

Job Performance Measure

Limiter Motor-Operated and Chainwheel Operated Valve Operations Review

JPM Number: A-N-1-S

Revision Number: 00

Date: 01 / 03 / 2017

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 OP-AA-103-105 Rev: 5
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



TQ-AA-150-J020

Revision 00

Page 3 of 8

This replaced TQ-JA-150-02

Revision Record (Summary)

Revision 00 Generated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. This is an administrative JPM. No simulator setup is required.

INITIAL CONDITIONS

1. Unit 2 is in Mode 5.
2. Unit 2 is in Day 8 of a refueling outage
3. MO 2-1501-20A is required to be manually backseated to isolate leakage.
4. Engineering has performed the initial calculations and recorded data required to determine maximum backseating handwheel shaft torque limit.
5. MO 2-1501-20A must be torqued via the handwheel.

INITIATING CUE

1. Review OP-AA-103-105 Attachment C for accuracy and make corrections as necessary.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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
*01	Determines Maximum Backseating torque as recorded is incorrect.	Determines incorrect value for maximum backseating torque is incorrect. Correct value is 1150.1 ft-lbs	—	—	—
<p align="center">NOTE:</p> <p>If the candidate attempts to terminate the review, direct the candidate to make corrections as necessary and complete the attachment. Another SRO will review upon completion.</p>					
*02	Determines Stem Factor was incorrectly used in Manual backseating handwheel torque limit calculation	Determines Stem Factor was used vice Spur Gear Ratio to determine handwheel torque limit. Replaces Stem Factor with Spur Gear Ratio.	—	—	—
*03	Determines calculated Maximum Backseating Handwheel Shaft Torque limit is incorrect.	Determines Maximum Backseating Handwheel Shaft Torque is 154.7 ft-lbs.	—	—	—
<p align="center">CUE:</p> <p align="center">Another SRO will review the calculation. JPM complete.</p>					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Limitorque Motor-Operated and Chainwheel Operated Valve Operations Review**JPM Number:** A-N-1-S**Revision Number:** 00**Task Number and Title:** 299L080 Perform the administrative duties for conduct of surveillances, complex, or special procedures**K/A Number and Importance:** Generic 2.1.23 --/ 4.4**Suggested Testing Environment:** Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** OP-AA-103-105 Revision 05**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. Unit 2 is in Mode 5.
2. Unit 2 is in Day 8 of a refueling outage
3. MO 2-1501-20A is required to be manually backseated to isolate leakage.
4. Engineering has performed the initial calculations and recorded data required to determine maximum backseating handwheel shaft torque limit.
5. MO 2-1501-20A must be torqued via the handwheel.

INITIATING CUE

1. Review OP-AA-103-105 Attachment C for accuracy and make corrections as necessary.

Job Performance Measure**AUTHORIZE A WAIVER OF 10 CFR WORK HOUR LIMITS**JPM Number: A-N-2-SRevision Number: 02Date: 12 / 28 / 2016

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.

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- _____ 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 LS-AA-119 Rev: 12
 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 Bank JPM.

Revision 01 Revised for ILT 12-1 (2013-301) NRC Exam.

Revision 02 Updated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. No simulator setup is required. This is an administrative JPM.

DOCUMENT PREPARATION

1. Clean copy of LS-AA-119.

INITIAL CONDITIONS

1. You are the Shift Manager.
2. Both units are operating at near rated power.
3. It is Monday 1/23/2017 @ 0600
4. The on-coming Unit 2 SRO, calls in to report he will not be able to come in for shift 2, due to a sudden illness.
5. Another SRO will not be able to come in until 1300.
6. The Unit 3 SRO is already scheduled to work a shift 1 and shift 2 double.
7. No other Licensed individual is available to fill the Safety Related position.
8. The Unit 2 SRO working shift 1 is Steve Smith.
9. Steve is ready and willing to work the overtime and will work until 1300.
10. Steve is NOT fatigued and IS mentally alert.
11. Steve's rolling work hour average for the past 6 weeks is 42.0 hours/week
12. Steve's Employee ID# is: 987654.
13. Safety-related work WILL be performed by Steve during the shift.
14. Steve is NOT scheduled to work Tuesday 1/24/2017 through Thursday 1/26/2017.
15. Steve was on a 7 day vacation, prior to the following worked hours and shifts that count towards 10 CFR 26 Work Hour Limits, so far this week:

Shift	Tue 1/17/17	Wed 1/18/17	Thu 1/19/17	Fri 1/20/17	Sat 1/21/17	Sun 1/22/17	Mon 1/23/17
1 (2300-0700)	8	8	8	8	8	8	8
2 (0700-1500)	4		4		4		
3 (1500-2300)							

INITIATING CUE

1. Complete LS-AA-119, attachment 1, section 1 - Request paperwork for Steve Smith.
2. The Operations Director will complete sections 2 – 4 of LS-AA-119.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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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
<p align="center"><u>NOTE:</u></p> <p align="center">Provide the examinee with the supplied copy of LS-AA-119.</p>					
01	Reviews procedure to determine what limits will be exceeded.	Determines that overtime would exceed: 72 hours in any 7 days.	—	—	—
*02	Records Planned Waiver Start.	Planned Waiver Start: 1/23/2017 / 1100	—	—	—
*03	Records Planned Waiver End.	Planned Waiver End: 1/23/2017 / 1300	—	—	—
*04	Records Planned Waiver Duration.	Planned Waiver Duration: 2 hours	—	—	—
*05	Checks the appropriate limit exceeded.	> 72 in any 7 days. checked	—	—	—
06	Documents and signs the submitted by block.	Submitted by: name, signature, date, and time.	—	—	—
07	Forwards paperwork to the Operations Director.	Forwards paperwork to the Operations Director or designee.	—	—	—
<p align="center">END</p>					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** AUTHORIZE A WAIVER OF 10 CFR WORK HOUR LIMITS**JPM Number:** A-N-2-S**Revision Number:** 02**Task Number and Title:** 299L057, Perform administrative duties to ensure overtime restrictions are not exceeded.**K/A Number and Importance:** Generic 2.1.5 -- / 3.9**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** LS-AA-119 Rev. 12**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 Shift Manager.
2. Both units are operating at near rated power.
3. It is Monday 1/23/2017 @ 0600
4. The on-coming Unit 2 SRO, calls in to report he will not be able to come in for shift 2, due to a sudden illness.
5. Another SRO will not be able to come in until 1300.
6. The Unit 3 SRO is already scheduled to work a shift 1 and shift 2 double.
7. No other Licensed individual is available to fill the Safety Related position.
8. The Unit 2 SRO working shift 1 is Steve Smith.
9. Steve is ready and willing to work the overtime and will work until 1300.
10. Steve is NOT fatigued and IS mentally alert.
11. Steve's rolling work hour average for the past 6 weeks is 42.0 hours/week
12. Steve's Employee ID# is: 987654.
13. Safety-related work WILL be performed by Steve during the shift.
14. Steve is NOT scheduled to work Tuesday 1/24/2017 through Thursday 1/26/2017.
15. Steve was on a 7 day vacation, prior to the following worked hours and shifts that count towards 10 CFR 26 Work Hour Limits, so far this week:

Shift	Tue 1/17/17	Wed 1/18/17	Thu 1/19/17	Fri 1/20/17	Sat 1/21/17	Sun 1/22/17	Mon 1/23/17
1 (2300-0700)	8	8	8	8	8	8	8
2 (0700-1500)	4		4		4		
3 (1500-2300)							

INITIATING CUE

1. Complete LS-AA-119, attachment 1, section 1 - Request paperwork for Steve Smith.
2. The Operations Director will complete sections 2 – 4 of LS-AA-119.

Job Performance Measure
**ACOUSTIC MONITOR SURVIELLANCE AND OPERABILITY
DETERMINATION**

JPM Number: A-N-3-S

Revision Number: 00

Date: 11 / 30 / 2016

Developed By: _____
Exam Author

Date

Approved By: _____
Facility Representative

Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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Prior to JPM usage, revalidate JPM using steps 9 and 13 below.

- _____ 1. Task description and number, JPM description and number are identified.
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- _____ 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 0250-06 Rev: 16
Procedure OP-AA-108-115 Rev: 19
Procedure OP-AA-108-115-1002 Rev: 03
- _____ 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



TQ-AA-150-J020

Revision 00

Page 3 of 8

This replaced TQ-JA-150-02

Revision Record (Summary)

Revision 00: Generated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. This is a administrative JPM utilizing simulator procedures. No simulator setup is necessary.

