

Job Performance Measure

REPORTABILITY DETERMINATION

JPM Number: A-N-1-S

Revision Number: 01

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A 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 LS-AA-1020 Rev: 29
Procedure LS-AA-1110 Rev: 28
Procedure _____ Rev: _____
- _____ 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 00: New JPM developed ILT 15-1 (2016-301) NRC Exam

Revision 01: Updated for the ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. This is a tabletop JPM utilizing simulator procedures.
2. No Simulator setup needed.

DOCUMENT PREPARATION

1. None

INITIAL CONDITIONS

1. You are the Unit 3 Unit Supervisor.
2. Unit 2 and Unit 3 are operating at rated power.
3. The following timeline occurred:
 - 2142 – Reactor Building differential pressure did not meet the required 0.25 inches of vacuum water gauge due to failure of the control system.
 - 2205 – Unit 3 Reactor Building Ventilation was secured and manually isolated.
 - 2207 – Reactor Building differential pressure returned to greater than 0.25 inches of vacuum water gauge.

INITIATING CUE

1. Utilizing the Reportability Manual, determine the earliest reportability requirement.

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

.....

Information For Evaluator's Use:

Task Standard: The Examinee will determine the proper Reportability requirements IAW the Reportability Manual, LS-AA-1110 SAFETY (SAF).

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>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
Note	Candidate locates a copy of Reportability Manual.				
*1.	Determines the event is reportable per SAF 1.8.	Determines the event is reportable per SAF 1.8, Event or Condition that could have prevented fulfillment of a Safety Function.	_____	_____	_____
*2.	Determines the time limit to Notify the NRC Operations Center via the ENS as soon as practical and in all cases, within 8 hours	Determines the time limit to Notify the NRC Operations Center via the ENS as soon as practical and in all cases within 8 hours of the occurrence (Time 0542).	_____	_____	_____
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____**Emp. ID#:** _____**Job Title:** ☐ SRO ☐ SRO Cert**JPM Title:** Reportability Determination**JPM Number:** A-N-1-S**Revision Number:** 01**Task Number and Title:** 299L001, Determine Reportability requirements as outlined in station**K/A Number and Importance:** Generic 2.4.30 -- / 4.1**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No**SRO Only:** ☒ Yes ☐ No**Time Critical:** ☐ Yes ☒ No**Reference(s):** LS-AA-1020, Rev 29

LS-AA-1110, Rev 28

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☒ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 12 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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 3 Unit Supervisor.
2. Unit 2 and Unit 3 are operating at rated power.
3. The following timeline occurred:
 - 2142 – Reactor Building differential pressure did not meet the required 0.25 inches of vacuum water gauge due to failure of the control system.
 - 2205 – Unit 3 Reactor Building Ventilation was secured and manually isolated.
 - 2207 – Reactor Building differential pressure returned to greater than 0.25 inches of vacuum water gauge.

INITIATING CUE

1. Utilizing the Reportability Manual, determine the earliest reportability requirement.

Job Performance Measure

REACTIVATION OF AN SRO LICENSE

JPM Number: A-N-2-S

Revision Number: 02

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A 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 OP-AA-105-102 Rev: 15
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 00	Modified for 2010 Cert Exam.
Revision 01	Modified for ILT 15-1 (2016-301) NRC Exam.
Revision 02	Updated for the ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. This is a tabletop JPM utilizing simulator procedures.
2. No Simulator setup needed.

DOCUMENT PREPARATION

1. Marked up copy of OP-AA-105-102, NRC ACTIVE LICENSE MAINTENANCE.

INITIAL CONDITIONS

1. You are the Shift Manager.
2. An SRO is in the process of license reactivation.
3. OP-AA-105-102, Attachment 2, Reactivation of License Log, is filled out up to the point of Shift Manager review for the licensee.

INITIATING CUE

1. The Shift Operation Superintendent directs you to “perform the Shift Manager review of OP-AA-105-102, Attachment 2 for the licensee and return it to me”.

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

.....

Information For Evaluator’s Use:

Task Standard: The Examinee will verify the Reactivation of License Log IAW OP-AA-105-102, NRC ACTIVE LICENSE MAINTENANCE, and will determine there are multiple errors and the operator cannot return to active status.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Candidate locates a copy of Reportability Manual.				
1.	Review OP-AA-105-102, Attachment 2.	Reviews OP-AA-105-102, Attachment 2.	___	___	___
2.	Check that Hours on Shift are in the same calendar quarter.	Notes 12.0 hours listed on 3/31/20 are performed during the 1 st calendar quarter and cannot be counted towards license re-activation.	___	___	___
3.	Check that Hours on Shift are applicable for license reactivation.	Determines 12.0 hours as WEC listed on 4/15/20 cannot be credited towards license re-activation.	___	___	___
*4.	Check that licensee has the required 40 hours.	Determines that licensee does NOT have adequate hours to meet the 40 hour requirement.	___	___	___
*5.	Verifies Plant Tour completed per step 4.b.	Determines that Plant Tour date and signature are not completed.	___	___	___
6.	Report the results of the review to the Shift Operations Superintendent (SOS).	Returns without signing OP-AA-105-102, Attachment 2 to the SOS. Informs the SOS that the licensee’s license CANNOT be reactivated due to insufficient hours on shift and plant tour incomplete.	___	___	___
Cue	Acknowledge report				
END					

JPM Stop Time: _____

.....

Exelon Confidential/Proprietary

OP-AA-105-102

Revision 15

Page 8 of 8

KEY

ATTACHMENT 2 Reactivation Of License Log Page 2 of 2

5. Hours on Shift
- The SRO / RO License Holder has completed a minimum of 40 hours of shift functions in the presence and under the sole direct supervision of an active RO or SRO, as appropriate, in the position to which the individual will be assigned. Log hours in the Shift Position log.
 - The SRO license holder being activated for fuel handling only has completed a minimum of one (1) 8 hour shift in the presence and under the sole direct supervision of an active SRO in the position to which the individual will be assigned.

Shift Position Log

Date	Shift Position	Shift	Number of Hours	Entered in Appropriate Log	Active License Signature
3/31/20	US	D	12	Yes/ No	Unit Supervisor
4/15/20	WEC	D	12	Yes/ No	Unit Supervisor
4/26/20	US	D	12	Yes/ No	Unit Supervisor
5/14/20	US	D	12	Yes/ No	Unit Supervisor
5/20/20	US	D	12	Yes/ No	Unit Supervisor
Required Action: Perform a complete plant tour under the sole direct supervision of an active license holder as required in Step 4.b. The tour shall be performed during the performance of the required hours on shift listed above. Obtain signature verifying completion.					

Reviewed by: _____
Shift Manager Date

Final Review and Approval:

Shift Operations Superintendent Date Operations Training Manager Date

Date to credit completion of reactivation (last shift stood) _____

SRRS 3.D.106

KEY

FORWARD ORIGINAL TO LICENSE HOLDER'S LICENSE FILE

JPM SUMMARY**Operator's Name:** _____**Emp. ID#:** _____**Job Title:** ☐ SRO ☐ SRO Cert**JPM Title:** Reactivation of an SRO License**JPM Number:** A-N-2-S**Revision Number:** 02**Task Number and Title:** 299L024, Maintain an Active License**K/A Number and Importance:** Generic 2.1.4 -- / 3.8**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** OP-AA-105-102, Rev 15**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☒ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 12 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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. An SRO is in the process of license reactivation.
3. OP-AA-105-102, Attachment 2, Reactivation of License Log, is filled out up to the point of Shift Manager review for the licensee.

INITIATING CUE

1. The Shift Operation Superintendent directs you to “perform the Shift Manager review of OP-AA-105-102, Attachment 2 for the licensee and return it to me”.

Exelon Confidential/Proprietary

OP-AA-105-102

Revision 15

Page 8 of 8

ATTACHMENT 2
Reactivation Of License Log
Page 2 of 2

5. Hours on Shift

- a. The SRO / RO License Holder has completed a minimum of 40 hours of shift functions in the presence and under the sole direct supervision of an active RO or SRO, as appropriate, in the position to which the individual will be assigned. Log hours in the Shift Position log.
- b. The SRO license holder being activated for fuel handling only has completed a minimum of one (1) 8 hour shift in the presence and under the sole direct supervision of an active SRO in the position to which the individual will be assigned.

Shift Position Log

Date	Shift Position	Shift	Number of Hours	Entered in Appropriate Log	Active License Signature
3/31/20	US	D	12	Yes/ No	<i>Unit Supervisor</i>
4/15/20	WEC	D	12	Yes/ No	<i>Unit Supervisor</i>
4/26/20	US	D	12	Yes/ No	<i>Unit Supervisor</i>
5/14/20	US	D	12	Yes/ No	<i>Unit Supervisor</i>
5/20/20	US	D	12	Yes/ No	<i>Unit Supervisor</i>
Required Action: Perform a complete plant tour under the sole direct supervision of an active license holder as required in Step 4.b. The tour shall be performed during the performance of the required hours on shift listed above. Obtain signature verifying completion.					

Reviewed by: _____
Shift Manager Date

Final Review and Approval:

Shift Operations Superintendent Date Operations Training Manager Date

Date to credit completion of reactivation (last shift stood) _____

SRRS 3.D.106

FORWARD ORIGINAL TO LICENSE HOLDER'S LICENSE FILE

Job Performance Measure

Review ACPS

JPM Number: A-N-3-S

Revision Number: 01

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A 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 OP-AA-108-101 Rev: 14
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 00:** Generated for ILT 16-1 (2017-301) NRC Exam.
- Revision 01:** Updated for the ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No simulator setup is required. This is an administrative JPM.
2. Provide a clean copy of OP-AA-108-101, CONTROL OF EQUIPMENT AND SYSTEM STATUS.
3. Provide a blank Equipment Status Tag (EST)
4. This completes the setup for this JPM.

INITIAL CONDITIONS

1. You are the WEC SRO.
2. A leak has developed on the 2A Service Water Pump (2-3901-A).
3. The 2A Service Water Pump motor has been thoroughly wetted.
4. The last ACPS number was 20-123.
5. IR 1234567 was written to document the leakage and motor wetting.
6. The 2A Service Water Pump is currently in Pull-to-Lock on Panel 923-1.
7. The Equipment Status Tag (EST) database is currently unavailable.

INITIATING CUE

1. Complete OP-AA-108-101 Attachments 1 and 2 and an Equipment Status Tag (EST) as required to support EST and ACPS for 2A Service Water Pump Control Switch.
2. When complete, inform the Unit 2 Unit Supervisor.

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

.....

Information For Evaluator's Use:

Task Standard: The Examinee will properly fill out OP-AA-108-101 Attachments 1 and 2 and an Equipment Status Tag IAW OP-AA-108-101, CONTROL OF EQUIPMENT AND SYSTEM STATUS.

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	Provide the examinee with the supplied copy of OP-AA-108-101 and a blank EST.				
1.	Examinee reviews DOP OP-AA-108-101 locates attachments 1 and 2.	Locates Attachments 1 and 2.	___	___	___
Cue	If asked, inform the examinee the unit 2 SRO will complete attachment 3.				
Note	The ACPS, Equipment Status Tag, and Equipment Status Tag Log are free form documents. Wording used for “tag location”, “purpose”, “actions required for removal” “name” and “normal position” may be different from the key.				
*2.	Examinee performs step 4.2.1 and completes attachment 1.	See attached key.	___	___	___
*3.	Examinee performs step 4.2.2 and completes attachment 2.	See attached key. (If entries are in RED are Required, and if in Black not Required as Critical.)	___	___	___
*4.	Examinee fills out EST with information from attachment 1.	See attached key.	___	___	___
5.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	___	___	___
Cue	Acknowledge as the Unit Supervisor that the task is complete.				
END					

JPM Stop Time: _____

.....

