



Job Performance Measure

Evaluate License Maintenance Requirements

JPM Number: A-RO-15

Revision Number: 05

Date: 12/12/2022

Developed By: KARL HEUSER / [Signature] 12/12/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>OP-AA-105-102</u>	Revision: <u>17</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	This JPM is developed IAW Guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category A "Administrative Topics" for RO/SRO candidates.
Revision 01	Corrected the procedure reference in the Evaluator notes section and changed the year to 2004 throughout the JPM.
Revision 02	Updated for revision OP-AA-105-102 Rev. 9
Revision 03	Updated K/A and Task references. Updated dates to 2009 throughout the JPM.
Revision 04	Updated to current template and procedures for ILT 13-1 NRC Exam
Revision 05	Updated for current LaSalle station Operations schedule (12-hr shifts) and modified JPM work with current schedule.
Revision 06	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision. Updated dates to make current.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of OP-AA-105-102 to provide to the Candidate.

INITIAL CONDITIONS

You are an on shift Reactor Operator with an active NRC License.

- Today is 12/23/22.
- The Station is working a straight 12 hour shift schedule.
- You are currently assigned to relieve the assist NSO on Unit 2 on January 2nd, 2023 on Day shift.
- You have covered the following shifts during the current quarter:
 - Three complete 12-hour Day shifts as the Unit 1 Assist NSO during the outage on October 12th, 13th, and 14th.
 - You split 12-hour Day shifts working eight hours as a clearance order writer and the other four hours as the Unit 1 Assist NSO on October 1st, 2nd, 8th, 9th, 15th, 16th, 22nd, 27th, 29th, and 30th.
 - You split two 12-hour midnight shifts working six hours as the Unit 1 NSO and the other six hours as a clearance order writer during a maintenance outage on November 10th and 11th.
 - You covered two 8-hour Day shifts on your training weeks as a Unit 2 NSO on October 23rd and 24th.
 - All shifts covered were entered in the Shift Manager Log.

INITIATING CUE

The Shift Manager has directed you to document your shift coverage for the 4th Quarter of 2022, evaluate your standing as an active Licensed RO, and determine your ability to assume shift for January 2, 2023. Notify the Shift Manager of your status and any additional requirements prior to the end of the 4th quarter 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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate reviews shift coverage from the 4 th Quarter and determines that they need additional shifts to maintain an active license to be available to take shift IAW OP-AA-105-102. Key Provided.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*1	Records shift coverage from 4 th quarter of 2022. Refer to Answer Key.	Correctly records dates, shifts, length of shift, position filled, and signs Attachment 1 using information from the initial conditions.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: ONLY full 12-hours with turnovers count towards shift coverage time allowed. Candidates should NOT record any of the split shifts or 8-hour shifts. The end result should show three 12-hour shifts, which is short of the required five 12-hour shifts. No truncation is allowed.					
*2	Reviews requirements to maintain active license.	Candidate RECOGNIZES they do NOT have the minimum number of required hours of shift watch to maintain their active license.	<input type="checkbox"/>	<input type="checkbox"/>	—
*3	Reviews requirements to maintain active license.	Candidate DETERMINES they are NOT eligible to stand shift on January 2, 2023 due to not having the minimum number of required shifts.	<input type="checkbox"/>	<input type="checkbox"/>	—
4	NOTIFY the Shift Manager.	Candidate NOTIFIES Shift Manager they are not eligible to stand shift on January 2, 2023.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Shift Manager, acknowledge report. If Candidate did not report additional requirements, ask them what additional requirements they need to be able to stand the shift on January 2, 2023.				