DOCUMENT PREPARATION

1. Mark up a copy of DOS 0250-06 as required.
2. Ensure access simulator procedures or EDMS/Passport is available.

INITIAL CONDITIONS

1. You are the Unit 2 SRO.
2. Unit 2 is in Mode 1.
3. DOS 0250-06 has just been completed.
4. The NSO reported that all surveillance requirements were within specifications.

INITIATING CUE

1. Review DOS 0250-06 for accuracy and completeness.
2. Determine operability of acoustic monitors.
3. Enter Technical Specification and/or TRMs if required.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section. The comment section should be used to document: the reason that a step is marked as unsatisfactory, marginal performance relating to management expectations, or problems the examinee had while performing the JPM.

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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
*01	Identifies on the data sheet that valve 203-4A threshold volt is out of spec.	Identifies out of spec value.	—	—	—
*02	Declares Acoustic Monitor Inoperable due to failure to meet acceptance criteria	Declares Acoustic Monitor Inoperable	—	—	—
<p style="text-align: center;">NOTE: Acoustic Monitor failure results in TRM 3.3.b Condition A.1</p>					
*03	Enters TRM 3.3.b Condition A.1	Enters TRM 3.3.b Condition A.1 and determines the channel must be restored to OPERABLE within 30 days.	—	—	—
END OF JPM					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** ACOUSTIC MONITOR SURVIELANCE AND OPERABILITY DETERMINATION**JPM Number:** A-N-3-S**Revision Number:** 00**Task Number and Title:** 299L080 Perform the administrative duties for conduct of surveillance, special, or complex procedures.**K/A Number and Importance:** Generic 2.2.37 --/4.6**Suggested Testing Environment:** Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOS 0250-06 Rev. 16, OP-AA-108-115 Rev. 17, OP-AA-108-115-1002 Rev. 03**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 SRO.
2. Unit 2 is in Mode 1.
3. DOS 0250-06 has just been completed.
4. The NSO reported that all surveillance requirements were within specifications.

INITIATING CUE

1. Review DOS 0250-06 for accuracy and completeness.
2. Determine operability of acoustic monitors.
3. Enter Technical Specification and/or TRMs if required.

Job Performance Measure (JPM)

KEY

EVALUATOR: The candidate must determine that dose for the task will be 55 mrem and determine that only two EOs can receive the dose, necessary to complete the task. They are Mike and Tom. See the table below for projected job dose, 24 hour total dose on RWP DR-0-17-00333, and total Annual TEDE dose for each Operator.

Calculation:

2 valves clearance (at RWCU Aux Pump) projected dose = 0.50 hr x 40 mr/hr = 20mrem

1 valve clearance (at 'A' RWCU Pump) projected dose = 0.25hr x 140 mr/hr = 35mrem

20 mrem + 35 mrem = 55 mrem projected job dose for clearance order hanging

Name	DDE dose received on RWP DR-0-17-00333 today	Annual TEDE dose as of Midnight To Date	Projected dose on RWP DR-0-17-00333 for the 24 hour period	Projected Annual TEDE (including all dose from last 24 hours)
Alex	50 mrem	1550 mrem	=) (50 + 55 <u>105</u> <u>mrem</u>	=) (1550 + 105 <u>1655</u> <u>mrem</u>
Dan	5 mrem	1950 mrem	=) (5 + 55 =) <u>60 mrem</u>	=) (1950 + 60 <u>2010</u> <u>mrem</u>
Mike	0 mrem	1920 mrem	=) (0 + 55 <u>55 mrem</u>	=) (1920 + 55 <u>1975</u> <u>mrem</u>
Sue	47 mrem	1850 mrem	=) (47 + 55 <u>102</u> <u>mrem</u>	=) (1850 + 102 <u>1952</u> <u>mrem</u>
Tom	8 mrem	1750 mrem	=) (8 + 55 <u>63 mrem</u>	=) (1750 + 63 <u>1813</u> <u>mrem</u>

The **bolded** values in the table exceed the applicable Company, RWP, or 10CFR limit.

Job Performance Measure
Select Personnel for Radiation Work

JPM Number: A-N-4-S

Revision Number: 02

Date: 12 / 28 / 2016

Developed By: _____
Exam Author Date

Approved By: _____
Facility Representative Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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- _____ 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 RP-AA-203 Rev: 03
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.
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_____ SME / Instructor	_____ Date
_____ SME / Instructor	_____ Date
_____ SME / Instructor	_____ Date

Revision Record (Summary)

Revision 02 Updated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

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

DOCUMENT PERPARATION

1. Markup a copy of an RWP for the Unit 3 RWCU Pump Room.
2. Markup a survey map for the Unit 3 RWCU Pump Room.
3. Clean copy of RP-AA-203.

INITIAL CONDITIONS

INITIAL CONDITIONS

1. You are a Unit Supervisor and will be briefing EOs to perform a Clearance Order First Hang in the Unit 3 RWCU Pump Room under RWP DR-0-17-00333.
2. Five EOs are available this shift.
 - None of the five have received dose at any location other than Dresden Station.
 - None of the five have received dose since midnight on any RWPs other than DR-0-17-00333.
3. The Radiation Protection Department has provided the attached Survey map, and the following dose history for the five EOs to assist you in your planning:

Name	DDE dose received on RWP DR-0-17-00333 <u>Today</u>	dose Annual TEDE <u>to Shift</u> <u>Prior</u>
Alex	50 mrem	1550 mrem
Dan	5 mrem	1950 mrem
Mike	0 mrem	1920 mrem
Sue	47 mrem	1850 mrem
Tom	8 mrem	1750 mrem

4. The total expected stay time for each EO will be 45 minutes. Based on past job history, it will breakdown as follows:
 - 30 minutes total in the area near the following **two** valves:
 - 3-1201-138 RWCU Aux Pump Suction (at RWCU Aux Pump)
 - 3-1201-139 RWCU Aux Pump Discharge (at RWCU Aux Pump)
 - 15 minutes total in the area near the following **one** valve:
 - 3-1201-128A 'A' RWCU Pump Suction (at 'A' RWCU Pump)

INITIATING CUE

1. CALCULATE the expected dose for the work in RWCU Pump Room. DETERMINE which EO(s) CAN and which EO(s) CAN NOT be assigned to perform the task. EXPLAIN the basis for your determination.

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

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

Information For Evaluator's Use:

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JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p align="center"><u>NOTE:</u></p> <p>Provide the examinee with the supplied copy of the RWP and survey map of the RWCU pump room and, if requested, the supplied copy of RP-AA-203.</p> <p>The following steps may be performed in any order.</p>					
01	Reviews Survey Maps to determine area dose rates.	Reviews the survey maps and determines area dose rates to be 40 mr/hr for the first group of 2 valves and 140 mr/hr for the remaining valve.	—	—	—
<p align="center"><u>NOTE:</u></p> <p>The following calculations should be made:</p> <p>2 valve clearance projected dose = 0.50 hr x 40 mr/hr = 20 mrem</p> <p>1 valve clearance projected dose = 0.25 hr x 140 mr/hr = 35 mrem</p> <p>Total projected dose for the job = 20 mrem + 35 mrem = 55 mrem</p>					
02	Calculates that the projected dose that will be received for the task is 55 mrem.	Determines the EOs will receive 20 mrem on the first 2 valves and 35 on the next valve.	—	—	—
*03	Determines that ALEX CAN NOT perform the job because he would exceed the 80 mrem dose alarm on RWP DR-0-17-00333.	Alex's total daily dose on RWP DR-0-17-00333 would be <u>105 mrem</u> .	—	—	—
*04	Determines that Dan CAN NOT perform the job because he would exceed the 2000 mrem Exelon Annual limit.	Dan's total Annual dose would be <u>2010 mrem</u> .	—	—	—
*05	Determines that Mike CAN perform the job because no limits will be exceeded.	Mike's total RWP daily dose and Annual dose will remain below the limits.	—	—	—
*06	Determines that Sue CAN NOT perform the job because she would exceed the 80 mrem dose alarm on RWP DR-0-17-00333.	Sue's total daily dose on RWP DR-0-17-00333 would be <u>102 mrem</u> .	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
*07	Determines that Tom CAN perform the job because no limits will be exceeded.	Tom's total RWP daily dose and Annual dose will remain below the limits.	—	—	—
END of JPM					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Select Personnel for Radiation Work**JPM Number:** A-N-4-S**Revision Number:** 02**Task Number and Title:** 29900LK119 Discuss the items to be considered prior to work authorization**K/A Number and Importance:** Generic 2.3.13 --/3.8**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** RP-AA-203 Revision 03**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

