition to another print at grid D and 4)	 Refers to P&ID 55 sheet 2A. Determines instrument air line 2IA100A is continued on P&ID M-55-2D. 			
CUE	When P&ID M-55 sheet 2D is identified as a needed print, provide examinee a copy of P&ID M-55 sheet 2D.				
3	Refer to P&ID M-55 sheet 2D. (The broken valve is at Grid location E and 3)	 Refers to P&ID 55 sheet 2D. Determines that instrument air header line number 2IA100A also supplies the feed reg vlaves and feed pump recirc valves. 			
*4	Determines isolation point.	 Determines that 2IA1008 (or 2IA1007) is an acceptable isolation point. Recomends to US that 2IA1008 (or 2IA1007) should be closed to isolate the leak. Recommends that steam generator blowdown be secured or re-directed to the blowdown monitor tanks due to the loss of air to 2FW094. 			

Braidwood R-204 rev 151 Comment UNSAT Number SAT **STEP** ELEMENT **STANDARD** CUE As the unit supervisor, acknowledge recommended isolation point, and inform examinee an EO is being dispatched to close the recommended valve. CUE As the unit supervisor acknowledge the recommendation to re-direct or secure blowdown. CUE The EO reports that the first recommended isolation point (2IA1008 or 2IA1007) is inaccessible and an alternate isolation point is required. Determines alternate isolation *5 **Determines that 2IA1007** point. (or 2IA1008) is an acceptable alternate isolation point. Recomends to US that . 2IA1007 (or 2IA1008) should be closed to isolate the leak. CUE As the unit supervisor acknowledge recommended isolation point, and inform examinee an EO is being dispatched to close the recommended valve. CUE This completes this JPM.

JPM Stop Time:

JPM SUMMARY

Operator's Name:	_ Emp. ID#:						
Job Title: □ EO ⊠ RO □SRO □ FS □ ST	A/IA 🛛 SRO Cert						
JPM Title: Identify leak isolation point from station	mechanical drawings.						
JPM Number: <u>R-204</u> Revision	on Number: <u>151</u>						
Task Number and Title: <u>R-AM-134</u> , <u>Troubleshoot</u> pelectrical drawings	Fask Number and Title: <u>R-AM-134, Troubleshoot plant equipment using plant mechanical &</u>						
K/A Number and Importance: 078000G2 2 41 3 5/	3.9						
Suggested Testing Environment: Classroom or Si	<u>o.o</u> mulator						
Alternate Path: \Box Yes \boxtimes No SRO Only: \Box Yes	\mathbb{N} \mathbb{N} \mathbb{N} \mathbb{N} \mathbb{N} \mathbb{N} \mathbb						
Reference(s): 0BwOA SEC-4, rev 103, LOSS OF rev AW, DIAGRAM OF TURBINE rev K, DIAGRAM OF INSTRUMEN	INSTRUMENT AIR UNIT 0, M-55 Sheet 2A, ROOM INSTRUMENT AIR, M-55 Sheet 2D, IT AIR UNIT 2						
Actual Testing Environment: Simulator] Control Room						
Testing Method: Simulate Perform							
Estimated Time to Complete: <u>13</u> minutes	Actual Time Used: minutes						
EVALUATION SUMMARY: Were all the Critical Elements performed satisfact	orily? 🗌 Yes 🗌 No						
The operator's performance was evaluated agains contained within this JPM and has been determined	st standards ed to be:						
Comments:							
	,						
Evaluator's Name (Print):							
Evaluator's Signature:	Date:						

Braidwood INITIAL CONDITIONS

- 1. You are an extra NSO.
- 2. BOTH units are at 100% power.
- 3. An EO was re-positioning 2FW094, MAIN FEEDWATER H.P. CLEANUP LINE FLOW CONTROL VALVE, to adjust Steam Generator Blowdown Hotwell Pump discharge pressure.
- 4. An instrument air line broke at the 1" to $\frac{1}{2}$ " reducer upstream of the 2FW094, HP FLUSH LINE FLOW CONT VLV.
- 5. The EO reports the header goes into 401' elevation overhead and the EO cannot trace the header back to an isolation valve.
- 6. The crew entered 0BwOA SEC-4 LOSS OF INSTRUMENT AIR UNIT 0 due to dropping instrument air pressure and is currently at step 6.c.
- 7. Instrument air pressure is 87 psig and stable.