Task Standard:

Candidate reviews shift coverage from the 4th Quarter and determines that they need additional shifts to maintain an active license to be available to take shift IAW OP-AA-105-102. **Key Provided.**

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*5	Reviews requirements to maintain active license.	Determines that a minimum of two 12-hr shifts are needed to fulfill the requirements to maintain their license active.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	NOTIFY the Shift Manager.	Candidate NOTIFIES Shift Manager of requirements needed to maintain an active RO license.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Shift Manager, acknowledge report. JPM is complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO Cert

JPM Title: Evaluate License Maintenance Requirements

JPM Number: A-RO-15

Revision Number: 05

Task Number and Title: 784.020 During the performance of tasks, apply the administrative requirements of NRC ACTIVE LICENSE MAINTENANCE, IAW OP-AA-105-102Task Standard: Candidate reviews shift coverage from the 4th Quarter and determines that they need additional shifts to maintain an active license to be available to take shift IAW OP-AA-105-102. Key Provided.K/A Number and Importance: Generic 2.1.4 3.3/3.8Suggested Testing Environment: ClassroomAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: OP-AA-105-102 Revision: 17

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____

ANSWER KEY

	DATE	SHIFT	LENGTH	UNIT	POSITION (circle one)			SM Log	SIGNATURE OF LICENSE HOLDER	
ONE	10/12/22	D	12	1	FHS	SM	US	RO	Logged Y/N	<i>Nuclear S. Operator</i>
TWO	10/13/22	D	12	1	FHS	SM	US	RO	Logged Y/N	<i>Nuclear S. Operator</i>
THREE	10/14/22	D	12	1	FHS	SM	US	RO	Logged Y/N	<i>Nuclear S. Operator</i>
FOUR					FHS	SM	US	RO	Logged Y/N	
FIVE					FHS	SM	US	RO	Logged Y/N	
SIX*					FHS	SM	US	RO	Logged Y/N	
SEVEN *					FHS	SM	US	RO	Logged Y/N	



INITIAL CONDITIONS

You are an on shift Reactor Operator with an active NRC License.

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- You have covered the following shifts during the current quarter:
 - Three complete 12-hour Day shifts as the Unit 1 Assist NSO during the outage on October 12th, 13th, and 14th.
 - You split 12-hour Day shifts working eight hours as a clearance order writer and the other four hours as the Unit 1 Assist NSO on October 1st, 2nd, 8th, 9th, 15th, 16th, 22nd, 27th, 29th, and 30th.
 - You split two 12-hour midnight shifts working six hours as the Unit 1 NSO and the other six hours as a clearance order writer during a maintenance outage on November 10th and 11th.
 - You covered two 8-hour Day shifts on your training weeks as a Unit 2 NSO on October 23rd and 24th.
 - All shifts covered were entered in the Shift Manager Log.

INITIATING CUE

The Shift Manager has directed you to document your shift coverage for the 4th Quarter of 2022, evaluate your standing as an active Licensed RO, and determine your ability to assume shift for January 2, 2023. Notify the Shift Manager of your status and any additional requirements prior to the end of the 4th quarter when complete.



Job Performance Measure

REPORTING EMERGENCIES

JPM Number: A-RO-17

Revision Number: 04

Date: 12/12/2022

Developed By: KARL HEUSER / [Signature] / 12/12/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] / 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Buetz / [Signature] / 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] / 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LAP-950-3</u>	Revision: <u>11</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
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Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM for ILT 02-01 exam
Revision 01	Revised LAP-950-3 rev number to (1) and changed task number to reflect current task list (722.020 to 722.010).
Revision 02	Updated to current revision of LAP-950-3.
Revision 03	Updated to current revision of LAP-950-3. Updated K/A reference. Updated Task reference.
Revision 04	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of LAP-950-3 – Handling Personnel Injuries

INITIAL CONDITIONS

You are an Extra NSO,

- U-1 and U-2 have both scrambled. The Shift Manager and both Unit Supervisors are not available due to implementation of LGA's.
- You have received a call from Ext. 2211, the LaSalle Station Emergency Telephone Extension.
- The following information is reported:
 1. Bill Smith, a contractor, has slipped in the Service Building Trackway and his ankle is broken.
 2. He is not contaminated.
 3. I am calling from Ext. 4444.