INITIAL CONDITIONS

1. You are a Unit Supervisor and will be briefing EOs to perform a Clearance Order First Hang in the Unit 3 RWCU Pump Room under RWP DR-0-17-00333.
2. Five EOs are available this shift.
 - None of the five have received dose at any location other than Dresden Station.
 - None of the five have received dose since midnight on any RWPs other than DR-0-17-00333.
3. The Radiation Protection Department has provided the attached Survey map, and the following dose history for the five EOs to assist you in your planning:

Name	DDE dose received on RWP DR-0-17-00333 <u>Today</u>	Annual TEDE dose <u>Prior to Shift</u>
Alex	50 mrem	1550 mrem
Dan	5 mrem	1950 mrem
Mike	0 mrem	1920 mrem
Sue	47 mrem	1850 mrem
Tom	8 mrem	1750 mrem

4. The total expected stay time for each EO will be 45 minutes. Based on past job history, it will breakdown as follows:
 - 30 minutes total in the area near the following **two** valves:
 - 3-1201-138 RWCU Aux Pump Suction (at RWCU Aux Pump)
 - 3-1201-139 RWCU Aux Pump Discharge (at RWCU Aux Pump)
 - 15 minutes total in the area near the following **one** valve:
 - 3-1201-128A 'A' RWCU Pump Suction (at 'A' RWCU Pump)

INITIATING CUE

1. CALCULATE the expected dose for the work in RWCU Pump Room. DETERMINE which EO(s) CAN and which EO(s) CAN NOT be assigned to perform the task. EXPLAIN the basis for your determination.

-

Job Performance Measure
EAL Declaration

JPM Number: A-N-5-S

Revision Number: 00

Date: 12 / 28 / 2016

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 EP-AA-1004 Addendum 3 Rev: 05
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



TQ-AA-150-J020

Revision 00

Page 3 of 8

This replaced TQ-JA-150-02

Revision Record (Summary)

Revision 00: Generated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. This is an administrative JPM utilizing the simulator procedures only. No simulator setup is required.
2. Ensure EAL charts are free of markings.

INITIAL CONDITIONS

1. You are the Unit 2 SRO.
2. Unit 2 is operating at rated power.
3. There are NO surveillances in progress.
4. There are **NO** RPV level transients in progress.
5. EO reports a fire with visible flames in the Unit 2 HPCI Aux Oil Pump.
6. The fire is limited to the HPCI Aux Oil Pump.
7. There is NO verifier available.

INITIATING CUE

1. Determine EAL(s) (ignore discretionary EALs) and complete a NARS form. 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:

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
<p align="center">NOTE:</p> <p align="center">When student located NARS form provide student with:</p> <ul style="list-style-type: none"> • Included color copy of NARS form (gray) • Screenshot of PPDS 					
*01	Determines a classification of ALERT, due to fire damaging a safety system required by Technical Specifications in the current operating mode.	Determine highest classification is ALERT per EAL MA5 . (15 minute time requirement)	_____	_____	_____
<p align="center">NOTE:</p> <p align="center">Determines classification start time _____ and stop time _____ . (15 minute limit)</p>					
*02	Properly fills out NARS form. (NOTE: referenced attached key has been withheld due to proprietary content)	See attached key for the areas that must be filled out correctly (12 minute requirement) NARS form Block 8 either meters/sec or miles/hr may be annotated. Only one is required. Elevated parameters must be used.	_____	_____	_____
<p align="center">NOTE:</p> <p align="center">Fill out NARS form start time (when declaration completed) _____ and stop time _____ (12 minute limit)</p>					
<p align="center">END</p>					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** EAL Declaration**JPM Number:** A-N-5-S**Revision Number:** 00**Task Number and Title:** 295L160 Perform the duties of Shift Emergency Director**K/A Number and Importance:** Generic 2.4.44 --/4.4**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☒ Yes ☐ No**Reference(s):** EP-AA-1004 Addendum 3 Rev. 05**Actual Testing Environment:** ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 20 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ 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 SRO.
2. Unit 2 is operating at rated power.
3. There are NO surveillances in progress.
4. There are **NO** RPV level transients in progress.
5. EO reports a fire with visible flames in the Unit 2 HPCI Aux Oil Pump.
6. The fire is limited to the HPCI Aux Oil Pump.
7. There is NO verifier available.

INITIATING CUE

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

Job Performance Measure
Insertion of Manual Scram with Failure to Scram (AP)

JPM Number: S-N-a

Revision Number: 02

Date: 12/ 28 / 2016

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 DGP 02-03 Rev: 106
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	Bank JPM
Revision 01	JPM revised for ILT 07-01 CERT Exam
Revision 02	JPM revised for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 50

<p>NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently. {Delete this NOTE if not applicable.}</p>
--

2. Insert expert command:

imf B12

INITIAL CONDITIONS

1. Security has reported a tornado heading towards the 345KV switchyard and it is about to strike the yard.

INITIATING CUE

1. Unit Supervisor has directed you to insert a manual scram and perform the immediate operator actions of the DGP 02-03 hard card.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
01	Presses both scram pushbuttons.	Both pushbuttons DEPRESSED.	—	—	—
02	Place reactor mode switch to SHUTDOWN.	Mode switch in SHUTDOWN.	—	—	—
<u>NOTE:</u> Rod position can be verified by: Full core display, Computer output, or RWM CRT.					
03	Check rods inserted ≤ 02 .	VERIFIES all rods not ≤ 02 .	—	—	—
BEGIN ALTERNATE PATH					
*04	Collars armed on either ATWS ARI S4A & S4C <u>OR</u> S4B & S4D.	Collars ARMED.	—	—	—
*05	Depress pushbuttons on either ATWS ARI S4A & S4C <u>or</u> S4B & S4D.	Pushbuttons DEPRESSED.	—	—	—
<u>NOTE:</u> Rod position can be verified by any or all of the following: <ul style="list-style-type: none"> • Full core display • Computer output • RWM CRT. 					
06	Check rods inserted ≤ 02 .	Rod positions VERIFIED.	—	—	—
07	Verify Recirc pumps run back to minimum.	VERIFIES that both Recirc pumps are running down to minimum.	—	—	—
08	Insert SRMs and IRMs.	Depresses SRM and IRM drive in pushbuttons.	—	—	—
09	Control Reactor water level +25 to +35 inches or as directed by the Unit Supervisor.	VERIFIES that the FWLC is operating and controlling RPV water level.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
10	Inform US that all rods are in, ARI was required.	"Attention for an Update; All rods are in ARI was used, Rx Pressure & Level are trending as expected. End of Update."	—	—	—
<u>CUE:</u> Acknowledge report. The JPM is considered complete at this time.					
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Insertion of Manual Scram with Failure to Scram**JPM Number:** S-N-a**Revision Number:** 02**Task Number and Title:** 295L068 Insertion of Manual Scram with Failure to Scram (ARI Successful)**K/A Number and Importance:** 295037.A1.03 4.1/4.1**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DGP 02-03 Revision 106**Actual Testing Environment:** ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 5 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. Security has reported a tornado heading towards the 345KV switchyard and it is about to strike the yard.

INITIATING CUE

1. Unit Supervisor has directed you to insert a manual scram and perform the immediate operator actions of the DGP 02-03 hard card.

Job Performance Measure**Initiate HPCI with Incomplete Group IV Isolation (AP)**JPM Number: S-N-bRevision Number: 01Date: 11/29/2016

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.
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- _____ 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 2300-02 Rev: 11
Procedure DAN 902(3)-3 C-7 Rev: 14
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 created for 2016 LORT exam.

Revision 01: Revised for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to 0% power with full pressure (IC 51 used for validation)
2. Run CAEP – S-2300-08.cae
 - a. If the CAEP cannot be ran, insert the following Expert Commands:
 - 1) irf rd25pos 0.0
 - 2) imf hp4vlbn 50.0
 - 3) trgset 1 “atl140b .gt. 0.0”
 - 4) imf ser0086 (1 8) on
 - 5) ior hpdcl4 (1 8) close
 - 6) imf ser0654 (1 60) on
 - 7) imf ser0288 (1 120)
3. Verify 2-0301-25 valve is closed (completed during running the CAEP file)
4. Lower FWLC setpoint to -10” and allow RPV level to stabilize at the new level.
5. Put computer point C360 up on the Digital Display
6. Acknowledge the alarms that are in and press the Reset button to clear any cleared alarms.
7. This completes the setup for this JPM

DOCUMENT PREPARATION

Need a clean copy of current revision of DOA 2300-02, HPCI Fast Startup, Attachment B (Hardcard).

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. A transient has occurred resulting in lowering RPV level.
3. **NO** HPCI initiation signal is present.