INITIATING CUE

1. The US has directed you to determine an acceptable isolation point that will allow the unit to remain at power. Report your recommendation to the US.

Job Performance Measure					
Perform Offsite Notification (NARS Form Transmittal) for Unusual Event					
	JPM Number: <u>R-401</u>				
	Revision Number: <u>151</u>				
	Date: <u>03 / 22 / 2016</u>				
Developed By:	Eric Steinberg Instructor	<u>03/22/2016</u> Date			
Validated By:	Dan Burton SME or Instructor	04/22/2016 Date			
Reviewed By:	Kevin Lueshen Operations Representative	<u>04/23/2016</u> Date			
Approved By:	Eric Steinberg Training Department	04/23/2016 Date			

Braidwood R-401 rev 151 JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

 1.	Task description and number, JPM description and number are identified.
 2.	Knowledge and Abilities (K/A) references are included.
 3.	Performance location specified. (in-plant, control room, simulator, or other)
 4.	Initial setup conditions are identified.
 5.	Initiating cue (and terminating cue if required) are properly identified.
 6.	Task standards identified and verified by SME review.
 7.	Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
 8.	If an alternate path is used, the task standard contains criteria for successful completion.
 9.	Verify the procedure(s) referenced by this JPM reflects the current revision:Procedure EP-MW-114-100Rev: 016Procedure EP-MW-114-100-F01Rev: HProcedureRev:
 10.	Verify cues both verbal and visual are free of conflict.
 11.	Verify performance time is accurate
 12.	If the JPM cannot be performed as written with proper responses, then revise the JPM.
 13.	When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:
	SME / Instructor Date

SME / Instructor

Date

SME / Instructor

Date

Revision Record (Summary)

Revision 151, Updated JPM to current template format and revised procedures.

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

Braidwood SIMULATOR SETUP INSTRUCTIONS

1. Not required, if used ensure the booth operator is present and able to answer the NARS phone.

- 2. If the simulator NARS phones are going to be used, ensure they are setup to **transmit to the booth operator, not the NARS line**.
- 3. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
- 4. This completes the setup for this JPM.

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

Braidwood INITIAL CONDITIONS

- 1. You are an extra NSO.
- 2. Unit 1 reactor trip has occurred.
- 3. An unusual event was declared two minutes ago.
- 4. EP-MW-114-100-F-01, NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM has been filled out and approved.
- 5. The NARS phone is operable.
- 6. This is a **TIME CRITICAL JPM**.

INITIATING CUE

- 1. The Shift Manager directs you to transmit the NARS form per EP-MW-114-100, MW Region Offsite Notifications.
- 2. Inform the Shift Manager when the NARS form has been transmitted.
- 3. This is a **TIME CRITICAL JPM.**

Fill out or have the exam fill out the time for 2 minutes before the current time and todays date on EP-MW-114-100-F-01 before acknowledging the cue and starting the clock on the 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>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE:	JPM critical time (13 minutes) starts when the initiating cue has been read to the examinee and stops after the initial roll call is made.				
1	Determine correct communications method.	 Refer to EP-MW-114-100 and determine step 4.3 needs to be performed Refer to EP-MW-114-100-F- 01 and determine NARS Code 20 to be used to transmit NARS form. 			
NOTE:	If performed in the simulator, ensure the booth operator is prepared to answer the NARS phone and give the cues.				

*2	Establish communications	 Establish communications as follows: Pick up the NARS phone. Use code BW 20. Read the following message: "This is the Exelon Nuclear Braidwood Station Main Control Room. Please Standby for a NARS message." Read the following message again as agencies pick up: "This is the Exelon Nuclear Braidwood Station Main Control Room. Please Standby to receive a NARS message and respond as the roll is called." TAKE initial roll call. Mark initial Boxes for IEMA and Illinois REAC Record time and date initial roll call complete.
CUE	After using code BW 20 and read Respond IEMA online when IEMA Respond REAC online when Illing	ling initial roll call: A is called. bis REAC is called.
NOTE:	Critical time is met when the TIME:	ne examinee completes roll call. Record completion