KEY

ATTACHMENT 1
EQUIPMENT STATUS TAG (EST) LOG

Page 1 of 1

Unit 2

EST Number	ACPS Number* (If no ACPS for this EST, then N/A)	Tag Location	EPN / Noun Name	Purpose of EST Placement	Actions Required for Removal (IR, WR, CO, etc.)
EST Tag #	20-124	Panel 923-1	2-3901-A 2A SW Pump	Motor Wetted C/S PTL	IR 1234567

KEY

KEY

ATTACHMENT 2

Abnormal Component Position Sheet (ACPS)

Page 1 of 1

OP-AA-108-101

Revision 14

Page 18 of 24

ACPS #: **20-124** (Refer to step 4.2.1.2)

Station: **Dresden**

Unit: **2**

System: **3900**

NOTE: The criteria below defines an operating boundary/threshold that ensures use of the ACPS does not or cannot adversely impact a system, structure or component as described in the UFSAR, or the method of performing or controlling a UFSAR-described design function. Use of the ACPS in accordance with the guidelines established below, i.e. answering **NO** to all of the questions, ensures that the activity is not within the scope of 10 CFR 50.59

Purpose for Abnormal Positioning: 2A Service Water Pump Motor Wetted								
Action Required for Removal (IR #, WR #, WO #, CO #, etc.): IR 1234567								
Will the change in component position alter a function required by regulation?							Y	N
Will the change in component position alter a function required by license condition?							Y	N
Will the change in component position alter a function required by NRC orders or technical specifications?							Y	N
Will the change in component position affect the design basis function of the system?							Y	N
Will the change in component position affect component(s) credited in the accident analysis?							Y	N
Will the change in component position materially alter the plant response to an accident?							Y	N
IF the answer to any of the questions above is YES (Y), THEN a 10CFR50.59 review is required. IF the answer to all of the questions above is NO (N), THEN the component may be positioned per the ACPS with no 10CFR50.59 review required.								
SRO Approval (Signature/Date/Time):						Candidate Signature	Date	Time
SRO Peer Check for Safety Related Equipment (Signature/Date/Time):						N/A	N/A	N/A
SRO Approval for Restoration (Signature/Date/Time):								
ABNORMAL POSITIONING						RESTORATION or Transfer to Other Approved Process		
EPN	EST Number*	Normal Position	Abnormal (Desired) Position	Performer Init / Date	Verifier Init / Date	Position	Performer Init / Date	Verifier Init / Date
2-3901-A	Tag #	Normal-after-close OR Normal-after-trip	PTL					
EST Log Updated:		Placement:			N/A	Removal:		N/A

*All EST(s) must have ACPS Number written or printed on them.
This form to be maintained in ACPS Binder until restoration is completed.

KEY

KEY

ACPS 20-124

EQUIPMENT STATUS TAG

TAG # 150965

EQUIPMENT#/NAME 2-3901-A
2A SW Pump

DEF/CONDITION Motor Wetted C/S in PTL

AR# 1234567

EQUIPMENT STATUS TAG

TAG # 150965

UNIT# 2 SYS# 3900

EQUIPMENT 2-3901-A

TAG LOCATION Panel 923-1

HUNG BY _____ DATE _____

AUTHORIZED BY _____

1456759-4

FRONT

TAG # 150965

REASON Motor Wetted

HUNG BY _____ DATE _____

TAG # 150965

REASON Motor Wetted

CONDITION C/S in PTL

AR# _____

BACK

****Circled information is required****

****All other information is optional.****

KEY

JPM SUMMARY**Operator's Name:** _____**Emp. ID#:** _____**Job Title:** ☐ SRO ☐ SRO Cert**JPM Title:** Review ACPS**JPM Number:** A-N-3-S**Revision Number:** 01**Task Number and Title:** 299L014 Complete an equipment status tag for a given component and properly log per OP-AA-108-101**K/A Number and Importance:** Generic 2.2.14 -- / 4.3**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No**SRO Only:** ☒ Yes ☐ No**Time Critical:** ☐ Yes ☒ No**Reference(s):** OP-AA-108-101, Rev 014**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 WEC SRO.
2. A leak has developed on the 2A Service Water Pump (2-3901-A).
3. The 2A Service Water Pump motor has been thoroughly wetted.
4. The last ACPS number was 20-123.
5. IR 1234567 was written to document the leakage and motor wetting.
6. The 2A Service Water Pump is currently in Pull-to-Lock on Panel 923-1.
7. The Equipment Status Tag (EST) database is currently unavailable.

INITIATING CUE

1. Complete OP-AA-108-101 Attachments 1 and 2 and an Equipment Status Tag (EST) as required to support EST and ACPS for 2A Service Water Pump Control Switch.
2. When complete, inform the Unit 2 Unit Supervisor.

Job Performance Measure

Review CCSW Activity Calculation

JPM Number: A-N-4-S

Revision Number: 03

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*). |
| _____ <u>N/A</u> | 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>DOS 1500-08</u> Rev: <u>17</u>
Procedure _____ Rev: _____
Procedure _____ Rev: _____ |
| _____ | 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 00	New JPM
Revision 01	Revised for 2010 NRC exam.
Revision 02	Revised for ILT 18-1 CERT Exam.
Revision 03	Revised for ILT 19-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. This is a tabletop JPM utilizing simulator procedures.
2. No Simulator setup needed.

DOCUMENT PREPARATION

1. Provide a marked up copy of DOS 1500-08, DISCHARGE OF CONTAINMENT COOLING SERVICE WATER (CCSW) FROM LOW PRESSURE COOLANT INJECTION (LPCI) HEAT EXCHANGER DURING CCSW PUMP OPERATIONS..
2. Ensure a calculator is available and the memory/display has been cleared.

INITIAL CONDITIONS

1. You are the Unit 2 Unit Supervisor.
2. The Unit 2 NSO has completed DOS 1500-08, DISCHARGE OF CONTAINMENT COOLING SERVICE WATER (CCSW) FROM LOW PRESSURE COOLANT INJECTION (LPCI) HEAT EXCHANGER DURING CCSW PUMP OPERATIONS.
3. Only the “A” CCSW Heat Exchanger is going to be placed in service.
4. All Circ Water and Service Water pumps are running.
5. Chemistry sample results on the 2A CCSW HX are $2.01 \times 10^{-5} \mu\text{Ci}/\text{ml}$, taken 7 days ago. Total % MPC is 22%.

INITIATING CUE

1. Review and Verify DOS 1500-08.
2. Inform the ~~examiner~~ Shift Manager when the task is complete.

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

.....

Information For Evaluator’s Use:

Task Standard: The Examinee will review the completed DOS 1500-08 Canal Activity Calculation and determine there are multiple errors and that the NSO needs to re-perform the calculations.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide the examinee with the provided copy of DOS 1500-08.				
Note	The following steps can be performed in any order.				
*1.	Verifies Dilution flow calculation (1,017,000 gpm).	Determines Dilution flow was incorrectly determined. Correct Dilution flow is 1,017,000 gpm.	___	___	___
*2.	Enters dilution flow (1,017,000 gpm) to calculate CCSW Activity Limit.	Determines 2.91×10^{-5} is the correct CCSW sample activity limit.	___	___	___
Note	If the candidate attempts to terminate the review based on incorrect dilution flow previously calculated: Direct the candidate to complete the review and make any necessary adjustments and another SRO will review.				
3.	Verifies CCSW Heat Exchanger A sample activity is less than or equal to the calculated CCSW activity limit.	Determines 2.01×10^{-5} is less than 2.91×10^{-5} .	___	___	___
*4.	Re-Performs Canal Activity Calculation.	Uses 1,017,000 gpm as Dilution Flow. Determines incorrect activity level used for “A” Activity level of CCSW Heat Exchanger. Correct value is 2.01×10^{-5} .	___	___	___
*5.	Determines Canal Activity Concentration.	Determines Canal Activity Concentration is 6.9×10^{-8}	___	___	___
6.	Determines need for NSO to re-perform calculations.	Examinee directs NSO to re-perform calculations.	___	___	___
7.	Notify examiner Shift Manager of discrepancies and task completion.	Notifies examiner Shift Manager.	___	___	___
Cue	Acknowledge report				
END					

JPM Stop Time: _____

CATEGORY 1

KEY

UNIT 2(3)
DOS 1500-08
REVISION 17

DATA SHEET 1
CANAL ACTIVITY CALCULATION

Table 1: Chemistry Sample Results

Step	Unit 2(3)	CCSW Heat Exchanger A	CCSW Heat Exchanger B
I.2	Sample Activity Results (µCi/ml)	2.01×10^{-5}	N/A
I.2	Total % MPC	22%	N/A

NOTE

IF CCSW activity = LLD, THEN % MPC = LLD.

- A. Calculated CCSW Sample Activity Limit (Optional, to be used only if required):

 N_2 = Number of Unit 2 Circulating Water Pumps operating: 3
 N_3 = Number of Unit 3 Circulating Water Pumps operating: 3
 N_5 = Number of Service Water Pumps operating: 5
 D = Dilution Flow = $[(N_2 + N_3) \times 157,000 \text{ gpm}] + (N_5 \times 15,000 \text{ gpm})$
 D = Dilution Flow = $[(\cancel{5} + 3) \times 157,000 \text{ gpm}] + (\cancel{8} \times 15,000 \text{ gpm})$
 D = Dilution Flow = $\cancel{1,301,000} \text{ gpm}$ $(942000 + 75000)$
1,017,000

Calculated CCSW sample activity limit = (Dilution Flow gpm) $\times 2.86 \times 10^{-11} \text{ µCi/ml}$

Calculated CCSW sample activity limit $\cancel{(1,301,000 \text{ gpm})} \times 2.86 \times 10^{-11} \text{ µCi/ml}$

Calculated CCSW sample activity limit = $\cancel{3.38 \times 10^{-5}} \text{ µCi/ml}$
2.91 $\times 10^{-5}$

KEY

CATEGORY 1

KEY

UNIT 2(3)
DOS 1500-08
REVISION 17

DATA SHEET 1 (Continued)
CANAL ACTIVITY CALCULATION

B. Canal Activity: (Optional, to be used only if required.)

A = The activity level of CCSW Heat Exchanger A in $\mu\text{Ci/ml}$.

B = The activity level of CCSW Heat Exchanger B in $\mu\text{Ci/ml}$.

D = Dilution flow (gpm)

$$\text{Canal Activity (CCSW Heat Exchanger A)} = \frac{A \times 4340}{D \times 1.24}$$

$$\text{Canal Activity (HX A)} = \frac{\frac{2.01 \times 10^{-5} \mu\text{Ci/ml} \times 4340}{1,017,000 \text{ gpm}} \times 1.24}{\frac{3.38 \times 10^{-5} \mu\text{Ci/ml} \times 4340}{1,017,000 \text{ gpm}} \times 1.24} = \frac{6.9 \times 10^{-8}}{9.1 \times 10^{-8}} \mu\text{Ci/ml}$$

$$\text{Canal Activity (CCSW Heat Exchanger B)} = \frac{B \times 4340}{D \times 1.24}$$

$$\text{Canal Activity (HX B)} = \frac{\frac{N/A \mu\text{Ci/ml} \times 4340}{N/A \text{ gpm}} \times 1.24}{N/A \text{ gpm} \times 1.24} = \frac{N/A}{N/A} \mu\text{Ci/ml}$$

Calculations performed by: Jing Johnson / TODAY
Signature Date

Calculations verified by: /
Signature Date

Release Started: / / Release Stopped: / /
Date / time Date / time

KEY

JPM SUMMARY**Operator's Name:** _____**Emp. ID#:** _____**Job Title:** ☐ SRO ☐ SRO Cert**JPM Title:** Review CCSW Activity Calculation**JPM Number:** A-N-4-S**Revision Number:** 03**Task Number and Title:** 277L003, Perform discharge of CCSW from contaminated LPCI heat exchanger during CCSW pump operation surveillance**K/A Number and Importance:** Generic 2.3.11 -- / 4.3**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No**SRO Only:** ☒ Yes ☐ No**Time Critical:** ☐ Yes ☒ No**Reference(s):** DOS 1500-08, Rev 17**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 ☐ NoThe 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 2 Unit Supervisor.
2. The Unit 2 NSO has completed DOS 1500-08, DISCHARGE OF CONTAINMENT COOLING SERVICE WATER (CCSW) FROM LOW PRESSURE COOLANT INJECTION (LPCI) HEAT EXCHANGER DURING CCSW PUMP OPERATIONS.
3. Only the "A" CCSW Heat Exchanger is going to be placed in service.
4. All Circ Water and Service Water pumps are running.
5. Chemistry sample results on 2A CCSW HX are 2.01×10^{-5} $\mu\text{Ci/ml}$, taken 7 days ago. Total % MPC is 22%.