INITIATING CUE

1. The Unit Supervisor has directed you to inject with HPCI to raise RPV level and maintain RPV level between +8" and +48".
2. Hard card use **IS** authorized.
3. An additional NSO has been tasked with starting HPCI room cooler, SBGT, and Torus Cooling.
4. 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:

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.

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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.	Verify HPCI Aux Oil Pump <u>AND</u> 2-2301-14 valve are NOT in PTL	Verify GREEN lights are lit	___	___	___
*2.	Depress <u>AND</u> hold depressed the HPCI AUTO INITIATE pushbutton until the MSC reaches the HSS.	Depress HPCI AUTO INITIATE pushbutton. Verifies Motor Speed Changer LSS (green light) goes out and HSS (red light) illuminates	___	___	___
3.	Verifies RWL is increasing	Verifies RWL is increasing by looking at Medium or Narrow Range indicators	___	___	___
BEGIN ALTERNATE PATH (HPCI Auto Isolation alarm occurs 8 seconds after RWL is > 0")					
4.	HPCI AUTO ISOL INITIATED alarm comes in	Recognizes 902-3 C-7 (HPCI AUTO ISOL INITIATED) is in alarm	___	___	___
5.	Verify Auto Isolation complete	Verifies: <ul style="list-style-type: none"> • MO 2-2301-35 green light lit • MO 2-2301-36 green light lit Determines <ul style="list-style-type: none"> • MO 2-2301-4 did not close (dual indication) • MO 2-2301-5 did not close (green light still lit) 	___	___	___
6.	Attempts to manually complete the incomplete Group IV Isolation	Attempts to close: <ul style="list-style-type: none"> • MO 2-2301-4 	___	___	___
*7.	Manually completes the incomplete Group IV Isolation	Closes: <ul style="list-style-type: none"> • MO 2-2301-5 	___	___	___

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
8.	Informs Unit Supervisor	<p>Informs Unit Supervisor</p> <ul style="list-style-type: none">• HPCI Isolation signal received while initiating system• MO 2-2301-4 has dual indication• MO 2-2301-5 valve did not close• Isolation was manually completed by closing the 2-2301-5 valve, the 2-2301-4 still has dual indication	—	—	—
Cue	Acknowledge report as the Unit Supervisor				
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Initiate HPCI with Incomplete Group IV Isolation (AP)**JPM Number:** S-N-b**Revision Number:** 01**Task Number and Title:** 206L022, Perform a fast startup of the HPCI system**K/A Number and Importance:** 206000.A3.09 4.2 / 4.1**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOA 2300-02, Rev 11, DAN 902(3)-3 C-7 Rev. 14**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 resulting in lowering RPV level.
3. **NO** HPCI initiation signal is present.

INITIATING CUE

1. The Unit Supervisor has directed you to inject with HPCI to raise RPV level and maintain RPV level between +8" and +48".
2. Hard card use **IS** authorized.
3. An additional NSO has been tasked with starting HPCI room cooler, SBGT, and Torus Cooling.
4. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

MSIV Closure Scram and Isolation Circuit Functional Test

JPM Number: S-N-c

Revision Number: 00

Date: 11 / 29 / 2016

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 0500-08 Rev: 45
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



TQ-AA-150-J020

Revision 00

Page 3 of 10

This replaced TQ-JA-150-02

Revision Record (Summary)

Revision 00: Developed for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 50

<p>NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently. {Delete this NOTE if not applicable.}</p>
--

2. This completes the setup for this JPM.

INITIAL CONDITIONS

1. Engineering requests that testing the 'D' Main Steam Line Isolation Valves (MSIVs) be performed.
2. Operators are stationed at the 902-15 & 17 panels.
3. Prerequisites have been completed.
4. No compensatory actions are in place for TS 3.3.1.1
5. Test switches SS1 and SS2 are NOT installed.

INITIATING CUE

1. The Unit Supervisor directs you to perform DOS 0500-08, Main Steam Line Isolation Valve Closure Scram Circuit Functional Test, for the 'D' MSIVs ONLY.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment #
NOTE					
Examinee MAY validate with assigned operators at the 902-15&17 panels that they are ready.					
01	Inform operators at 902-15 & 17 to watch relays 590-102G and 590-102H.	Informs operators at 902-15 & 17 to watch relays 590-102G and 590-102H.	_____	_____	_____
CUE					
Acknowledge direction and inform the examinee “we are ready”.					
NOTE					
If Examinee requests a peer check, respond – “a peer check is not available. Examinee may use flagging to identify components to be manipulated.					
*02	Test MSIV 203-1D by momentarily placing MSIV TEST AO 2-203-1D switch to TEST on Panel 902(3)-3	Momentarily rotates MSIV TEST AO 2-203-1D switch to TEST on Panel 902-3.	_____	_____	_____
03	Verifies MSIV 1D slow closes until the dual indication is received, <u>THEN</u> returns to the full open position.	Dual indication is received, THEN returns to the full open position. (CLOSE light OFF, OPEN light ON)	_____	_____	_____
04	Verify MSIV NOT FULL OPEN relay 590-102G drops out.	Contacts operator watching relay 590-102G for its operation.	_____	_____	_____
05	Verify MSIV NOT FULL OPEN relay 590-102G picks up.	Contacts operator watching relay 590-102G for its operation.	_____	_____	_____
CUE					
Report that “relay 590-102G dropped out with contacts 1-2 AND 3-4 opening, then the relay picked up”					
06	Verify MSIV NOT FULL OPEN relay 590-102H drops out.	Contacts operator watching relay 590-102H for its operation.	_____	_____	_____
07	Verify MSIV NOT FULL OPEN relay 590-102H picks up.	Contacts operator watching relay 590-102H for its operation.	_____	_____	_____
CUE					
Report that “relay 590-102H dropped out with contacts 1-2 AND 3-4 opening, then the relay picked up”					
NOTE					
If other Examinees are in proximity of the 902-5 panel and the Process Computer terminals, then use the CUEs provided for the next steps.					

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment #
08	On Panel 902(3)-5, annunciator 902(3)-5 D-14 does <u>NOT</u> alarm.	Verifies on Panel 902-5, annunciator 902-5 D-14 does NOT alarm.	_____	_____	_____
CUE Annunciator 902-5 D-14 did NOT alarm.					
09	MSIV C NOT FULL OPEN computer point W010 does <u>NOT</u> indicate TRIP.	Verifies MSIV C NOT FULL OPEN computer point W010 does NOT indicate TRIP.	_____	_____	_____
CUE Computer point W010 does NOT indicate TRIP.					
10	MSIV D NOT FULL OPEN computer point W011 does <u>NOT</u> indicate TRIP.	Verifies MSIV D NOT FULL OPEN computer point W011 does NOT indicate TRIP.	_____	_____	_____
CUE Computer point W011 does NOT indicate TRIP.					
NOTE Examinee MAY inform the operators at the 902-15&17 panels that they are ready.					
11	Inform operators at 902-15 & 17 to watch relays 590-102G and 590-102H.	Inform operators at 902-15 & 17 to watch relays 590-102G and 590-102H.	_____	_____	_____
CUE Acknowledge direction and inform the examinee "we are ready".					
*12	Test MSIV 203-2D by momentarily placing MSIV TEST AO 2-203-2D switch to TEST on Panel 902(3)-3	Momentarily rotates MSIV TEST AO 2-203-2B switch to TEST on Panel 902-3.	_____	_____	_____
13	Verifies MSIV 2D slow closes until the dual indication is received, <u>THEN</u> returns to the full open position.	Dual indication is received, <u>THEN</u> returns to the full open position. (CLOSE light OFF, OPEN light ON)	_____	_____	_____
14	Verify MSIV NOT FULL OPEN relay 590-102G drops out.	Contacts operator watching relay 590-102G for its operation.	_____	_____	_____
15	Verify MSIV NOT FULL OPEN relay 590-102G picks up.	Contacts operator watching relay 590-102G for its operation.	_____	_____	_____

PERFORMANCE CHECKLIST		STANDARDS	SAT	UNSAT	Comment #
CUE					
Report that "relay 590-102G dropped out, then the relay picked up"					
16	Verify MSIV NOT FULL OPEN relay 590-102H drops out.	Contacts operator watching relay 590-102H for its operation.	_____	_____	_____
17	Verify MSIV NOT FULL OPEN relay 590-102H picks up.	Contacts operator watching relay 590-102H for its operation.	_____	_____	_____
CUE					
Report that "relay 590-102H dropped out, then the relay picked up"					
NOTE					
If other Examinees are in proximity of the 902-5 panel and the Process Computer terminals, then use the CUEs provided for the next steps.					
18	On Panel 902(3)-5, ALL white SCRAM SOLENOID GROUPS lights are lit.	Verifies on Panel 902-5, SCRAM SOLENOID GROUP lights are illuminated: A1, A2, A3, A4, B1, B2, B3, B4.	_____	_____	_____
END OF JPM					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** MSIV Closure Scram and Isolation Circuit Functional Test**JPM Number:** S-N-c**Revision Number:** 00**Task Number and Title:** 239000LP012 / Perform a MSIV closure scram and isolation circuit functional test in accordance with DOS 0500-08**K/A Number and Importance:** 239001.A4.01 4.2/4.0**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOS 0500-08 Rev. 45**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. Engineering requests that testing the 'D' Main Steam Line Isolation Valves (MSIVs) be performed.
2. Operators are stationed at the 902-15 & 17 panels.
3. Prerequisites have been completed.
4. No compensatory actions are in place for TS 3.3.1.1
5. Test switches SS1 and SS2 are NOT installed.