*3	Verbally transmit the NARS Form.	Verbally transmit the NARS				
		Utility Message No: 1				
		 State Message No: <u>N/A</u> 				
		1. Status – [B] Drill/Exercise				
		2. Station – [A] Braidwood				
		3. Onsite Condition – [A] Unusual Event				
		4. Accident Classified:				
		○ Time: <u>Two minutes ago.</u>				
		○ Date: <u>Today's date.</u>				
		○ EAL # : <u>MU6</u>				
		 Accident Terminated Date and Time: <u>N/A</u> 				
		5. Release Status: [A] None				
		6. Type of Release: [A] Not Applicable				
		7. Wind Dir: <u>270</u>				
		8. Wind Speed:				
		○ [<u>A] is N/A</u>				
		○ <u>[B] 4.5 Miles/Hr</u>				
		9. Recommended Actions: Utility Recommendation:				
		10 Additional Information:				
		None				
		Verified With: <u>U. Supervisor</u>				
		Approved By: <u>S. Manager</u>				
4	Complete the NARS form.	Fill in the following information on the NARS form after transmitting info in blocks 1-10:				
		Mark 11A EXELON				
		Examinee Name				
		Outside line number				
		Current time/ Date				
		Request and record name				
		and organization of the				
		person receiving the				
		Current time/dete				
CUE	When asked for name and organization respond John Smith, IEMA.					

5	Perform final roll call.	Perform final roll call and records by marking boxes							
		 IEMA Illinois REAC Asks if there are any question about the information provided. 							
CUE	When called on for roll call respond IEMA, and Illinois REAC.								
	Respond no questions when asked.								
6	Complete call.	State "NARS communication is complete."							
NOTE: Critical time stopped after initial roll call was complete JPM step 3.									
Determine critical time:									
- - = (Time initial roll call complete) (JPM start time) < 13 minutes									
+7									
^/	Critical time met.	minutes. ≤ 13							
CUE	That completes the JPM.								

JPM Stop Time:

JPM SUMMARY

Operator's Name:		Emp. ID#	# :	_
Job Title: 🗌 EO		TA/IA 🛛 SR	O Cert	
JPM Title: <u>Perform</u> JPM Number: <u>R-40</u> Task Number and T K/A Number and In Suggested Testing Alternate Path: T Reference(s): EP- EP- For	Offsite Notification (NARS for) <u>1</u> Revis Title: <u>R-ZP-004, Transmit NAF</u> nportance: <u>R-002000G2.4.39,</u> Environment: <u>Simulator</u> Yes ⊠No SRO Only: NW-114-100, Rev. 16, MW F MW-114-100-F-01, Rev. H, N m	<u>m transmittal)</u> sion Number: <u>RS form</u> <u>3.9</u> Yes ⊠No Region Offsite luclear Accide) for Unusual Ev 151 Time Critical: Notifications ent Reporting Sy	<u>ent</u> ⊠Yes ⊡No /stem (NARS)
Actual Testing En	vironment: 🛛 Simulator	Control Rc	oom 🗌 In-Pla	nt 🗌 Other
Testing Method:	🗌 Simulate 🛛 Perform			
Estimated Time to	Complete: <u>10</u> minutes	Actual Tir	me Used:	_ minutes
EVALUATION SUI Were all the Critica	MMARY: Il Elements performed satisfac	ctorily?	□Yes	□ No
The operator's perf contained within th	ormance was evaluated again is JPM and has been determine	nst standards ned to be:	Satisfactory	Unsatisfactory
Comments:				
Evaluator's Name	(Print):		_	
Evaluator's Signa	ture:		_ Date:	

INITIAL CONDITIONS

- 1. You are an extra NSO.
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- 4. EP-MW-114-100-F-01, NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM has been filled out and approved.
- 5. The NARS phone is operable.
- 6. This is a **TIME CRITICAL JPM.**

INITIATING CUE

- 1. The Shift Manager directs you to transmit the NARS form per EP-MW-114-100, MW Region Offsite Notifications.
- 2. Inform the Shift Manager when the NARS form has been transmitted.
- 3. This is a **TIME CRITICAL JPM.**