INITIATING CUE

1. Review and Verify DOS 1500-08.
2. Inform the examiner when the task is complete.

CATEGORY 1

UNIT 2(3)
DOS 1500-08
REVISION 17

DATA SHEET 1
CANAL ACTIVITY CALCULATION

Table 1: Chemistry Sample Results

Step	Unit 2(3)	CCSW Heat Exchanger A	CCSW Heat Exchanger B
I.2	Sample Activity Results (pCi/ml)	2.01×10^{-5}	N/A
I.2	Total % MPC	22%	N/A

NOTE

IF CCSW activity = LLD, THEN % MPC = LLD.

- A. Calculated CCSW Sample Activity Limit (Optional, to be used only if required):

 N_2 = Number of Unit 2 Circulating Water Pumps operating: 3
 N_3 = Number of Unit 3 Circulating Water Pumps operating: 3
 N_5 = Number of Service Water Pumps operating: 5
 D = Dilution Flow = $[(N_2 + N_3) \times 157,000 \text{ gpm}] + (N_5 \times 15,000 \text{ gpm})$
 D = Dilution Flow = $[(\underline{5} + \underline{3}) \times 157,000 \text{ gpm}] + (\underline{3} \times 15,000 \text{ gpm})$
 D = Dilution Flow = 1,301,000 gpm

Calculated CCSW sample activity limit = (Dilution Flow gpm) $\times 2.86 \times 10^{-11}$ pCi/ml

Calculated CCSW sample activity limit (1,301,000 gpm) $\times 2.86 \times 10^{-11}$ pCi/ml

Calculated CCSW sample activity limit = 3.38×10^{-5} pCi/ml

CATEGORY 1

UNIT 2(3)
DOS 1500-08
REVISION 17

DATA SHEET 1 (Continued)
CANAL ACTIVITY CALCULATION

B. Canal Activity: (Optional, to be used only if required.)

A = The activity level of CCSW Heat Exchanger A in $\mu\text{Ci/ml}$.

B = The activity level of CCSW Heat Exchanger B in $\mu\text{Ci/ml}$.

D = Dilution flow (gpm)

$$\text{Canal Activity (CCSW Heat Exchanger A)} = \frac{A \times 4340}{D \times 1.24}$$

$$\text{Canal Activity (HX A)} = \frac{3.38 \times 10^{-5} \mu\text{Ci/ml} \times 4340}{1,301,000 \text{ gpm} \times 1.24} = \frac{9.1 \times 10^{-8}}{} \mu\text{Ci/ml}$$

$$\text{Canal Activity (CCSW Heat Exchanger B)} = \frac{B \times 4340}{D \times 1.24}$$

$$\text{Canal Activity (HX B)} = \frac{N/A \mu\text{Ci/ml} \times 4340}{N/A \text{ gpm} \times 1.24} = \frac{N/A}{} \mu\text{Ci/ml}$$

Calculations performed by: Jimmy Johnson / TODAY
Signature Date

Calculations verified by: _____ / _____
Signature Date

Release Started: _____ / _____ Release Stopped: _____ / _____
Date / time Date / time

Job Performance Measure

DETERMINE EMERGENCY CLASSIFICATION

JPM Number: A-N-5-S

Revision Number: 02

Date: 01/20

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A 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-AA-1004 Addendum 3 Rev: 08
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 01: Revised for 2010 Cert Exam.

Revision 02: Modified and updated for the ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. This is a tabletop JPM utilizing simulator procedures.
2. No Simulator setup needed.

DOCUMENT PREPARATION

1. Screenshot of meteorological data.

INITIAL CONDITIONS

1. This is a time critical JPM.
2. You are the Shift Emergency Director.
3. EONS is **NOT** online.
4. Unit 2 was operating at near rated power when a steam leak developed in the RPV vessel and the following conditions exist:
 - Drywell Temperature is 255°F and steady.
 - Drywell Pressure is 65 psig and rising slowly.
 - RPV Pressure is 920 psig and dropping slowly.
 - RPV level is at -158 inches and dropping slowly.
 - ALL Reactor Building Radiation Levels are < 1000 mrem.

INITIATING CUE

1. Determine EAL(s) (ignore discretionary EALs) and complete a NARS form.
2. Give the NARS form to the WEC Supervisor, who will make the state notification.

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

.....

Information For Evaluator's Use:

Task Standard: Examinee will determine the emergency classification within 15 minutes and fill out a NARS form utilizing EP-AA-1004 ADDENDUM 3, EXELON NUCLEAR EMERGENCY ACTION LEVELS FOR DRESDEN STATION

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*1.	Determines a classification of SITE AREA EMERGENCY, due to a loss or potential loss of TWO Fission Product Barriers	Determines highest classification is a SITE AREA EMERGENCY per EAL FS1 (15 minute requirement).	___	___	___
Note	Determines classification start time _____ and stop time _____ . (15 minute limit)				
Note	<u>Loss of “REACTOR COOLANT SYSTEM” Fission Product Barrier has occurred.</u> <ul style="list-style-type: none">Drywell pressure >2.0 psig (65 psig) AND <ul style="list-style-type: none">Drywell pressure rise is due to RCS leakage <u>Potential Loss of “CONTAINMENT” Fission Product Barrier has occurred.</u> <ul style="list-style-type: none">Drywell Pressure ≥ 62 psig and rising (65 psig)				
*2.	Properly fills out NARS form.	See attached key for the areas that must be filled out correctly.	___	___	___
Note	Fill out NARS form start time (when declaration completed) _____ and stop time _____ . (15 minute limit for considering this critical step completed satisfactory.)				
END					

JPM Stop Time: _____

.....

KEY

EP-MW-114-100-F-01

Revision K

Page 1 of 2

NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM

OR ELECTRONIC FACSIMILE

NO REVISION BARS WERE USED FOR THIS REVISION

UTILITY MESSAGE NO. 0

STATE MESSAGE NO. _____

- | | | | |
|---|---|--|--|
| <p>1. <u>STATUS</u>
 [A] ACTUAL
 [B] DRILL/EXERCISE</p> | <p>2. <u>STATION</u>
 [A] BRAIDWOOD
 [B] BYRON</p> | <p>[C] CLINTON
 [D] DRESDEN</p> | <p>[E] LASALLE
 [F] QUAD CITIES</p> |
| <p>3. <u>ONSITE CONDITION</u>
 [A] UNUSUAL EVENT
 [B] ALERT
 [C] SITE AREA EMERGENCY
 [D] GENERAL EMERGENCY
 [E] RECOVERY
 [F] TERMINATED</p> | <p>4. <u>ACCIDENT CLASSIFIED</u>
 TIME (3[A-E]): _____
 DATE (3[A-E]): _____
 EAL#: FS1</p> | <p><u>ACCIDENT TERMINATED</u>
 TIME (3[F]): _____
 DATE (3[F]): _____</p> | |
| <p>5. <u>RELEASE STATUS</u>
 [A] NONE
 [B] OCCURRING
 [C] TERMINATED</p> | <p>6. <u>TYPE OF RELEASE</u>
 [A] NOT APPLICABLE
 [B] GASEOUS
 [C] LIQUID</p> | <p>7. <u>WIND DIR</u>

 (DEGREES FROM)</p> | <p>8. <u>WIND SPEED</u>
 [A] METERS/SEC.: _____
 [B] MILES/HR.: _____</p> |
| <p>9. <u>RECOMMENDED ACTIONS</u>
 UTILITY RECOMMENDATION
 [A] NONE (VE, Alert and SAE Only)</p> | | | |

----- (General Emergency Only) -----

- [B] SHELTER ILLINOIS SUB-AREAS: _____
- [C] SHELTER IOWA SUB-AREAS: _____
- [D] EVACUATE ILLINOIS SUB-AREAS: _____
- [E] EVACUATE IOWA SUB-AREAS: _____

AND

ADVISE THE REMAINDER OF THE 10 MILE EPZ TO MONITOR AND PREPARE

AND

FOR ILLINOIS ONLY, CONSIDER JIC ADVISORY WITH POTASSIUM IODIDE (KI) STATEMENT IN ACCORDANCE WITH STATE PROCEDURES

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

Verified With:

Approved By:

- | 11. TRANSMITTED BY: | NAME | PHONE NUMBER | TIME/DATE |
|---------------------|------|--------------|-----------|
| [A] EXELON: | | | |
| [B] STATE: | | | |
| [C] COUNTY: | | | |

- | 12. RECEIVED BY: | NAME | ORGANIZATION | TIME/DATE |
|------------------|------|--------------|-----------|
|------------------|------|--------------|-----------|

 Indicates required field

EP-MW-114-100-F-01

Revision K

Page 2 of 2

NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM

OR ELECTRONIC FACSIMILE

NO REVISION BARS WERE USED FOR THIS REVISION

Braidwood BW 38	
<u>Initial Time</u>	<u>Final</u>
___ # Illinois EMA	<input type="checkbox"/>
(Time) (217)782-7860	
<input type="checkbox"/> * Grundy County	<input type="checkbox"/>
<input type="checkbox"/> * Kankakee County	<input type="checkbox"/>
<input type="checkbox"/> * Will County	<input type="checkbox"/>

Clinton CL 36	
<u>Initial Time</u>	<u>Final</u>
___ # Illinois EMA	<input checked="" type="checkbox"/>
(Time) (217)782-7860	
<input type="checkbox"/> * DeWitt County	<input type="checkbox"/>

LaSalle LS 25	
<u>Initial Time</u>	<u>Final</u>
___ # Illinois EMA	<input type="checkbox"/>
(Time) (217)782-7860	
<input type="checkbox"/> * Grundy County	<input type="checkbox"/>
<input type="checkbox"/> * LaSalle County	<input type="checkbox"/>

Byron BY 37	
<u>Initial Time</u>	<u>Final</u>
___ # Illinois EMA	<input checked="" type="checkbox"/>
(Time) (217)782-7860	
<input type="checkbox"/> ^ Ogle County	<input type="checkbox"/>
<input type="checkbox"/> ^ Rochelle Police	<input type="checkbox"/>

Dresden DR 22	
<u>Initial Time</u>	<u>Final</u>
___ # Illinois EMA	<input type="checkbox"/>
(Time) (217)782-7860	
<input type="checkbox"/> * Grundy County	<input type="checkbox"/>
<input type="checkbox"/> * Kendall County	<input type="checkbox"/>
<input type="checkbox"/> * Will County	<input type="checkbox"/>

Quad Cities QC 23	
<u>Initial Time</u>	<u>Final</u>
___ # Illinois EMA	<input type="checkbox"/>
(Time) (217)782-7860	
<input type="checkbox"/> # Iowa HSEMD	<input type="checkbox"/>
(515) 725-3231	
<input type="checkbox"/> # Clinton County	<input type="checkbox"/>
(563) 242-9211	
<input type="checkbox"/> # Scott County	<input type="checkbox"/>
(563) 388-3904	
<input type="checkbox"/> * Rock Island County	<input type="checkbox"/>
<input checked="" type="checkbox"/> * Whiteside County	<input type="checkbox"/>

- NOTES:**
- # Indicates that this agency is required to be notified within 15 minutes for all NARS messages
 - * Indicates that this agency is required to be notified within 15 minutes if the initiating event is a General Emergency
 - ^ Indicates that only one of Ogle County or Rochelle Police is required to be notified within 15 minutes if the initiating event is a General Emergency (Byron Only)

JPM SUMMARY**Operator's Name:** _____**Emp. ID#:** _____**Job Title:** ☐ SRO ☐ SRO Cert**JPM Title:** Determine Emergency Classification**JPM Number:** A-N-S-5**Revision Number:** 02**Task Number and Title:** 295L160, Given a plant in an off normal condition, determine the EP classification**K/A Number and Importance:** Generic 2.4.41 -- / 4.6**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No**SRO Only:** ☒ Yes ☐ No**Time Critical:** ☒ Yes ☐ No**Reference(s):** EP-AA-1004 Addendum 3, Rev 08**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 ☐ NoThe operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

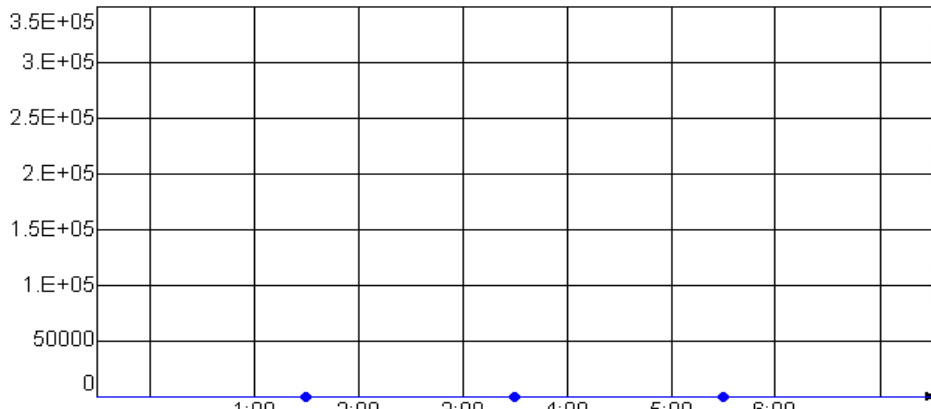
_____**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____

INITIAL CONDITIONS

1. This is a time critical JPM.
2. You are the Shift Emergency Director.
3. EONS is **NOT** online.
4. Unit 2 was operating at near rated power when a steam leak developed in the RPV vessel and the following conditions exist:
 - Drywell Temperature is 255°F and steady.
 - Drywell Pressure is 65 psig and rising slowly.
 - RPV Pressure is 920 psig and dropping slowly.
 - RPV level is at -158 inches and dropping slowly.
 - ALL Reactor Building Radiation Levels are < 1000 mrem.