INITIATING CUE

1. The Unit Supervisor directs you to perform DOS 0500-08, Main Steam Line Isolation Valve Closure Scram Circuit Functional Test, for the 'D' MSIVs ONLY.

Job Performance Measure
Initiate IC with System Isolation Failure

JPM Number: S-N-d

Revision Number: 00

Date: 11 / 30 / 2016

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 1300-03 Rev: 38
Procedure DAN 902(3)-3 H-2 Rev: 21
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



TQ-AA-150-J020

Revision 00

Page 3 of 9

This replaced TQ-JA-150-02

Revision Record (Summary)

Revision 00: Generated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 50

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently. {Delete this NOTE if **not** applicable.}

2. Insert Expert Commands:

Incomplete Group V Isolation

imf cigr5ap

Causes a spurious Group V Isolation by taking out 125 VDC 2B-1

trgset 1 ".not. hwiclc3"

imf t61 (1 20)

3. This completes the setup for this JPM.

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. A transient occurred resulting in the loss of bypass valves.
3. The Unit Supervisor has directed a RPV pressure band of 800 – 1060 psig.
4. No Isolation Condenser auto-initiation signal has been received.
5. Hard Card use has been authorized.

INITIATING CUE

1. The Unit Supervisor has directed you to initiate the Isolation Condenser and lower RPV pressure between 800 and 850 psig.
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:

UNSAT requires written comments on respective step.

NOTE: Simulator conditions do not match plant conditions as specified in initial conditions. Main Turbine bypass valves are open in simulator setup. This does not effect the performance of the JPM

* 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.

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

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p align="center">NOTE:</p> <p>When the candidate locates the DOP 1300-03 Hard Card located on the 902-3 panel, hand the candidate the included copy of the Hard Card.</p>					
01	Close AO 2-1301-17 and 2-1301-20 valves.	Place control switch for AO 2-1301-17 and 2-1301-20 valves in the closed direction. Observe GREEN lights (Open) extinguish and RED lights (Closed) illuminate.	—	—	—
02	Rotate RX INLET ISOL VLV HAND/RESET switch to HAND and release.	Rotates RX INLET ISOL VLV HAND/RESET switch on 902-3 panel to HAND and releases.	—	—	—
*03	Open MO 2-1301-3 RX INLET ISOL valve to lower RPV pressure.	Places control switch for MO 2-1301-3 valve in the open position. Observes GREEN (closed) light extinguish and RED (open) light illuminate.	—	—	—
<p align="center">BEGIN ALTERNATE PATH</p> <p align="center">NOTE:</p> <p>If candidate attempts to address annunciators beyond the 902-3 Panel inform them: Another NSO will address the annunciators beyond the 902-3 Panel.</p>					
04	Determines PCIS Group V isolation signal has been received.	Annunciator 902-3 H-2, ISOL CONDR LINE BREAK (GROUP 5 ISOL) is illuminated.	—	—	—
*05	Determines MO 2-1301-1 failed to close	Places control switch for MO 2-1301-1 to close. Verifies RED (closed) light illuminates and GREEN (open) light extinguishes.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*06	Determines MO 2-1301-4 failed to close	Places control switch for MO 2-1301-4 to close. Verifies RED (closed) light illuminates and GREEN (open) light extinguishes.	—	—	—
07	Verifies PCIS Group V isolation completed	Verifies the following valves closed: AO 2-1301-17 (Red light lit) AO 2-1301-20 (Red light lit) MO 2-1301-2 (Red light lit) MO 2-1301-3 (Green light lit)	—	—	—
08	Informs Unit Supervisor	Informs Unit Supervisor PCIS signal failed to complete isolation of Isolation Condenser. Manual action was taken to complete the isolation.	—	—	—
END OF JPM					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Initiate IC with System Isolation Failure**JPM Number:** S-N-d**Revision Number:** 00**Task Number and Title:** 20700LP003 Given plant conditions which result in an automatic initiation of the IC, secure the IC with the initiation signal still present per DOP 1300-02.**K/A Number and Importance:** 207000.A4.A4.01 3.1/3.0**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 1300-03 Rev. 38, DAN 902(3)-3 H-2 Rev. 21**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 occurred resulting in the loss of bypass valves.
3. The Unit Supervisor has directed a RPV pressure band of 800 – 1060 psig.
4. No Isolation Condenser auto-initiation signal has been received.
5. Hard Card use has been authorized.

INITIATING CUE

1. The Unit Supervisor has directed you to initiate the Isolation Condenser and lower RPV pressure between 800 and 850 psig.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure**CONTAINMENT - VENT THE TORUS WITH LEVEL LESS THAN 30 FEET –
(AP)**JPM Number: S-N-eRevision Number: 07Date: 11 / 29 / 2016

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 DEOP 0500-04 Rev: 17
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 04 Bank JPM.

Revision 05 Revised for 2010 NRC exam.

Revision 06 Revised for 2014 NRC exam.

Revision 07 Revised for 2016-302 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to an IC with the mode switch NOT in run, so that the proper alarms and interlocks will work. IC 51 used for validation.
2. Ensure Torus water level is <30 feet.
3. Insert following Malfunctions and/or Remotes.
 - IMF CIGP2I (Spurious Group II Isolation)
 - IOR PCDOP61 OFF (prevents the 1601-61 valve from opening)
 - Adjusts Torus Level indications to ~20 feet.
 - ❖ ior atl10 25.0
 - ❖ ior pcltr10a 20
 - ❖ ior pcltr10b 20
 - ior pcptr103 58.0 (Adjusts Torus Bottom Pressure to 58.0 psig)
 - Pulls ECCS Initiation Logic fuses so when Drywell pressure is forced high, NO ECCS starts.
 - ❖ irf lp1aaf1f pulled
 - ❖ irf lp701af pulled
 - ❖ irf lp1aaf2f pulled
 - ❖ irf lp701bf pulled
 - ❖ irf csalgoff pulled
 - ❖ irf csblgoff pulled
 - ❖ irf hp2a1f1 pulled
 - ❖ irf hp2b1f1 pulled
 - Adjusts Drywell & Torus pressures to 50.0 psig.
 - ❖ ior pcp8524 50.0
 - ❖ ior pcpdw102 50.0
 - ❖ ior pcp85401 5.0|
 - ❖ ior pcptr1 5.0
4. Verify the SBGT system operating and verify flow ~4000 scfm.
5. Place CRM ISOL switch to ISOLATE – wait 10 seconds then verify a C/R Booster Fan is running.
6. Cover DW pressure indications on 902-3 and 902-5 panel.

DOCUMENT PREPARATION

Markup a copy of DEOP 0500-04, Containment Venting.

INITIAL CONDITIONS

1. You are the Aux 2 NSO.
2. A break inside the Unit 2 Primary Containment has occurred.
3. Torus bottom pressure is about to exceed the PCP limit in DEOP 0200-01.
4. Torus water level is 20 feet.
5. Control Room ventilation has been isolated.
6. Reactor Building and Turbine Building have been evacuated.
7. The Instrument Bus and ESS Bus are energized.
8. The Instrument Air System is available.
9. The N2 System is in its normal lineup.