INITIATING CUE

The Shift Manager has informed you to perform the actions to handle the injury IAW LAP-950-3, "Handling Personnel Injuries". Inform the Shift Manager after the Nursing Supervisor at the hospital has been informed.

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 Candidate 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.

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JPM Start Time: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will notify Emergency Services for an injured personnel up to and including the Nursing Supervisor IAW LAP-950-3.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
Note: Inform the Candidate that phone numbers will be simulated. You, as the evaluator, will respond as needed.					
*1	Notifies Rad Protection at 2241 and the Nurse at 4204 for first aid and radiological assistance.	Candidate notifies Rad Protection and the Nurse.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As RP and the Nurse, acknowledge the report.				
*2	Designates an individual to assume command and control at the scene. This will normally be the Field Supervisor.	Candidate directs an individual to assume command and control at the scene. This will normally be the Field Supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As the individual selected by the Candidate, inform the Candidate that you will head to the scene to assume command and control.				
*3	Notifies the Seneca Emergency Services at 911 or (815) 942-0336 to send an ambulance to the station address: 2601 North 21st Road Marseilles, Illinois 61341-9757	Candidate notifies Seneca Emergency Services.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Seneca Emergency Services, inform Candidate that someone is available and the ambulance will be dispatched immediately. Inform the Candidate that a Time Compression is in effect. 5 minutes have elapsed and Seneca Emergency Services has informed you that an ambulance is in route.				

<u>Task Standard:</u> Candidate will notify Emergency Services for an injured personnel up to and including the Nursing Supervisor IAW LAP-950-3.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
4	Verify Seneca Emergency Services has sent an ambulance to the station within 15 minutes by: <ul style="list-style-type: none"> • Call-back from Seneca Emergency Services stating that an ambulance is in route. • Calling the Seneca Emergency Services and requesting the status of the ambulance requested. 	Candidate verifies status of the ambulance by the cue provided above of a call back from Seneca Emergency Services stating that an ambulance is in route.	<input type="checkbox"/>	<input type="checkbox"/>	—
5	If the Seneca Ambulance Service cannot be reached, then CALL the Marseilles Area Ambulance Service by dialing 911 for an ambulance.	Candidate determines this step is N/A.	<input type="checkbox"/>	<input type="checkbox"/>	—
*6	Notify Security at 2940 that an ambulance has been called to respond to the station.	Candidate notifies Security.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Security, acknowledge report.				
7	Verify status of the victim from the Field Supervisor, Nurse, or Rad Protection at the scene.	Candidate verifies status of the injured person from the Field Supervisor	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As the Field Supervisor, report that the contractor appears to have a broken ankle and is not contaminated. He is in a great deal of pain, but the injury is not life threatening.				
8	Verify with Rad Protection whether or not the victim is leaving the station contaminated prior to calling the hospital.	Candidate determines victim is not contaminated.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard: Candidate will notify Emergency Services for an injured personnel up to and including the Nursing Supervisor IAW LAP-950-3.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*9	Notify the appropriate hospital: <ul style="list-style-type: none"> Morris Community Hospital, (815) 942-2129 (emergency) or (815) 942-2932 (non-emergency). Presence St. Joseph Medical Center in Joliet 815-741-7660 (emergency) and 815-725-7133 x7077 (non-emergency). 	Candidate calls one of the listed hospitals, Morris Community Hospital preferred.	<input type="checkbox"/>	<input type="checkbox"/>	—
*10	Inform the individual answering the phone to put you in contact with the Nursing Supervisor or designee immediately. The Nursing Supervisor or designee must be told the nature or extent of the injury and if the person is not contaminated, potentially contaminated or contaminated.	Candidate notifies Nursing Supervisor of the extent of the injury and that the person is not contaminated.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	When the hospital is called, answer the call as the Nursing Supervisor. As the Nursing Supervisor, acknowledge the information from the Candidate				
11	Inform Shift Manager that Nursing Supervisor has been informed.	Shift Manager informed.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Acknowledge report, JPM is complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: REPORTING EMERGENCIESJPM Number: A-RO-17 Revision Number: 04Task Number and Title: 722.010 Given a postulated personnel injury, complete the required administrative sections related to personnel injury IAW LAP-950-3.Task Standard: Candidate will notify Emergency Services for an injured personnel up to and including the Nursing Supervisor IAW LAP-950-3.K/A Number and Importance: 2.4.38 2.4/4.4