INITIATING CUE

1. Determine EAL(s) (ignore discretionary EALs) and complete a NARS form.
2. Give the NARS form to the WEC Supervisor, who will make the state notification.

U2/3 Chimney (Elevated Release)				Reactor Bldg Vent (Ground Level Release)			
Noble Gas Release Rate		Lo	6.20000E-07 $\mu\text{Ci/cc}$	Noble Gas Release Rate		Lo	5.80000E-07 $\mu\text{Ci/cc}$
LOW	1.02528E+02 $\mu\text{Ci/s}$	Mid	8.00000E-04 $\mu\text{Ci/cc}$	LOW	6.14098E+01 $\mu\text{Ci/s}$	Mid	Bad Input $\mu\text{Ci/cc}$
Flow	3.50355E+02 kcfm	Hi	3.70000E-03 $\mu\text{Ci/cc}$	Flow	2.24320E+02 kcfm	Hi	Bad Input $\mu\text{Ci/cc}$
15 Minute Avg MET		A Stability Class		U1 Chimney (Elevated Release)			
Elevated		Ground Level		Noble Gas Release Rate		Lo	6.20000E-07 $\mu\text{Ci/cc}$
Wind Speed	25.9 mph		16.3 mph	LOW	3.01419E+00 $\mu\text{Ci/s}$	Mid	1.30000E-02 $\mu\text{Ci/cc}$
	11.6 m/s		7.3 m/s	Flow	1.03000E+01 kcfm	Hi	0.00000E+00 $\mu\text{Ci/cc}$
15min Avg Status	UPDATING		UPDATING				
Wind From	353 Deg		2 Deg				
15min Avg Status	UPDATING		UPDATING				
Drywell Radiation (R/hr)				DRE02V_AM300 4/20/2018 7:29:44 AM			
U2	1.23176E+00	U3	Shutdown				
Isolation Condenser (mR/hr)							
U2	1.34722E-02 Low		U3				
U2	Bad Input High		U3				
SPDS Effluent Radiation ($\mu\text{Ci/s}$)							
U2	1.82062E+02		U3				
Total Noble Gas Release Rate							
1.63938E+02 $\mu\text{Ci/s}$							

Job Performance Measure

SBLC - INJECTION WITH PUMP AND RWCU FAILURES

JPM Number: S-N-a

Revision Number: 04

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 DOP 1100-02 Rev: 19
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 02	Revised for 2013 NRC Exam.
Revision 03	Revised for ILT 15-1 (2016-301) NRC Exam.
Revision 04	Updated for ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Simulator is in any IC (IC 324 used for validation).

NOTE: It is acceptable 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. Run CAEP file: **2020-301 S-N-a.cae**. If the CAEP file does not load properly enter the following Expert commands:
 - a. Malfunctions and/or Remotes:
 - 1) imf cirwcuap (2-1201-1 valve failure to close – and allows manual closure).
 - 2) imf cirwcubp (2-1201-2 valve failure to close – and allows manual closure).
 - 3) imf scrifvad 0.0 (Inserts BOTH SBLC Pump relief valve setpoint drift to 0.0 so whichever pump is started first will not develop flow)
 - 4) imf scrifvbd 0.0 (Inserts BOTH SBLC Pump relief valve setpoint drift to 0.0 so # whichever pump is started first will not develop flow)
 - 5) ior scd3013 off (Overrides SBLC SYS1&2 and SYS2&1 positions OFF)
 - b. Triggers:
 - 1) trgset 1 "hwscd301(1)" (Trigger 1 Activates when SBLC control switch is placed to SYS1 position)
 - 2) trg 1 "dmf scrifvbd" (Deletes 2B SBLC relief valve setpoint drift malfunction)
 - 3) trgset 2 " hwscd301(2)" (Trigger 2 Activates when SBLC control switch is placed to SYS2 position)
 - 4) trg 2 "dmf scrifvad" (Deletes 2A SBLC relief valve setpoint drift malfunction)

DOCUMENT PREPARATION

Clean copy of DOP 1100-02 hardcard.

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. A transient has occurred, resulting in an ATWS.
3. The Unit Supervisor has authorized the use of Hard Cards.

INITIATING CUE

1. The Unit Supervisor has ordered you to inject SBLC per the Hard Card.
2. Inform the Unit Supervisor when the task is complete.

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

.....

Information For Evaluator's Use:

Task Standard: Examinee will attempt to start a single system of SBLC and have to try the other system due to a failure of the first pump. Then using the SBLC Hardcard verify the RWCU system isolated and 2 of the valves have failed but can be closed using the control switches.

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	Examinee should locate the hard card, then provide the included copy.				
1.	Selects the correct procedure step.	Determines correct procedure step is per DOP 1100-02 Page 6, Initiate SBLC for Boron Injection or Level Control (ATWS)	___	___	___
2.	Place the SBLC INJECTION CONTROL keylock switch to the SYS 1 <u>OR</u> SYS 2 position.	Turns the SBLC INJECTION CONTROL keylock switch to <u>either</u> the intermediate right OR intermediate left position.	___	___	___
3.	Verifies applicable SQUIB pilot light NOT lit.	SQUIB "A" or "B" light off.	___	___	___
Note	The selected pump starts but does not develop flow (relief valve failure in the JPM setup).				
*4.	Verifies applicable PUMP pilot light lit.	PUMP light on.	___	___	___
BEGIN ALTERNATE PATH					
5.	Verifies FLOW pilot light lit.	FLOW light off (SBLC is NOT injecting).	___	___	___
6.	SBLC SQUIB VLV CKT FAILURE annunciator alarms (902-5 H-6).	Annunciator 902-5 H-6 illuminated.	___	___	___
*7.	Places SBLC INJECTION CONTROL keylock switch to opposite the position turned in step 1.	Turns SBLC INJECTION CONTROL keylock switch to the opposite direction turned in step 1.	___	___	___
8.	Verifies opposite PUMP pilot light lit.	Opposite PUMP light on.	___	___	___
Note	Flow light will illuminate when SBLC INJECTION CONTROL keylock switch is re-positioned.				
9.	Verifies RWCU valve 2-1201-1 closed.	Recognizes that 2-1201-1 valve did NOT close.	___	___	___
*10.	Closes RWCU valve 2-1201-1.	Takes manual action for a failed automatic action and closes 2-1201-1 valve, by placing c/s in the CLOSED position.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
11.	Verifies RWCU valve 2-1201-1A closed.	GREEN light illuminated.	___	___	___
12.	Verifies RWCU valve 2-1201-2 closed.	Recognizes that 2-1201-2 valve did NOT close.	___	___	___
*?13.	Closes RWCU valve 2-1201-2. Only one valve is required to be closed.	Takes manual action for a failed automatic action and closes 2-1201-2 valve, by placing c/s in the CLOSED position.	___	___	___
14.	Verifies RWCU valve 2-1201-3 closed.	GREEN light illuminated.	___	___	___
15.	Verifies RWCU valve 2-1201-7 closed.	RED light illuminated.	___	___	___
16.	Informs Unit Supervisor task is complete.	Reports SBLC injecting but the first pump did not inject and valves 2-1201-1 and 2-1201-2 failed to close automatically.	___	___	___
Cue	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** SBLC - Injection With Pump and RWCU Failures**JPM Number:** S-N-a**Revision Number:** 04**Task Number and Title:** 211L002, Injection of Standby Liquid Control System**K/A Number and Importance:** 211000.A4.08 4.2 / 4.2**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 1100-02, rev 19**Actual Testing Environment:** ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 9 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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 2 NSO.
2. A transient has occurred, resulting in an ATWS.
3. The Unit Supervisor has authorized the use of Hard Cards.

INITIATING CUE

1. The Unit Supervisor has ordered you to inject SBLC per the Hard Card.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

ALTERNATE DEPRESSURIZATION USING GLAND SEAL PER DEOP 0500-07

JPM Number: S-N-c

Revision Number: 00

Date: 1/20

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A 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 DEOP 0500-07 Rev: 01
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 00 New JPM for ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Simulator is in any IC (IC 324 used for validation).

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

2. Ensure both Gland Exhauster fans are secured.
3. Malfunctions and/or Remotes:
 - lor mtlmttp7 on – Overrides the autotrip light ON for the 2A Gland Exhauster
4. Triggers:
 - None

DOCUMENT PREPARATION

Clean copy of DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. A transient has occurred.
3. All Group One Isolations have been bypassed.

INITIATING CUE

1. The Unit Supervisor has ordered you to perform Alternate Emergency Depressurization using Gland Seal per DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.
2. Inform the Unit Supervisor when the task is complete.

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

.....

Information For Evaluator's Use:

Task Standard: The examinee will perform Alternate Emergency Depressurization utilizing Gland Seal per DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE	Provide the Examinee a copy of DEOP 0500-07.				
Note	If Examinee requests a peer check, respond – “a peer check is not available.”				
1.	Selects the correct procedure step.	Determines correct procedure step is per DEOP 0500-07, page 15, step G.9, DEPRESSURIZE RPV USING GLAND SEAL STEAM	___	___	___
NOTE	2A Gland Exhauster is tripped, the examinee should start 2B Gland Exhauster.				
*2.	Starts the 2A(B) Gland Exhauster(s).	Places the 2B Gland Exhauster C/S to CLOSE position and verifies blue ON light illuminated.	___	___	___
3.	Verifies 2B EXH INLET VLV MO E2 opens.	Verifies that the 2B EXH INLET VLV MO E2 green CLOSE light is out, and the green OPEN light is illuminated.	___	___	___
*4.	Throttles 2B EXH DISCH VLV MO D2 to maintain 10 to 20 inWC as indicated on VI 2-5640-70, GSC EXH PRESS.	Places 2B EXH DISCH VLV MO D2 to OPEN. Throttles valve until VI 2-5640-70, GSC EXH PRESS, indicates 10 to 20 inches Water Column.	___	___	___
NOTE	For either Gland Exhauster, performs the following:				
5.	Opens MO S1, FEED VLV	Verifies the MO S1, FEED VLV, is OPEN by checking that the green OPEN light is illuminated.	___	___	___
*6.	Opens MO S2, FEED BYPASS VLV	Places the MO S2, FEED BYPASS VLV, control switch to OPEN and verifies that the red OPEN light is illuminated.	___	___	___
7.	Informs Unit Supervisor task is complete.	Reports that Alternate Emergency Depressurization using Gland Seal has been established.	___	___	___
Cue	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** Alternate Emergency Depressurization using Gland Seal per DEOP 0500-07**JPM Number:** S-N-c**Revision Number:** 00**Task Number and Title:** 295L017, Perform residual heat removal alternatives to control reactor vessel temperature**K/A Number and Importance:** 295025 G.2.4.6 3.7 / 4.7**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DEOP 0500-07, Rev 01**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 ☐ NoThe 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 2 NSO.
2. A transient has occurred.
3. All Group One Isolations have been bypassed.