INITIATING CUE

1. The Unit Supervisor has directed you to vent the Unit 2 Primary Containment in accordance with DEOP 0500-04, to control Primary Containment pressure.
2. Inform the Unit Supervisor when the task is complete.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p align="center"><u>NOTE:</u></p> <p align="center">Provide examinee the marked up copy of DEOP 0500-04.</p> <p align="center">Annunciator 902-3 A-15, Pri Cnmt Vent/Sample Isol Bypass, will be received during this JPM.</p>					
01	Verify SBGT is operating and flow is ~ 4000 scfm.	Verifies 2/3A SBGT train FI 7540-13 is reading ~4000 scfm.	—	—	—
02	Verify Reactor Mode switch <u>NOT</u> in RUN.	Verifies Reactor Mode switch <u>NOT</u> in RUN.	—	—	—
*03	Place VENT ISOL SIGNAL BYPASS switch on 902-5 panel to TORUS.	Momentarily places Bypass switch to Torus Position.	—	—	—
<p align="center"><u>NOTE:</u></p> <p align="center">The AO 2-1601-61, TORUS 2-INCH VENT VLV, will <u>NOT</u> open.</p>					
04	Open AO 2-1601-61, TORUS 2-INCH VENT VLV.	Places AO 2-1601-61 control switch to OPEN position and determines that the valve will not open.	—	—	—
<p align="center"><u>NOTE:</u></p> <p align="center">IF candidate states that the 2-1601-61 valve will not open, direct him/her to complete the task.</p>					
BEGIN ALTERNATE PATH					
*05	Place VENT ISOL SIGNAL BYPASS switch on 902-5 panel to DRYWELL.	Momentarily places Vent Isol Signal Bypass switch to Drywell position.	—	—	—
<p align="center"><u>CUE:</u></p> <p align="center">If examinee reads TORUS BOTTOM PRESS PI 2-1640-103, inform him/her that the meter displays 58 psig and is trending UP slowly.</p>					
*06	Open AO 2-1601-62, DW 2-INCH Vent.	Red Open light illuminated.	—	—	—
*07	Open AO 2-1601-63, VENT TO SBGT.	Red Open light illuminated.	—	—	—

SRRS: 3D.105 (when utilized for operator initial or continuing training)

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
08	Determine if SBGT flow is adequate to control and maintain Torus Bottom pressure below the Primary Containment Pressure Limit.	Containment pressure stable or decreasing.	—	—	—
<u>CUE:</u> DW pressure is being controlled and maintained below the Primary Containment Pressure Limit. If examinee asks reading on TORUS BOTTOM PRESS PI 2-1640-103, inform him/her that the meter has decreased to 53 psig (5 psig less than original report).					
09	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	—	—	—
<u>CUE:</u> Acknowledge report of task completion.					
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** CONTAINMENT - VENT THE TORUS WITH LEVEL LESS THAN 30 FEET – (A)**JPM Number:** S-N-e**Revision Number:** 07**Task Number and Title:** 295L099, Vent the primary containment to SBGT to stay below the Primary Containment Pressure Limit.**K/A Number and Importance:** 295024.A1.14 3.4/3.5**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DEOP 0500-04 Rev. 17**Actual Testing Environment:** ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☒ Perform**Estimated Time to Complete:** 17 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 Aux 2 NSO.
2. A break inside the Unit 2 Primary Containment has occurred.
3. Torus bottom pressure is about to exceed the PCP limit in DEOP 200-01.
4. Torus water level is 20 feet.
5. Control Room ventilation has been isolated.
6. Reactor Building and Turbine Building have been evacuated.
7. The Instrument Bus and ESS Bus are energized.
8. The Instrument Air System is available.
9. The N2 System is in its normal lineup.

INITIATING CUE

1. The Unit Supervisor has directed you to vent the Unit 2 Primary Containment in accordance with DEOP 500-04, to control Primary Containment pressure.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure
RWM – PLACE A CONTROL ROD O.O.S

JPM Number: S-N-f

Revision Number: 02

Date: 11 / 29 / 2016

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 0400-02 Rev: 28
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: Updated for 2016-302 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 50

NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently. {Delete this NOTE if **not** applicable.}

2. Re- Initialize the RWM to ensure no rods are OOS
3. Insert the following remote function (this remote disarms CRD H-08):
 - IRF RODH08DA disarm
4. This completes the setup for this JPM.

INITIAL CONDITIONS

1. You are the Unit 2 NSO.
2. Control Rod H-08 was discovered uncoupled, 15 minutes ago.
3. All attempts to couple the rod have been unsuccessful.
4. The Control rod was then inserted to position 00, then electrically disarmed.
5. QNE has been notified.

INITIATING CUE

1. The Unit Supervisor has directed you to take rod H-08 out of service on the Rod Worth Minimizer per DOP 0400-02.
2. Another NSO will complete DOA 0300-05 actions and logging requirements once control rod H-08 is OOS.
3. Notify the Unit Supervisor when complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
<p align="center"><u>NOTE:</u></p> <p align="center">Provide Examinee a copy of DOP 0400-02.</p>					
*01	Touches the area marked SECONDARY FUNCTION.	SECONDARY FUNCTION selected.	—	—	—
*02	Selects H-08 on the rod select matrix	CRD H-08 selected and illuminated on rod select matrix.			
*03	Selects control rod H-08 on the RWM touch screen.	Control Rod H-08 outlined with blue box and shown on screen as SELECTED.	—	—	—
04	Verifies CRD H-08 is enclosed in a blue box.	CRD H-08 is outlined with a blue box and shown as selected on the screen.			
*05	Selects the ROD OUT OF SERVICE command.	Message “ROD H-08 placed out of service” is displayed.	—	—	—
	Verify ONLY withdraw block is applied to CRD H-08.	H-08 Rod position numerals are blue. Withdraw Block inserted for H-08.			
05	Selects the RETURN TO PRIMARY command.	RWM returns to the Main Display.	—	—	—
<p align="center"><u>NOTE:</u></p> <p align="center">Performer may verify the rod OOS by any of the following:</p> <ul style="list-style-type: none"> • The RWM Main Display for H-08 indicates 00 and is blue in color. • Select rod to ensure rod in and out blocks are applied. Rod indication is backlit in blue color. • Review status screen to verify H-08 is listed as OOS. 					
06	Informs Unit Supervisor task is complete.	Examinee notifies the Unit Supervisor.	—	—	—
<p align="center"><u>CUE:</u></p> <p align="center">Respond as Unit Supervisor and/or QNE when examinee informs you they have completed the task</p>					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** RWM – Place a Control Rod O.O.S**JPM Number:** S-N-f **Revision Number:** 02**Task Number and Title:** 20106LP005.B.3 / From the Functions available from the Primary Display Screen, operate the RWM in the "optional modes" settings listed below, IAW DOP 0400-02: Given the Secondary Functions Display, initiate the following functions: Rod Out of Service.**K/A Number and Importance:** 201006.A2.05 3.1/3.5**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 0400-02 Rev. 28**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 NSO.
2. Control Rod H-08 was discovered uncoupled, 15 minutes ago.
3. All attempts to couple the rod have been unsuccessful.
4. The Control rod was then inserted to position 00, then electrically disarmed.
5. QNE has been notified.

INITIATING CUE

1. The Unit Supervisor has directed you to take rod H-08 out of service on the Rod Worth Minimizer per DOP 0400-02.
2. Another NSO will complete DOA 0300-05 actions and logging requirements once control rod H-08 is OOS.
3. Notify the Unit Supervisor when complete.

Job Performance Measure
Lift Station – Swap Lift Pumps for Maintenance

JPM Number: S-N-g

Revision Number: 01

Date: 11 / 29 / 2016

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 4450-02 Rev: 33
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: Updated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 50

<p>NOTE: It is okay to use a similar IC to the IC listed above, provided the IC actually used is verified to be compatible with this and other JPMs that are scheduled to be run concurrently. {Delete this NOTE if not applicable.}</p>
--

2. Secure the “A” Lift Pump
3. Ensure Lift Station Panel screen display is on the OVERVIEW screen
4. This completes the setup for this JPM.

INITIAL CONDITIONS

1. You are the Unit 2 Aux NSO.
2. The 2/3 “B” Lift Pump is required to be secured for maintenance.
3. An EO has been briefed and is waiting in the Lift Station.
4. Breaker logic reset is NOT required.
5. All prerequisites of DOP 4450-02 are met.