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure: LAP-950-3 Revision: 11

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are an Extra NSO,

- U-1 and U-2 have both scrambled. The Shift Manager and both Unit Supervisors are not available due to implementation of LGA's.
- You have received a call from Ext. 2211, the LaSalle Station Emergency Telephone Extension.
- The following information is reported:
 4. Bill Smith, a contractor, has slipped in the Service Building Trackway and his ankle is broken.
 5. He is not contaminated.
 6. I am calling from Ext. 4444.

INITIATING CUE

The Shift Manager has informed you to perform the actions to handle the injury IAW LAP-950-3, "Handling Personnel Injuries". Inform the Shift Manager after the Nursing Supervisor at the hospital has been informed.

Job Performance Measure**Calculate Reactor Coolant System Leakage**JPM Number: A-RO-26Revision Number: 00Date: 12/14/2022

Developed By:

KARL HEUSER / [Signature] 12/14/22
Instructor: Print / Sign Date

Reviewed By:

THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By:

Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By:

Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOS-AA-S101</u>	Revision: <u>119</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM
Revision 01	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of LOS-AA-S101.
2. Provide a copy of LOS-AA-S101 Attachment A pages 54-55 partially filled out for Candidate handout.
3. Have an Answer key prepared for grading.
4. Calculator.

INITIAL CONDITIONS

You are the Assist NSO,

- The current time is 1600 Shift 3.
- DWEDS discharge flow totalizer reading at 1600 (Shift 3) is 4353356.
- 1UR-RF002 DWFDS Fill-Up Rate/Dsch Flow recorder is inoperable.
- 1UR-RF002 Totalizer is still functioning.
- The Unit 1 Gravity Drain Fill Up Rate Monitor is in operation.
- DC voltage reading taken today at 1600 from 1PM13J TB 34-10 to TB 34-11 is 2.64V.
- DWFDS Totalizer reading at 1600 (Shift 3) is 12,123.