INITIATING CUE

1. The Unit Supervisor has ordered you to perform Alternate Emergency Depressurization using Gland Seal per DEOP 0500-07, ALTERNATE EMERGENCY DEPRESSURIZATION SYSTEMS.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

SWAP STATOR COOLING PUMPS WITH FAILURE OF PCV (AP)

JPM Number: S-N-d

Revision Number: 00

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 DOP 7400-02 Rev: 19
Procedure DOA 7400-01 Rev: 39
Procedure DAN 902(3)-7 C-3 Rev: 24
- _____ 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 00 New JPM developed for ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Simulator is in any IC with >93% FCL (IC 325 used for validation).

NOTE: It is acceptable 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 2A Stator Cooling Water Pump is running and 2B Stator Cooling Water Pump is secured.
3. Run CAEP file: **2020-301 S-N-d.cae**. If the CAEP file does not load properly enter the following Expert commands:
 - a. `trgset 1 "hwmglscfof(1)"` (activates when the 'Off' light illuminates on the 2A Stator Cooling Pump)
 - b. `irf kp4 (1) 0.0` (fails the Stator Cooling PCV causing a turbine runback)

DOCUMENT PREPARATION

Clean copies of the following procedures:

- DOP 7400-02, Stator Cooling Water System Pump Changeover
- DAN 902(3)-7 C-3, Turb Stator Coolant Runback
- DOA 7400-01, Failure of the Stator Coolant System

Provide the Examinee a copy of DOP 7400-02.

DO NOT GIVE THE EXAMINEE THE COPIES OF DOA 7400-01 or DAN 902(3)-7 C-3

UNTIL THEY NEED IT DURING THE JPM AND FIND IT IN THE DOA OR DAN BOOK

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Engineering has requested that 2A Stator Cooling pump to be secured due to high vibrations.

INITIATING CUE

1. The Unit 2 Unit Supervisor has directed you start 2B Stator Cooling pump and secure 2A Stator Cooling pump IAW DOP 7400-02.
2. Inform the Unit Supervisor when the task is complete.

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

.....

Information For Evaluator's Use:

Task Standard: The Examinee will swap Stator Cooling Water Pumps IAW DOP 7400-02, STATOR COOLING WATER SYSTEM PUMP CHANGEOVER, and when the originally running pump is secured the PCV will fail causing a Stator Cooling Runback and utilizing DOA 7400-01, FAILURE OF THE STATOR COOLANT SYSTEM, the examinee will scram the reactor based on condition of the plant.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide Examinee the supplied copy of DOP 7400-02, the copies of DAN 902-7 C-3 and/or DOA 7400-01 will be handed to the examinee when the Alternate Path begins.				
*1.	Takes 2B Stator Cooling Water pump control switch to START	Takes 2B Stator Cooling Water pump control switch to START and verifies the NORMAL PRESS is illuminated	___	___	___
2.	Directs EO to check the 2B Stator Cooling Water pump for proper operation	Directs EO to check the 2B Stator Cooling Water pump for proper operation	___	___	___
Cue	The 2B Stator Cooling Water pump is 1) ready to start and 2) operating normally				
*3.	Takes 2A Stator Cooling Water pump control switch to STOP	Takes 2A Stator Cooling Water pump control switch to STOP	___	___	___
Note	When the 2A Stator Cooling Water pump OFF light illuminates the PCV will fail closed causing a Turbine Runback.				
BEGIN ALTERNATE PATH					
Note	When examinee locates DOA 7400-01 hand them the included copy.				
4.	Identifies the Turbine Runback and enters DOA 7400-01	Identifies the Turbine Runback and enters DOA 7400-01	___	___	___
*5.	Starts standby Stator Water Cooling pump (Re-starting this pump is not a mitigating action – no impact on PCV valve.)	Takes 2A Stator Cooling Water pump control switch to START and verifies the NORMAL PRESS is illuminated	___	___	___
Note	The runback will still be occurring and FCL is >93%, therefore the next step in the DOA is to Scram the Reactor.				
*6.	Performs a manual scram of the Reactor (If it takes longer than 1.5 minutes, the reactor will automatically Scram.)	Pushes the scram pushbuttons on the 902-5 panel and verifies all rods have inserted.	___	___	___
Cue	Inform examinee that another NSO will continue with the Reactor Scram actions and that the task is completed.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** Swap Stator Cooling Pumps with Failure of PCV (AP)**JPM Number:** S-N-d**Revision Number:** 00**Task Number and Title:** 253L003 Respond to a failure of the stator coolant system**K/A Number and Importance:** 245000.K6.05 2.9 / 2.9**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 7400-02, Rev 19
DOA 7400-01, Rev 39
DAN 902(3)-7 C-3, Rev 24**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 ☐ NoThe 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 2 Aux NSO.
2. Engineering has requested that 2A Stator Cooling pump to be secured due to high vibrations.

INITIATING CUE

1. The Unit 2 Unit Supervisor has directed you start 2B Stator Cooling pump and secure 2A Stator Cooling pump IAW DOP 7400-02.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

AUX POWER - TRANSFER AUX POWER

JPM Number: S-N-e

Revision Number: 04

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A _____ 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 DOP 6500-01 Rev: 15
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 02	Bank JPM
Revision 03	Revised for ILT 16-1 (2017-301) NRC Exam
Revision 04	Updated for the ILT 19-1 (2020-301) NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Simulator is in an 70% power IC (IC 324 used for validation).

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

2. Ensure ONLY 2 RFPs operating.
3. Ensure ONLY 3 Cond/Cond Booster Pumps operating.
4. This completes the setup for this JPM.

DOCUMENT PREPARATION

Mark up a copy of DOP 6500-01 through step F.5

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Unit 2 was operating at rated power when the TR-21 trouble alarm is received.
3. The EO, dispatched to TR-21, reported that the TR-21 cooling fans are not all operating and the transformer temperature is rising.
4. The Unit Supervisor has decided to unload TR-21 by transferring auxiliary power to TR-22.
5. Another operator will verify TR-86 Load Tap Changer positions and loading remains below the restrictions of the procedure.

INITIATING CUE

1. The Unit Supervisor has directed you to transfer Bus 21 and Bus 23 to TR-22 in accordance with DOP 6500-01 Transfer of 4160 Volt Bus Power Supply.
2. Inform the Unit Supervisor when the task is complete.

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

.....

Information For Evaluator's Use:

Task Standard: The examinee will transfer Aux Power IAW DOP 6500-01, TRANSFER OF 4160 VOLT BUS POWER SUPPLY.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Provide the examinee with the provided copy of DOP 6500-01. This task has two parts, which can be performed in any order.				
Cue	IF the incoming and running voltages are NOT approximately equal, inform examinee that they ARE approximately equal.				
TRANSFER BUS 21 TO TR-22					
*1.	Position TR-22 to Bus 21 SYNCHROSCOPE selector switch to ON.	Switch in ON position.	___	___	___
2.	Verify: INCOMING VOLTS and RUNNING VOLTS meters approximately equal. SYNCHRONIZING meter at 12 o'clock position and NOT rotating. SYNCHRONIZING meter lights NOT glowing.	Voltages approximately equal. Meter NOT rotating. White lights extinguished.	___	___	___
*3.	Position TR-22 to Bus 21 breaker control switch to CLOSE.	RED light illuminated.	___	___	___
Cue	IF the examinee states there are large variations of incoming / running bus currents / voltages, inform examinee that this is due to expected circulating currents and to continue with the evolution.				
4.	Verify: SYNCHRONIZING meter at 12 o'clock position. TR-22 to Bus 21 breaker indicates CLOSED. Annunciator 902-8 D-1 in alarm.	Meter NOT rotating. RED light illuminated. Annunciator 902-8 D-1 illuminated.	___	___	___
*5.	Position TR-21 to Bus 21 breaker control switch to TRIP.	GREEN light illuminated.	___	___	___

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6.	Verify: TR-21 to Bus 21 breaker indicates OPEN. Annunciator 902-8 D-1 clears.	GREEN light illuminated. Annunciator 902-8 D-1 extinguished.	___	___	___
7.	Position TR-22 to Bus 21 synchroscope selector switch to OFF.	Switch in OFF position.	___	___	___
8.	Verify Bus 21 AMMETER and VOLTMETER indications are normal.	Verifies Bus 21 amps and volts are normal.	___	___	___
Note	Amps may vary depending on conditions, and volts are normally ~4160.				
TRANSFER BUS 23 TO TR-22					
*9.	Position TR-22 to Bus 23 SYNCHROSCOPE selector switch to ON.	Switch in ON position.	___	___	___
10.	Verify: INCOMING VOLTS and RUNNING VOLTS meters approximately equal. SYNCHRONIZING meter at 12 o'clock position and NOT rotating. SYNCHRONIZING meter lights NOT glowing.	Voltages approximately equal. Meter NOT rotating. White lights extinguished.	___	___	___
*11.	Position TR-22 to Bus 23 breaker control switch to CLOSE.	RED light illuminated.	___	___	___
Cue	IF the examinee states there are large variations of incoming / running bus currents / voltages, inform examinee that this is due to expected circulating currents and to continue with the evolution.				
12.	Verify: SYNCHRONIZING meter at 12 o'clock position. TR-22 to Bus 23 breaker indicates CLOSED. Annunciator 902-8 C-3 in alarm.	Meter NOT rotating. RED light illuminated. Annunciator 902-8 C-3 illuminated.	___	___	___
*13.	Position TR-21 to Bus 23 breaker control switch to TRIP.	GREEN light illuminated.	___	___	___

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
14.	Verify: TR-21 to Bus 23 breaker indicates OPEN. Annunciator 902-8 C-3 clears.	GREEN light illuminated. Annunciator 902-8 C-3 extinguished.	___	___	___
15.	Position TR-22 to Bus 23 synchroscope selector switch to OFF.	Switch in OFF position.	___	___	___
16.	Verify Bus 23 AMMETER and VOLTMETER indications are normal.	Verifies Bus 23 amps and volts are normal.	___	___	___
Note	Amps may vary depending on conditions, and volts are normally ~4160.				
17.	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	___	___	___
Cue	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** AUX POWER - Transfer Aux Power**JPM Number:** S-N-e**Revision Number:** 04**Task Number and Title:** 262L024, Transfer a 4160 volt bus between power supplies**K/A Number and Importance:** 262001.A4.04 3.6 / 3.7**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 6500-01, Rev 15**Actual Testing Environment:** ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 14 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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 2 Aux NSO.
2. Unit 2 was operating at rated power when the TR-21 trouble alarm is received.
3. The EO, dispatched to TR-21, reported that the TR-21 cooling fans are not all operating and the transformer temperature is rising.
4. The Unit Supervisor has decided to unload TR-21 by transferring auxiliary power to TR-22.
5. Another operator will verify TR-86 Load Tap Changer positions and loading remains below the restrictions of the procedure.

INITIATING CUE

1. The Unit Supervisor has directed you to transfer Bus 21 and Bus 23 to TR-22 in accordance with DOP 6500-01 Transfer of 4160 Volt Bus Power Supply.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

WITHDRAW SRM DETECTORS WITH A STUCK SRM DETECTOR (AP)

JPM Number: S-N-f

Revision Number: 04

Date: 10/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 DOP 0700-01 Rev: 17
Procedure DOA 0700-02 Rev: 13
Procedure _____ Rev: _____
- _____ 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 00	New JPM for the 2010 LORT exam
Revision 01	Updated for 2012 LORT Exam
Revision 02	Updated for 2015 LORT Exam
Revision 03	Updated for 2018 LORT Exam
Revision 04	Updated for the ILT 19-1 (2020-301) NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to 2-3% power IC (IC 326 was used for validation) .