INITIATING CUE

1. The Unit Supervisor has directed you to start the 2/3 “A” Lift Pump and secure the 2/3 “B” Lift Pump per DOP 4450-02.
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:

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
01	Verify the lift station supervisory LOCAL/REMOTE selector switch is in REMOTE.	Directs the EO to report the position of the LOCAL/REMOTE selector switch.	—	—	—
<p style="text-align: center;"><u>CUE:</u></p> <p style="text-align: center;">The switch is in the REMOTE position.</p> <p style="text-align: center;">If informed as the EO of the pending pump start, then acknowledge the communication.</p> <p style="text-align: center;">If asked, Lift Pump A shaft is at rest.</p>					
*02	Selects <PUMP-A-SCREEN> touch button.	Touches the <PUMP-A-SCREEN> touch button.	—	—	—
*03	Closes the breaker for Pump-A	Pushes the Closed box in the control window	—	—	—
04	Verifies Lift Pump A is running	Verifies any or all of the following: <ul style="list-style-type: none"> ○ Pump impeller is rotating in Status box ○ Lift pump breaker is closed in status box (blue box) ○ Pump Amps are indicative of pump running 	—	—	—
<p style="text-align: center;"><u>CUE:</u></p> <p style="text-align: center;">If asked, “A” Lift Pump is operating normally.</p> <p style="text-align: center;">If asked, Lift Pump stuffing box flow operation has been verified per step G.7</p>					
*05	Selects <PUMP-B-SCREEN> touch button.	Touches the <PUMP-B-SCREEN> touch button.	—	—	—
*06	Opens the breaker for Pump-B	Pushes the Open box in the control window	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
07	Verifies Lift Pump B is secured	Verifies any or all of the following: <ul style="list-style-type: none"> ○ Pump impeller is NOT rotating in Status box ○ Lift pump breaker is OPEN in status box (green box) ○ Pump Amps are zero 	—	—	—
<u>CUE:</u> If asked, “B” Lift pump is tripped and the discharge vacuum breaker is open.					
<u>CUE:</u> Another NSO will finish the task.					
<u>END</u>					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Lift Station – Swap Lift Pumps for Maintenance**JPM Number:** S-N-g**Revision Number:** 01**Task Number and Title:** 27501LP005 Maintain Hot Canal Level between elevation 504 and 510 feet in accordance with DOP 4450-02.**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):** DOP 4450-02 Rev. 33**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 Aux NSO.
2. The 2/3 "B" Lift Pump is required to be secured for maintenance.
3. An EO has been briefed and is waiting in the Lift Station.
4. Breaker logic reset is NOT required.
5. All prerequisites of DOP 4450-02 are met.

INITIATING CUE

1. The Unit Supervisor has directed you to start the 2/3 "A" Lift Pump and secure the 2/3 "B" Lift Pump per DOP 4450-02.
2. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

Respond to failure of Unit 2 24 / 48 VDC power supply (AP)

JPM Number: S-N-i

Revision Number: 08

Date: 01/04/17

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 6900-01 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 04:** Updated for 2006 LORT exam
- Revision 05:** Updated for 2009 LORT exam
- Revision 06:** Updated for 2012 LORT exam
- Revision 07:** Updated for 2016 LORT exam and new JPM format
- Revision 08:** Updated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

N/A: In-Plant JPM

DOCUMENT PREPARATION

Need a clean copy of current revision of DOA 6900-01, Failure of Unit 2(3) 24 48 Vdc Power Supply

INITIAL CONDITIONS

Unit 2 is operating at 780 MWe when the following annunciators alarm:

1. SRM Downscale.
2. IRM Downscale.
3. Channel B Reactor Scram.
4. IRM channel B HI-HI / Inop.
5. 48/24 V Neutron Monitor B Supply Voltage Hi/Lo.
6. 250 / 125 / 48/24 Volt Battery Undervoltage.
7. 48/24 V Battery 2A or 2B Feed Breaker Open.
8. Channel A/B Instrument Volume Level High.

INITIATING CUE

1. An extra EO is available to assist as necessary for monitoring.
2. The Unit Supervisor has directed you to perform DOA 6900-01.
3. 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:

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.	Proceeds to the Unit 2 Battery Room.	LOCATES Unit 2 Battery Room and performs an evaluation of the 24/48 VDC equipment.	—	—	—												
Cue	As the Examine checks equipment, provide the following cues: <u>Battery Charger Indications:</u> <table><tr><td><u>2A+</u></td><td><u>2A-</u></td><td><u>2B+</u></td><td><u>2B-</u></td></tr><tr><td>25 V</td><td>25 V</td><td>25 V</td><td>25 V</td></tr><tr><td>7 amps</td><td>5 amps</td><td>0 amps</td><td>0 amps</td></tr></table> ALL circuit breakers at the Battery Chargers are closed. The local low current light is lit on the face of the 2B+ and 2B- chargers <u>Batteries</u> Batteries appear normal. <u>Bus 2B</u> BOTH DC Voltmeters are indicating zero (0) volts. BOTH Undervoltage relay targets are indicating RED targets. <u>Distribution Panel 2B</u> (Give this indication when the panel is opened) Main (lower section) Breaker #4 (48/24 VDC TO 2B DISTRIBUTION BREAKERS) is in the mid-position.					<u>2A+</u>	<u>2A-</u>	<u>2B+</u>	<u>2B-</u>	25 V	25 V	25 V	25 V	7 amps	5 amps	0 amps	0 amps
<u>2A+</u>	<u>2A-</u>	<u>2B+</u>	<u>2B-</u>														
25 V	25 V	25 V	25 V														
7 amps	5 amps	0 amps	0 amps														
2.	Notify Unit Supervisor.	Notifies Unit Supervisor of conditions found.	—	—	—												
3.	IF 24/48 VDC System voltage is low (below 25 VDC OR a battery charger has failed, THEN restore the battery charger to operation per DOP 6900-03, 24/48 VDC Electrical System.	Operator might contact the Unit Supervisor as this step directs DOP 6900-03 to restore a charger.	—	—	—												
Cue	Acknowledge as U2 Unit Supervisor. Operator should perform actions the DOA as directed in the initial cue. As Unit Supervisor respond – “Another operator will be assigned DOP 6900-03.”																
4.	Isolate any failed loads if possible.	Will not be able to identify any failed loads.	—	—	—												
5.	Attempt to RESET AND close any tripped load breaker (8 breaker upper section)	There are no tripped breakers in the upper section	—	—	—												
Cue	Breakers are in the condition seen. (If there are open/tripped breakers in section cue the operator that all upper breakers are closed.)																

SRRS: 3D.105 (when utilized for operator initial or continuing training)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*6.	Attempt to RESET AND close any tripped supply breaker (4 breaker lower section)	Finds Breaker #4 tripped. Takes Main (lower) breaker #4 (48/24 VDC TO 2A DISTRIBUTION BREAKERS) to Open and then back to Close.	—	—	—
Cue	Main (lower) breaker #4 re-tripped instantly.				
BEGIN ALTERNATE PATH					
*7.	In the applicable Distribution Panel (upper) section, open all breakers (1 through 8)	Opens / verifies open all breakers in the upper section.	—	—	—
Note	Breakers 2, 3, 5, 6, and 8 are labeled as SPARES and are already open. Breaker 7 is closed.				
Cue	Indicate breakers #1 and 4 are OPEN, as the examinee opens each.				
*8	In the Main Panel (lower) section (lower four breakers), reset any tripped breakers. <u>IF</u> the breaker trips again, <u>THEN</u> notify the Unit Supervisor of a faulted panel.	Places Main Panel (lower) section breaker #4 to Open and then Close.	—	—	—
Cue	Main (lower) breaker #4 is closed.				
Note	The breakers can be closed in any order and the examinee will stop when upper breaker #4 is closed.				
Cue	If requested as the extra EO, report, “I will stand by the battery charger ammeters.				
*9.	Close applicable load breakers one at a time to return required loads to service <u>AND</u> determine which load causes the overload.	Closes upper breakers one at a time to determine faulted circuit.	—	—	—
Cue	<u>Bkr 1</u> Indicate breaker closed as examinee closes breaker. If asked, breaker shows a few amps. <u>Bkr 4</u> Main Supply breaker #4 (48/24 VDC TO 2B DISTRIBUTION BREAKERS) tripped when upper breaker #4 was closed. Amps momentarily pegged full scale.				
Cue	Unit Supervisor will take care of documenting issue per OP-DR-108-101-1001.				

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
10.	<u>IF</u> a breaker trips after a load is restored, <u>THEN</u> notify the Unit Supervisor of the failed load.	Notifies the Unit Supervisor that fault is on upper load breaker #4.	___	___	___
Cue	Repeat back the status of the 24/48 VDC battery system. As Unit Supervisor – “Leave all breakers in their present position. Electrical Maintenance will be contacted for further troubleshooting.”				
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Respond to failure of Unit 2 24 / 48 VDC power supply**JPM Number:** S-N-i**Revision Number:** 08**Task Number and Title:** 263L003, Respond to failure of Unit 2(3) 24/48 VDC power supply**K/A Number and Importance:** 295004.AA1.01 3.3 / 3.4**Suggested Testing Environment:** Plant**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOA 6900-01, Rev 19**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

Unit 2 is operating at 780 MWe when the following annunciators alarm:

1. SRM Downscale.
2. IRM Downscale.
3. Channel B Reactor Scram.
4. IRM channel B HI-HI / Inop.
5. 48/24 V Neutron Monitor B Supply Voltage Hi/Lo.
6. 250 / 125 / 48/24 Volt Battery Undervoltage.
7. 48/24 V Battery 2A or 2B Feed Breaker Open.
8. Channel A/B Instrument Volume Level High.