NOTE: It is acceptable 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. Position SRM detectors for a 10^4 to 10^5 count rate. (Should not be in the fully withdrawn position).
3. Run CAEP – **2020-301 S-N-f.cae**, if the CAEP file does not load properly enter the following expert commands:
 - `trgset 1 "nilsdet(2) .and. nil104do"`
 - `trgset 2 "et_array(1) .and. nilsdet(2) .and. nil101di"`
 - `trg 2 "dmf nis22det"`

DOCUMENT PREPARATION

A marked up copy of DOP 0700-01, Source Range Monitor Operation (SRM) complete through Step G.1.e, Step G.1.f is the next to be performed

A clean copy of DOA 0700-02, SRM or IRM Detector Stuck.

CAEP File

2020-301 S-N-f.cae

Revised by: DSS

10/19

Initial Setup

Inserts SRM 22 stuck malfunction.

`imf nis22det`

Trigger 1 activates when SRM 22 is selected and SRM DRIVE OUT light goes ON.

This is to make sure the examinee has tried to withdraw SRM 22 before deleting the SRM 22 stuck malfunction.

`trgset 1 "nilsdet(2) .and. nil104do"`

Trigger 2 activates when Trigger 1 is activated, SRM 22 is selected, and the DRIVE IN pushbutton is depressed.

Deletes SRM 22 stuck malfunction.

`trgset 2 "et_array(1) .and. nilsdet(2) .and. nil101di"`

`trg 2 "dmf nis22det"`

END

Provide the Examinee a copy of DOP 0700-01.

*** **DO NOT GIVE THE EXAMINEE THE COPY OF DOA 0700-02** ***

*** **UNTIL THEY NEED IT DURING THE JPM AND FIND IT IN THE DOA BOOK** ***

INITIAL CONDITIONS

1. Unit 2 startup is in progress.
2. You are an extra NSO assisting the startup.
3. **At least 1** IRM downscale lights ~~has~~ **have** cleared.

INITIATING CUE

1. The Unit 2 Supervisor directs you to fully withdraw SRM detectors per DOP 0700-01, Source Range Monitor Operation (SRM), IAW Step G.1.f.
2. Your Pre-Job Brief has been completed.
3. The Prerequisites have been completed.
4. Notify the Unit supervisor upon completion of the task.

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

.....

Information For Evaluator's Use:

Task Standard: The examinee will attempt to withdraw SRM detectors IAW DOP 0700-01, SOURCE RANGE MONITOR OPERATION (SRM), one of the SRMs will be stuck. Then utilizing DOA 0700-02, SRM OR IRM DETECTOR STUCK, the examinee will free the stuck SRM and it can be fully withdrawn.

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>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
Cue	Provide the Examinee a copy of DOP 0700-01. ** DO NOT GIVE THE EXAMINEE THE COPY OF DOA 0700-02 UNTIL THEY FIND IT IN THE DOA BOOK **				
Note	If Examinee requests a peer check, respond – “a peer check is not available.”				
Cue	DOP 0700-01 Step G.1.f bullet refers to Step G.1.j which does not exist. The correct step to be referred to is Step G.1.g. An IR will be written following the exam to get the procedure corrected.				
1.	<u>WHEN</u> IRM down scale alarms have cleared, <u>THEN</u> start SRM withdrawal and maintain SRM count rate 290 cps to 8.85×10^4 cps.	IRM down scales are cleared by initial conditions. Monitors count rate when withdrawing SRMs.	___	___	___
*2.	Depress the applicable SELECT switch (LIT when selected).	<ul style="list-style-type: none"> Depresses each SRM’s SELECT switch. Verifies SELECT light lit. 	___	___	___
*3.	Depress and hold the DRIVE OUT switch to withdraw SRMs to maintain SRM count rate of 290 cps to 8.85×10^4 cps.	Depress and hold the DRIVE OUT switch to withdraw SRMs	___	___	___
BEGIN ALTERNATE PATH					
4.	Verify that SRMs indication is changing as expected.	For SRMs 21, 23 & 24: <ul style="list-style-type: none"> Count rate drops. Period indicates negative. OUT light is lit when detector reaches full out position. For SRM 22 indications remain unchanged.	___	___	___
5.	Report SRM 22 detector did not move and/or appears to be stuck.	Reports SRM 22 detector did not move and/or appears to be stuck.	___	___	___
Note	The Examinee should allow SRMs 21, 23, 24 to fully withdraw. The Examinee should determine that DOA 0700-02, SRM or IRM Detector Stuck, should be entered and enters the procedure. When the Examinee locates DOA 0700-02, give them the provided copy of DOA 0700-02.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*6.	Depress SRM SELECT switches to establish ONLY SRM 22 selected	Depresses SRM SELECT switches to establish ONLY SRM 22 SELECT light lit.	___	___	___
Note	An automatic Trigger is setup to delete the SRM stuck detector malfunction when the proper actions are taken per the DOA.				
Note	The following actions are from DOA 0700-02				
*7.	Use DRIVE IN <u>AND</u> DRIVE OUT switches to move stuck SRM detector in both directions to free it.	Depresses DRIVE IN switch to move SRM 22.	___	___	___
8.	Verify indication that SRM 22 is moving.	Observes SRM 22: <ul style="list-style-type: none">Count rate rises.Period indicates positive.	___	___	___
*9.	Depress DRIVE IN switch to stop SRM 22.	Depresses DRIVE IN switch to stop SRM 22.	___	___	___
*10.	Use DRIVE IN <u>AND</u> DRIVE OUT switches to move stuck SRM detector in both directions to free it.	Depresses and holds DRIVE OUT switch to move SRM 22. Drives SRM 22 fully out.	___	___	___
11.	Verify that SRM 22 indication is changing as expected.	Observes SRMs 22: <ul style="list-style-type: none">Count rate drops.Period indicates negative.OUT light is lit when detector reaches full out position.	___	___	___
12.	Report SRM 22 detector is fully withdrawn.	Reports SRM 22 detector is fully withdrawn.	___	___	___
Cue	Acknowledge report.				
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** Withdraw SRM Detectors with a Stuck SRM Detector (AP)**JPM Number:** S-N-f**Revision Number:** 04**Task Number and Title:** 215L022, Respond to an SRM or IRM stuck detector**K/A Number and Importance:** 215004.A4.04 3.2 / 3.2**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 0700-01, Rev. 17

DOA 0700-02, Rev. 13

Actual Testing Environment: ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 18 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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. Unit 2 startup is in progress.
2. You are an extra NSO assisting the startup.
3. IRM downscale lights have cleared.

INITIATING CUE

1. The Unit 2 Supervisor directs you to fully withdraw SRM detectors per DOP 0700-01, Source Range Monitor Operation (SRM), IAW Step G.1.f.
2. Your Pre-Job Brief has been completed.
3. The Prerequisites have been completed.
4. Notify the Unit supervisor upon completion of the task.

Job Performance Measure

RBCCW – SWAP RBCCW PUMPS WITH PUMP TRIP (AP)

JPM Number: S-N-g

Revision Number: 01

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 DOA 3700-01 Rev: 20
Procedure DOP 3700-02 Rev: 43
Procedure _____ Rev: _____
- _____ 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 00	Developed for ILT 16-1 (2017-301) NRC Exam
Revision 01	Updated for the ILT 19-1 (2020-301) NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Simulator is in any IC with 2 RBCCW Pumps running on Unit 2 (IC 325 used for validation).

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

2. Ensure 2B and 2/3 RBCCW pumps are running and 2A RBCCW pump is secured.
3. Setup the Malfunctions, Remotes, and/or Triggers by running CAEP file: **2020-301 S-N-g.cae**. If the CAEP file does not load properly enter the following Expert Commands:
 - a. `trgset 1 "hw wrdpmpt(2)"` (Activates 10 seconds after 2B RBCCW Pump is secured)
 - b. `imf wr2afo (1 10)` (Trips the 2A RBCCW Pump)
4. This completes the setup for this JPM.

DOCUMENT PREPARATION

Mark up a copy of DOP 3700-02, REACTOR BUILDING CLOSED COOLING WATER SYSTEM OPERATION, through step G.6.f.(2), step G.6.g is the next step to be performed.

Clean copy of DOA 3700-01, LOSS OF COOLING BY REACTOR BUILDING CLOSED COOLING WATER (RBCCW) SYSTEM

CAEP File

```
# 2020-301 S-N-g.cae
# For 19-1 ILT NRC Exam
# Revised by DSS
# Rev 01
# Date 11/19
```

```
##### EVENT TRIGGERS #####
```

```
##### Setup for JPM S-N-g, RBCCW - Swap RBCCW Pumps with Pump Trip #####
```

```
# Event Trigger 1 Activates when 2B RBCCW Pump is secured.
# Inserts a trip of 2A RBCCW pump 10 seconds after 2B RBCCW pump is secured.
trgset 1 "HWWRDPMPT(2)"
imf WR2AFO (1 10)
```

```
##### END #####
```

***** DO NOT GIVE THE EXAMINEE THE COPY OF DOA 3700-01 *****
***** UNTIL THEY FIND IT IN THE DOA BOOK *****

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. Maintenance has just been completed on 2A RBCCW pump.
3. Fill and vent of the 2A RBCCW pump has been completed.

INITIATING CUE

1. The Unit Supervisor has directed you to start 2A RBCCW pump for post maintenance testing and secure 2B RBCCW pump IAW DOP 3700-02.
2. Inform the Unit Supervisor when the task is complete.

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

.....

Information For Evaluator's Use:

Task Standard: The Examinee will swap the RBCCW pumps IAW DOP 3700-02, REACTOR BUILDING CLOSED COOLING WATER SYSTEM OPERATION, and when 2B RBCCW pump is secured the 2A RBCCW pump will trip. The examinee will restart the 2B RBCCW pump IAW DOA LOSS OF COOLING BY REACTOR BUILDING CLOSED COOLING WATER (RBCCW) SYSTEM.

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: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Cue	Provide the Examinee a copy of DOP 3700-02. *** DO NOT GIVE THE EXAMINEE THE COPY OF DOA 3700-01 *** *** UNTIL THEY FIND IT IN THE DOA BOOK ***				
Note	If Examinee requests a peer check, respond – “a peer check is not available.”				
*1.	Start on coming RBCCW pump	Places 2A RBCCW PP C/S to CLOSE position and verifies blue ON light illuminated	___	___	___
2.	Verify proper operation	Verifies 2A RBCCW PP AMPS spike then return to approximately 30 amps Contacts EO to verify proper operation of 2A RBCCW pump	___	___	___
Cue	As the EO, inform the examinee “2A RBCCW pump is operating normally”				
*3.	Stop off going RBCCW pump	Places 2B RBCCW PP C/S to TRIP position and verifies green OFF light illuminated	___	___	___
Note	An automatic Trigger inserts a trip of the 2A RBCCW pump 10 seconds after the 2B RBCCW pump is secured.				
BEGIN ALTERNATE PATH					
4.	Announces 2A RBCCW pump trip and enters DOA 3700-01, Loss Of Cooling By Reactor Building Closed Cooling Water (RBCCW) System	Announces 2A RBCCW pump trip and enters DOA 3700-01, Loss Of Cooling By Reactor Building Closed Cooling Water (RBCCW) System	___	___	___
*5.	Start a standby RBCCW Pump (DOA immediate action)	Places 2B RBCCW PP C/S to CLOSE position and verifies blue ON light illuminated	___	___	___

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
6.	Verify proper operation	Verifies 2B RBCCW PP AMPS spike then return to approximately 30 amps Contacts EO to verify proper operation of 2B RBCCW pump	___	___	___
Note	As the EO, inform the examinee “2B RBCCW pump is operating normally”				
7.	Informs the Unit Supervisor 2B RBCCW pump was restarted due to a trip of 2A RBCCW pump	Examinee notifies the Unit Supervisor.	___	___	___
Cue	Acknowledge the report				
Cue	Inform the examinee “Another NSO will complete DOA 3700-01 actions”.				
Note	At this point the JPM is complete				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** RBCCW – Swap RBCCW Pumps with Pump Trip (AP)**JPM Number:** S-N-g**Revision Number:** 01**Task Number and Title:** 208N008, Perform RBCCW pump and heat exchanger lineup combinations**K/A Number and Importance:** 400000.A4.01 3.1 / 3.0**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOA 3700-01, Rev 20

DOP 3700-02, Rev 43

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 ☐ NoThe 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 2 Aux NSO.
2. Maintenance has just been completed on 2A RBCCW pump.
3. Fill and vent of the 2A RBCCW pump has been completed.

INITIATING CUE

1. The Unit Supervisor has directed you to start 2A RBCCW pump for post maintenance testing and secure 2B RBCCW pump IAW DOP 3700-02.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

SBGT - START STANDBY GAS TREATMENT

JPM Number: S-N-h

Revision Number: 08

Date: 11/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*). |
| _____ <u>N/A</u> | 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>DOP 7500-01</u> Rev: <u>39</u>
Procedure _____ Rev: _____
Procedure _____ Rev: _____ |
| _____ | 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 05:** Updated for the 2013 LORT exam.
- Revision 06:** Updated for the 2016 LORT exam and to new JPM template.
- Revision 07:** Updated for the 2019 LORT exam.
- Revision 08:** Updated for the ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Standby gas treatment can be started from any IC (IC 326 used for validation).
2. Place "B" SGBT train switch in Primary, and the "A" train switch in Standby.

DOCUMENT PREPARATION

Markup a copy of DOP 7500-01, STANDBY GAS TREATMENT SYSTEM OPERATION, as complete up to but not including Step G.1a.(2).

INITIAL CONDITIONS

1. HPCI operability surveillance is about to be performed.
2. In order for this surveillance to be run, SBGT needs to be on.
3. No painting or GCA chemical use is in progress in the Reactor Building or Turbine Building and no painting or GCA chemical use has been done in the last 24 hours.
4. No propane powered vehicles have been in the area over the last 24 hours.
5. **No dry cask operations in progress in the spent fuel pool.**

INITIATING CUE

1. The Unit Supervisor has directed you to start the "A" train of SBGT system in accordance with DOP 7500-01.
2. DOP 7500-01 has been completed up to but not including step G.1.a.(2).
3. Your Pre-Job Brief has been completed.
4. Notify the Unit Supervisor upon completion of the task.

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

.....

Information For Evaluator's Use:

Task Standard: The examinee will start SBGT IAW DOP 7500-01, STANDBY GAS TREATMENT SYSTEM OPERATION.

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>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
Cue	Provide Examinee a copy of DOP 7500-01.				
*1.	Place "A" SBTG SELECT SWITCH to PRI position.	"A" SBTG SELECT SWITCH in PRI.	___	___	___
*2.	Place "B" SBTG SELECT SWITCH to STBY position.	"B" SBTG SELECT SWITCH in STBY.	___	___	___
3.	Verify the 2/3 A(B) AIR HEATERS OFF.	Conditions verified as listed.	___	___	___
4.	Verify the 2/3 A(B) FANS OFF.	Conditions verified as listed.	___	___	___
5.	Verify the annunciators 923-5 A-6 and B-6 NOT in alarm state.	Conditions verified as listed.	___	___	___
6.	Verify "B" SBTG SELECT SWITCH in STBY position.	Verifies "B" SBTG SELECT SWITCH in STBY position.	___	___	___
*7.	Place "A" SBTG SELECT SWITCH to START position	Starts "A" SBTG.	___	___	___
8.	Verify the following on the "A" SBTG: <ul style="list-style-type: none"> 2/3-7505A, INLET DAM, OPENS. 2/3-7504A, OUTSIDE AIR DAM, CLOSES. 2/3 "A" AIR HEATER ON. 2/3 "A" FAN ON. 2/3-7507A, 2/3A FAN DISCH DAM, OPENS. Sufficient flow rate verified on FI 7540-13, SBTG DISCH FLOW. 	Equipment and flow rate verified as listed.	___	___	___
9.	Verify the following on the "B" train: <ul style="list-style-type: none"> 2/3-7505B, INLET DAM, CLOSED. 2/3-7504B, OUTSIDE AIR DAM, OPEN. 2/3-7507B, 2/3A(B) FAN DISCH DAM, CLOSED 	Equipment Verified as listed.	___	___	___

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
10.	Inspect the 2/3 A SBGT for proper operation.	Directs EO to inspect the 2/3 A SBGT for proper operation.	___	___	___
Cue	The 2/3 A SBGT is operating properly. Start time will be recorded by another NSO.				
11.	Notify Unit Supervisor of task completion.	Unit Supervisor notified of task completion.	___	___	___
Cue	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** SBT - Start Standby Gas Treatment**JPM Number:** S-N-h**Revision Number:** 08**Task Number and Title:** 261L002, Start Standby Gas Treatment**K/A Number and Importance:** 261000.A4.02 3.1 / 3.1**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 7500-01, Rev 39**Actual Testing Environment:** ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 9 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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. HPCI operability surveillance is about to be performed.
2. In order for this surveillance to be run, SBGT needs to be on.
3. No painting or GCA chemical use is in progress in the Reactor Building or Turbine Building and no painting or GCA chemical use has been done in the last 24 hours.
4. No propane powered vehicles have been in the area over the last 24 hours.

INITIATING CUE

1. The Unit Supervisor has directed you to start the "A" train of SBGT system in accordance with DOP 7500-01.
2. DOP 7500-01 has been completed up to but not including step G.1.a.(2).
3. Your Pre-Job Brief has been completed.
4. Notify the Unit Supervisor upon completion of the task.

Job Performance Measure

Containment – Bypass Drywell Cooler Trip

JPM Number: S-N-i

Revision Number: 12

Date: 02 / 2020

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*). |
| _____ <u>N/A</u> | 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>DEOP 0500-02</u> Rev: <u>21</u>
Procedure _____ Rev: _____
Procedure _____ Rev: _____ |
| _____ | 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)

Rev 10	Revised for ILT 15-1 (2016-301) NRC Exam
Rev 11	Revised for ILT 16-1 (2016-301) NRC Exam
Rev 12	Revised for ILT 19-1 (2020-301) NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. N/A: In-Plant JPM

DOCUMENT PREPARATION

1. Clean copy of DEOP 0500-02, BYPASSING INTERLOCKS AND ISOLATIONS

INITIAL CONDITIONS

1. A fire has occurred resulting in a loss of the feeder breakers to Busses 33-1 AND 34-1 from Busses 33 AND 34.
2. The Unit 3 and 2/3 Diesel Generators have started AND are powering Busses 33-1 and 34-1.
3. The loss of Busses 33-1 AND 34-1 caused a spurious trip of the Unit 3 Drywell Coolers.
4. RBCCW pressure is normal with the 2/3 RBCCW pump in operation lined up to Unit 3.
5. Drywell temperature and pressure are rising.

INITIATING CUE

1. The Unit Supervisor has directed you to perform the in-plant actions to bypass the Drywell Cooler trip signals to allow the restart of the Unit 3 Drywell Coolers for Drywell temperature control in accordance with DEOP 500-02.
2. Your Pre Job Brief has been completed.
3. Notify the Unit Supervisor when the in-plant actions are complete.

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

.....

Information For Evaluator's Use:

Task Standard: The examinee will bypass the Drywell Cooler trip signal IAW DEOP 0500-02, BYPASSING INTERLOCKS AND ISOLATIONS.

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 time clock 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	Provide examinee a current copy of DEOP 500-02.				
01	Proceed to Step G.3 of procedure	Locates Step G.3	—	—	—
NOTE	The DEOP Equipment Storage Cabinet key must be obtained from the Unit Supervisor.				
NOTE	Examinee should locate the proper Equipment Box in the cabinet. Tools required are: Electrical Tape, Standard Straight Screwdriver, Split Blade Screwdriver, and Insulated Gloves				
NOTE	Do NOT allow examinee to remove the Equipment Box from the DEOP Equipment Storage Cabinet. Lock cabinet and return DEOP key to Unit Supervisor PRIOR to leaving the Control Room.				
02	Obtain appropriate Equipment Box from the Control Room DEOP Equipment Storage Cabinet.	OBTAINS appropriate EQUIPMENT BOX from the Control Room DEOP Equipment Storage Cabinet	—	—	—
CUE	DEOP Equipment Box you have identified is in your hand.				
NOTE	DS key is required for entry into the AEER				
03	Proceed to the AEER and panel 903-32	Locates Panel 903-32	—	—	—
NOTE	Simulated JPM - Examinee must explain the task.				
*04	Lift <u>AND</u> tape lead on 903-32 panel terminal block AA terminal point 6 <u>OR</u> terminal point 7	On 903-32 panel terminal block AA terminal point 6 <u>OR</u> terminal point 7 <ul style="list-style-type: none"> • Puts on insulated gloves. • Loosens screw with standard screwdriver. • Uses split blade screwdriver to grasp screw and remove it. • Tapes the loose wire with electricians tape. 	—	—	—
CUE	903-32 panel terminal block AA terminal point 6 <u>OR</u> terminal point 7 screw is removed and the loose wire is taped.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*05	Lift <u>AND</u> tape lead on 903-33 panel terminal block AA terminal point 6 <u>OR</u> terminal point 7	On 903-33 panel terminal block AA terminal point 6 <u>OR</u> terminal point 7 <ul style="list-style-type: none">• Puts on insulated gloves.• Loosens screw with standard screwdriver.• Uses split blade screwdriver to grasp screw and remove it.• Tapes the loose wire with electricians tape.	___	___	___
CUE	903-33 panel terminal block AA terminal point 6 <u>OR</u> terminal point 7 screw is removed and the loose wire is taped.				
06	Notify Unit Supervisor upon completion of task.	Notifies Unit Supervisor upon completion of task.	___	___	___
CUE	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____**Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert

JPM Title: Containment – Bypass Drywell Cooler Trip

JPM Number: S-N-i

Revision Number: 12

Task Number and Title: 295L074, Bypass the Trip of Drywell Coolers

K/A Number and Importance: 295028.EA1.03 3.9 / 3.9

Suggested Testing Environment: In-Plant

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

Reference(s): DEOP 0500-02, Rev 021

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 ☐ NoThe 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. A fire has occurred resulting in a loss of the feeder breakers to Busses 33-1 AND 34-1 from Busses 33 AND 34.
2. The Unit 3 and 2/3 Diesel Generators have started AND are powering Busses 33-1 and 34-1.
3. The loss of Busses 33-1 AND 34-1 caused a spurious trip of the Unit 3 Drywell Coolers.
4. RBCCW pressure is normal with the 2/3 RBCCW pump in operation lined up to Unit 3.
5. Drywell temperature and pressure are rising.

INITIATING CUE

1. The Unit Supervisor has directed you to perform the in-plant actions to bypass the Drywell Cooler trip signals to allow the restart of the Unit 3 Drywell Coolers for Drywell temperature control in accordance with DEOP 500-02.
2. Your Pre Job Brief has been completed.
3. Notify the Unit Supervisor when the in-plant actions are complete.

Job Performance Measure

SWAPPING 2/3 EDG COOLING WATER FLOW (AP)

JPM Number: S-N-j

Revision Number: 01

Date: 10/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 DOS 6600-02 Rev: 22
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 00: New JPM for the 2016 LORT exam.

Revision 01: Updated for ILT 19-1 (2020-301) NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

N/A: In-Plant JPM

Note: Need a clean copy of current revision of DOS 6600-02, Reversal of Emergency Diesel Generator Cooling Water Flow

INITIAL CONDITIONS

1. The 2/3 EDG is shut down and cooled.
2. A high differential pressure exists across the 2/3 EDG cooling water heat exchanger.
3. An EO is available in the crib house.
4. The Pre-Job brief has been conducted.
5. Prerequisites are met.
6. Independent verification to be completed next shift.

INITIATING CUE

1. The U2 Unit Supervisor has directed you to reverse the 2/3 EDG cooling water flow direction through the heat exchanger in accordance with DOS 6600-02.
2. Inform the U2 Unit Supervisor when task is complete

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

.....

Information For Evaluator's Use:

Task Standard: The Examinee will start to reverse the 2/3 EDG cooling water flow direction IAW DOS 6600-02, REVERSAL OF EMERGENCY DIESEL GENERATOR COOLING WATER FLOW, and when the valves of one side are repositioned a plant announcement will occur stating that the U2 Reactor has scrambled. The Examinee will perform Attachment A of DOS 6600-02 and make the 2/3 EDG ready by repositioning the valves appropriately.