INITIATING CUE

1. An extra EO is available to assist as necessary for monitoring.
2. The Unit Supervisor has directed you to perform DOA 6900-01.
3. Inform the Unit Supervisor when the task is complete.

Job Performance Measure

Bypass the Unit 2 HPCI Group 4 Isolations

JPM Number: S-N-j

Revision Number: 08

Date: 01/04/17

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 DEOP 0500-02 Rev: 17
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 04:** Updated for the 2007 LORT exam
- Revision 05:** Updated for the 2010 LORT exam
- Revision 06:** Updated for the 2013 LORT exam
- Revision 07:** Updated for 2016 LORT Exam and new JPM format
- Revision 08:** Updated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

N/A: In-Plant JPM

Note: Need a clean copy of current revision of DEOP 0500-02, Bypassing Interlocks and Isolations, to provide to examinee.

INITIAL CONDITIONS

1. A transient has occurred which requires Alternate Emergency Depressurization of the Unit 2 RPV
2. A Group 4 Isolation is present.
3. The Reactor Building is evacuated.
4. NO HPCI initiation signal is present.

INITIATING CUE

1. The Unit Supervisor has directed you to bypass the Unit 2 HPCI Group 4 isolations in accordance with DEOP 500-02.
2. 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:

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.	Locate procedure step G.10.	Locates Step G.10.	—	—	—
Note	The DEOP Equipment Storage Cabinet key must be obtained from the Unit Supervisor. 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.				
2.	Obtains appropriate Equipment Box from the Control Room DEOP Equipment Storage Cabinet.	Locates Equipment Box DEOP 500-2 Bypassing Interlocks & Isolations Step G.10: HPCI Group 4 Isolation and identifies the following equipment. <ul style="list-style-type: none"> • Electrical Tape. • Standard Straight Screwdriver. • Split Blade Screwdriver. • Insulated Gloves. 	—	—	—
Cue	DEOP Equipment Box you have identified is in your hand.				
Note	DS key is required for entry into the AEER.				
3.	Proceeds to 902-39 panel (HPCI RELAYS ESS II).	Locates the 902-39 panel.	—	—	—
Note	Location of the correct terminal board inside the cabinet is shown in a placard attached to the outside of the cabinet door on the correct side.				

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	<u>SAT</u>	<u>UNSAT</u>	<u>Comment Number</u>
*4.	Lift and tape lead in panel 902-39, relay 2330-125B, device AE, terminal point 13.	Lifts and tapes leads in panel 902-39, relay 2330-125B, device AE, terminal point 13 (back left terminal). <ul style="list-style-type: none"> • Puts on insulated gloves. • Locates relay 2330-125B. • Locates terminal point 13. • Loosens terminal point 13 screw with standard screwdriver. • Uses split screwdriver to remove screw. • Tapes loose wire with electrician's tape. 	—	—	—
Cue	The lead on back left terminal, 902-39 Panel, relay 2330-125B, device AE, terminal point 13 is lifted and taped.				
*5.	Lift and tape lead in panel 902-39, relay 2330-126, device BW, terminal point 13.	Lifts and tapes leads in panel 902-39, relay 2330-126, device BW, terminal point 13 (two leads on back left terminal). <ul style="list-style-type: none"> • Using insulated gloves. • Locates relay 2330-126. • Locates terminal point 13. • Loosens terminal point 13 screw with standard screwdriver. • Uses split screwdriver to remove screw. • Tapes loose wires with electrician's tape. 	—	—	—
Cue	The two leads on 902-39 Panel, relay 2330-126, device BW, terminal point 13, are lifted and taped.				
6.	Proceed to 902-33 panel.	Locates 902-33 panel in AEER.	—	—	—

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*7.	Lift and tape lead in panel 902-33, relay 2330-125A, device DL, terminal point 13.	Lifts and tapes lead in panel 902-33, relay 2330-125A, device DL, terminal point 13 (back left terminal). <ul style="list-style-type: none">• Using insulated gloves.• Locates relay 2330-125A.• Locates terminal point 13.• Loosens terminal point 13 screw with standard screwdriver.• Uses split screwdriver to remove screw.• Tapes loose wire with electrician’s tape.	___	___	___
CUE	The lead on back left terminal of 902-33 Panel relay 2330-125A device DL terminal point 13 is lifted and taped.				
8.	Notify Unit 2 Unit Supervisor upon completion of bypassing the HPCI Group 4 Isolation per DEOP 500-02.	Notifies Unit 2 Unit Supervisor upon completion of this task.	___	___	___
CUE	Acknowledge report of task completion.				
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Bypass the Unit 2 HPCI Group 4 Isolations**JPM Number:** S-N-j**Revision Number:** 08**Task Number and Title:** 295L081, Bypass the Unit 2 HPCI Group 4 Isolations**K/A Number and Importance:** 206000A2.10 4.0 / 4.1**Suggested Testing Environment:** Plant**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DEOP 0500-02, Revision 17**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other**Testing Method:** ☒ Simulate ☐ PerformEstimated 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 transient has occurred which requires Alternate Emergency Depressurization of the Unit 2 RPV
2. A Group 4 Isolation is present.
3. The Reactor Building is evacuated.
4. NO HPCI initiation signal is present.

INITIATING CUE

1. The Unit Supervisor has directed you to bypass the Unit 2 HPCI Group 4 isolations in accordance with DEOP 500-02.
2. Notify the Unit Supervisor upon completion of the task.

Job Performance Measure
Seal Purge Isolation on Unit 3

JPM Number: S-N-k

Revision Number: 15

Date: 01 / 04 / 2017

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 0202-11 Rev: 33
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 Revised for 2006 LORT Requal exam

Revision 12 Revised for 2009 LORT Requal exam

Revision 13 Revised for 2012 LORT Requal exam

Revision 14 Revised for 2015 LORT Requal exam

Revision 15 Updated for 2016-302 NRC Exam

SIMULATOR SETUP INSTRUCTIONS

1. No simulator setup is required. This is an in-plant JPM.

INITIAL CONDITIONS

1. Unit 3 is in a Refuel Outage.
2. Both Recirc Pumps are off.
3. Both pumps will be shutdown for an extended period for seal replacement.

INITIATING CUE

1. The Unit 3 Unit Supervisor has directed you to perform the infield actions to shutdown the Unit 3 Seal Purge System to the Recirculation Pumps in accordance with DOP 0202-11 steps G.2.a through G.2.c..
2. Notify the Unit Supervisor upon completion.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
01	Proceed to Step G.2.a of DOP 0202-11.	LOCATES step G.2.a	—	—	—
	For 3 A Recirc Pump, close the following valves:		—	—	—
*02	3-0399-510, 3 A RECIRC PMP SEAL PURGE ISOL VLV.	Rotates 3-0399-510 CW until stem stops moving inward.	—	—	—
NOTE	Operating the following valve requires a ladder and RP survey.				
CUE	Conditions are as described.				
*03	3-0399-512, 3 A RECIRC PMP SEAL PURGE ISOL VLV	Rotates 3-0399-512 CW until stem stops moving inward.	—	—	—
CUE	Conditions are as described.				
	For 3 B Recirc Pump, close the following valves:		—	—	—
*04	3-0399-509, 3 B RECIRC PMP SEAL PURGE ISOL VLV.	Rotates 3-0399-509 CW until stem stops moving inward.	—	—	—
CUE	Conditions are as described.				
NOTE	Operating the following valve requires a ladder and RP survey.				
*05	3-0399-513, 3 B RECIRC PMP SEAL PURGE ISOL VLV	Rotates 3-0399-513 CW until stem stops moving inward.	—	—	—
CUE	Conditions are as described.				
06	Notify Unit Supervisor that the seal purge system is shutdown.	Notifies Unit Supervisor that the seal purge system is shutdown.	—	—	—
CUE	Respond as US.				
END					

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** ☐ SRO**JPM Title:** Seal Purge Isolation on Unit 3**JPM Number:** S-N-k**Revision Number:** 15**Task Number and Title:** 202LN001.14d: Seal Purge System Isolation**K/A Number and Importance:** 202001K4.04 3.0/3.1**Suggested Testing Environment:** In-Plant**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** DOP 0202-11 Rev. 33**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:** _____

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