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>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
1.	Record the as-found position of the following valves: <ul style="list-style-type: none"> 2/3-3930-525, D/G HX SW INLET VLV (3 WAY VLV) 2/3-3931-525, D/G HX SW OUTLET VLV (3 WAY VLV) 	Records position of: <ul style="list-style-type: none"> 2/3-3930-525, D/G HX SW INLET VLV (3 WAY VLV) 2/3-3931-525, D/G HX SW OUTLET VLV (3 WAY VLV) 	___	___	___
Cue	The valve positions are as seen				
2.	Start 2/3 Diesel Generator Cooling Water Pump.	Starts 2/3 Diesel Generator Cooling Water Pump by taking the selector switch to the AUTO-START position (spring returned to normal).	___	___	___
Note	Depending on flow direction will determine which pressure is higher, top or bottom. If discovered flow is from Top to Bottom, then the higher pressure will be Top. If discovered flow is from Bottom to Top, then the higher pressure will be Bottom. Give the proper pressure for the given request. Higher pressure is 24 psig. Lower pressure is 17 psig.				
3.	Record the indicated pressure at the heat exchanger top, PI 2/3-3941-31, D/G CLG WTR HX SW OUT/IN (TOP).	Records the indicated pressure at the heat exchanger top.	___	___	___
Cue	Pressure at top of Heat Exchanger is ... (see above note for value)				
4.	Record the indicated pressure at the heat exchanger bottom, PI 2/3-3941-30, D/G CLG WTR HX SW IN/OUT (BOTTOM).	Records the indicated pressure at the heat exchanger bottom.	___	___	___
Cue	Pressure at bottom of Heat Exchanger is ... (see above note for value)				

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
5.	Calculate AND record heat exchanger dP as follows: HIGHER PRESSURE ____ (psig) – LOWER PRESSURE ____ (psig) = Differential Pressure ____ (psid). Differential Pressure ____	Calculates and records heat exchanger dP as follows: HIGHER PRESSURE <u>24</u> (psig) – LOWER PRESSURE <u>17</u> (psig) = Differential Pressure <u>7</u> (psid). Differential Pressure <u>7</u>	____	____	____
Cue	If examinee requests the calculation verified give the following: “I have verified the calculation” Then sign the verification line in the procedure.				
6.	Stop 2/3 Diesel Generator Cooling Water Pump.	Stops 2/3 Diesel Generator Cooling Water Pump by taking the selector switch to the STOP position (spring returned to normal).	____	____	____
*7.	Place 2/3-3903, DIESEL COOLING WATER PUMP 2/3, control switch in the PULL TO LOCK (PTL) position	Places 2/3 Diesel Generator Cooling Water Pump Control Switch in the PTL Position.	____	____	____
Cue	The 2/3 Diesel Generator Cooling Water Pump Control Switch is in PTL.				
8.	At local panel 'A', silence DIESEL CLG WTR PUMP FAILURE OR LOCKED OUT Annunciator, C-3.	At Local Panel 'A', Silences DIESEL CLG WTR PUMP FAILURE OR LOCKED OUT Annunciator, C-3 by depressing the SILENCE button.	____	____	____
Cue	The SILENCE button is depressed.				
9.	Acknowledge the following annunciators: <ul style="list-style-type: none"> 902-7 H-8, U2/3 DIESEL GEN CLG WTR PP TRIP/LKOUT 902-8 A-4, U2/3 DIESEL GEN TROUBLE 	Contacts U2 NSO to acknowledge alarms: <ul style="list-style-type: none"> 902-7 H-8, U2/3 DIESEL GEN CLG WTR PP TRIP/LKOUT 902-8 A-4, U2/3 DIESEL GEN TROUBLE 	____	____	____
Cue	Respond as U2 NSO that the alarms have been acknowledged.				
*10.	Unlock 2/3-3930-525, D/G HX SW INLET VLV (3 WAY VLV)	Unlocks 2/3-3930-525, D/G HX SW INLET VLV (3 WAY VLV)	____	____	____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*11.	On valve 2/3-3930-525, D/G HX SW INLET VLV, Turn the "Lift and Reseat" locking handwheel in the open direction approximately 1/2 turns. (Valve will back out of body 3/16 to 1/4 inch)	Turns the 2/3-3930-525 “Lift and Reseat” locking handwheel in Open direction (counter-clockwise) ~1/2 turns	—	—	—
*12.	On valve 2/3-3930-525, D/G HX SW INLET VLV (3 WAY VLV), turn the Worm Gear handwheel to move the valve to the position determined from Table 1.	Turns the 2/3-3930-525 worm gear handwheel to move the valve to the position determined in Table 1.	—	—	—
Note	Refer to note under Step 2 of JPM for required position				
Cue	Valve is in the position that you indicated				
BEGIN ALTERNATE PATH					
++ Do not give the following Cue until the examinee finishes positioning the 2-3930-525 valve ++					
Cue	You hear the following announcement over your radio and the plant PA: “U2 has scrambled”				
Note	Examinee should recognize the need to perform Attachment A – Contingency Actions for Reactor Scram or Loss of Offsite Power to Restore DG Operability/Availability During D/G Surveillance Testing				
*13.	2/3-3930-525, D/G HX SW INLET VLV, <u>AND</u> 2/3-3931-525, D/G HX SW OUTLET VLV, in Position 1-3 - OR - 2/3-3930-525, D/G HX SW INLET VLV, <u>AND</u> 2/3-3931-525, D/G HX SW OUTLET VLV, in Position 2-3	Turns the 2/3-3930-525 Worm Gear handwheel to move the valve to the previous position - OR - Performs steps I.1.K.(5) thru (8) for 2/3-3931-525, D/G HX SW INLET VLV (3 WAY VLV)	—	—	—
*14.	Verify the C/S for 2/3-3903, DIESEL COOLING WATER PUMP 2, in Normal-After-Trip	Places the C/S for the 2/3 Diesel Generator Cooling Water Pump out of PTL and allows the switch to return to the Normal-After-Trip position	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
15.	On valve 2/3-3930-525, D/G HX SW INLET VLV, verify the locking handwheel engaged (reference step I.1.k.(4))	Turns 2/3-3930-525 in the close direction (clockwise) ~1/2 turn.	___	___	___
16.	On valve 2/3-3931-525, D/G HX SW OUTLET VLV, verify the locking handwheel engaged (reference step I.1.k.(8))	Turns 2/3-3931-525 in the close direction (clockwise) ~1/2 turn.	___	___	___
17.	Inform Unit Supervisor of the status of the DGCW System	Inform Unit Supervisor of the status of the DGCW System	___	___	___
Cue	Acknowledge report of the status of the DGCW system.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** Swapping 2/3 EDG Cooling Water Flow (AP)**JPM Number:** S-N-j**Revision Number:** 01**Task Number and Title:** 264H010, Reverse Emergency diesel Generator Cooling Water Flow**K/A Number and Importance:** 264000 G.2.1.20 4.6 / 4.6**Suggested Testing Environment:** Plant**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOS 6600-02, Rev 22**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 ☐ NoThe 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. The 2/3 EDG is shut down and cooled.
2. A high differential pressure exists across the 2/3 EDG cooling water heat exchanger.
3. An EO is available in the crib house.
4. The Pre-Job brief has been conducted.
5. Prerequisites are met.
6. Independent verification to be completed next shift.

INITIATING CUE

1. The U2 Unit Supervisor has directed you to reverse the 2/3 EDG cooling water flow direction through the heat exchanger in accordance with DOS 6600-02.
2. Inform the U2 Unit Supervisor when task is complete

Job Performance Measure

CROSSTIE UNIT 2 AND UNIT 3 INSTRUMENT AIR HEADERS

JPM Number: S-N-k

Revision Number: 15

Date: 10/19

Developed By:

Exam Author

Date

Approved By:

Facility 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 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 (*).
- N/A _____ 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 DOP 4700-03 Rev: 23
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 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 11:** Updated for 2007 LORT exam.
- Revision 12:** Updated for 2010 LORT exam.
- Revision 13:** Updated for 2013 LORT exam.
- Revision 14:** Updated for 2016 LORT exam and to new JPM format.
- Revision 15:** Updated for the ILT 19-1 (2020-301) NRC Exam

SIMULATOR SETUP INSTRUCTIONS

N/A: In-Plant JPM

Note: Need a marked-up copy of current revision of DOP 4700-03, Unit 2/3 Instrument Air Cross Connect Operation, to provide to examinee.

INITIAL CONDITIONS

1. Unit 3 is shutdown for a refuel outage.
2. Unit 2 is at 100% power and is experiencing an Instrument Air transient that is causing the Unit 2 Instrument Air header pressure to drop slowly.
3. The Unit 2 Service Air to Instrument Air cross-tie valve is already open and the Instrument Air header pressure is still dropping slowly.
4. The Shift Manager has given permission to carry out "cross-connect" operations.

INITIATING CUE

1. The Unit 2 Unit Supervisor has directed you to cross-connect the Unit 2 to Unit 3 Instrument Air headers by opening BOTH the North and South Instrument Air header cross-tie valves in accordance with DOP 4700-03, Step G.8. Appropriate portions of DOP 4700-03 have been completed up to Step G.8.
2. All applicable prerequisites of DOP 4700-03 have been met.
3. Your Pre Job Brief has been completed.
4. Notify the Unit Supervisor when you are complete with the task.

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

.....

Information For Evaluator's Use:

Task Standard: The Examinee will cross-tie the Unit 2 and 3 Instrument Air Headers IAW DOP 4700-03, UNIT 2/3 INSTRUMENT AIR CROSS CONNECT OPERATION.

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.	Proceed to step G.8 in DOP 4700-03	Proceeds to Step G.8	—	—	—
*2.	Open the Unit 2 Instrument Air to Unit 3 Instrument Air South cross-tie valve 2-4705-330, U2 INST AIR SYS XTIE VLV TO/FROM THE U3 INST AIR SYS.	Rotates Instrument Air South cross-tie valve 2-4705-330 CCW until stem is out. (Valve is located in the overhead, north of 2B IAC)	—	—	—
Cue	The Instrument Air South cross-tie valve 2-4705-330 stem is full out.				
*3.	Open the Unit 3 Instrument Air to Unit 2 Instrument Air North cross-tie valve 3-4712-501, U2 INST AIR SYS XTIE VLV TO/FROM THE U3 INST AIR SYS.	Rotates Instrument Air North cross-tie valve 3-4712-501 CCW until stem is out. (Valve is located in the overhead west of stairs to TBCCW Pumps)	—	—	—
Cue	The Instrument Air North cross-tie valve 3-4712-501 stem is full out.				
4.	Notify Unit Supervisor upon completion of task.	Notifies Unit Supervisor upon completion of task.	—	—	—
Cue	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ RO ☐ SRO ☐ SRO Cert**JPM Title:** Crosstie Unit 2 and Unit 3 Instrument Air Headers**JPM Number:** S-N-k**Revision Number:** 15**Task Number and Title:** 278N011, Crosstie unit two and unit three instrument air headers**K/A Number and Importance:** 295019.AA1.02 3.3 / 3.1**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 4700-03, Rev 23**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other**Testing Method:** ☒ Simulate ☐ Perform**Estimated Time to Complete:** 8 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe 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. Unit 3 is shutdown for a refuel outage.
2. Unit 2 is at 100% power and is experiencing an Instrument Air transient that is causing the Unit 2 Instrument Air header pressure to drop slowly.
3. The Unit 2 Service Air to Instrument Air cross-tie valve is already open and the Instrument Air header pressure is still dropping slowly.
4. The Shift Manager has given permission to carry out "cross-connect" operations.

INITIATING CUE

1. The Unit 2 Unit Supervisor has directed you to cross-connect the Unit 2 to Unit 3 Instrument Air headers by opening BOTH the North and South Instrument Air header cross-tie valves in accordance with DOP 4700-03, Step G.8. Appropriate portions of DOP 4700-03 have been completed up to Step G.8.
2. All applicable prerequisites of DOP 4700-03 have been met.
3. Your Pre Job Brief has been completed.
4. Notify the Unit Supervisor when you are complete with the task.