INITIATING CUE

Calculate Reactor Coolant System Leakage IAW LOS-AA-S101, Unit 1 Shiftly Surveillance, Attachment A including identified and unidentified leakage over the last 24 hours. Inform the Unit Supervisor of the results.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will take data from the Initial Conditions and calculate Identified Leakage using the normal method and Unidentified Leakage using the alternate method to determine Unidentified Leakage has risen more than allowed per LOS-AA-S101. Key Provided.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
Note: Provide student copy of partial LOS-AA-S101 Attachment A					
1	RECORD the following information on the DWEDS Sump: <ul style="list-style-type: none"> Discharge flow totalizer reading from Shift 3 on previous day. Times those readings were taken. GPM figures for Shift 1 and 2 from previous 24 hours. 	Candidate determines step was completed Shift 1.	<input type="checkbox"/>	<input type="checkbox"/>	—
*2	RECORD present DWEDS discharge flow totalizer reading from 1UR-RE001 and time reading was taken at approximately 8 hour intervals during shift.	Candidate records reading from the Initial Conditions in to the DWEDS Calculations for Today's Data Shift 3 Totalizer Column. Totalizer value <u>4353356</u>	<input type="checkbox"/>	<input type="checkbox"/>	—
3	If the totalizer is inoperable, EC 617711 provides that the GPM value can be determined by taking a DC voltage reading from 1PM13J TB 35-1 to TB 35-2 and converting this signal to GPM with the following formula.	Candidate DETERMINES the DWEDS totalizer is operable, and this step is N/A.	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
Candidate will take data from the Initial Conditions and calculate Identified Leakage using the normal method and Unidentified Leakage using the alternate method to determine Unidentified Leakage has risen more than allowed per LOS-AA-S101. Key Provided.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*4	CALCULATE Identified Leakage approximately every 8 hours by using the 8 hr. difference in total readings and dividing by 480 minutes. CALCULATE the Identified Leakage in GPM and RECORD in appropriate location.	Candidate CALCULATES and RECORDS results into DWEDS Calculations for Today's Data Shift 3 GPM column. (4353356-4352254)/480 GPM <u>2.3</u> Range: 2.25 – 2.35 gpm	<input type="checkbox"/>	<input type="checkbox"/>	—
5	DETERMINE value of Unidentified Leakage (DWFDS) every 8 hours as follows:	Candidate DETERMINES value of Unidentified Leakage (DWFDS) every 8 hours as follows:			
6	RECORD the DWFDS Sump Fill-up Rate from 1UR-RF002 (record both pens if the Gravity Drain Fill-up Rate Monitor is in operation) and the time the reading was taken at approximately 8 hour intervals during the shift.	Candidate DETERMINES 1UR-RF002 is inoperative and uses the guidance in E.1.8.7.1.1 to determine Fill-up Rate.	<input type="checkbox"/>	<input type="checkbox"/>	—
*7	If 1UR-RF002 DWFDS Fill-Up Rate/Dsch Flow Recorder is inoperative: o EC 368200 provides that the GPM value can be determined by taking a DC voltage reading from 1PM13J TB 34-10 to TB 34-11 and converting this signal to GPM with the following formula: Reading (GPM) = (Voltage Reading – 1) times 2.5 GPM	Candidate DETERMINES voltage from initial conditions and CALCULATES Fill-up Rate. (2.64v – 1) times 2.5 GPM= <u>4.1</u> GPM Range: 3.7 – 4.5 GPM	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
Candidate will take data from the Initial Conditions and calculate Identified Leakage using the normal method and Unidentified Leakage using the alternate method to determine Unidentified Leakage has risen more than allowed per LOS-AA-S101. Key Provided.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
8	<p>RECORD the following information on the DWFDS Sump:</p> <ul style="list-style-type: none"> Discharge DWFDS Sump Fill-up Rate reading from Shift 3 on the previous day and the time reading was taken. GPM and times for Shift 1 and 2 from the previous 24 hours. 	<p>Candidate RECORDS reading from initial conditions in to the Alternate DWFDS Calculations for Today's Data 1600 Totalizer Column.</p> <p>Totalizer value <u>12,123</u></p>	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE	When the Gravity Drain Fill-up Rate Monitor is in operation, the following method may still be performed by starting at step E.1.8.7.2.4. All of the steps prior to E.1.8.7.2.4. may be marked N/A.				
9	<p>When the sump pumps down (or approximately every 4 hours when the Gravity Drain Fill-up Rate Monitor is in operation) CALCULATE the leakage as follows:</p> <ul style="list-style-type: none"> RECORD the date/time that the current pumpdown started and stopped (or N/A the Pumpdown Start and Stop date/time when the Gravity Drain Fill-up Rate Monitor is in operation). 	<p>Candidate marks Pumpdown Start and Stop columns as N/A.</p>	<input type="checkbox"/>	<input type="checkbox"/>	—
*10	<p>DETERMINE the gallons per one of the following:</p> <p>(Preferred) SUBTRACT the previous totalizer reading from the current reading.</p>	<p>Candidate CALCULATES Unidentified Leakage by SUBTRACTING the previous totalizer reading from the current reading.</p> <p>12,123 – 11,139 = <u>984 Gallons</u></p>	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
Candidate will take data from the Initial Conditions and calculate Identified Leakage using the normal method and Unidentified Leakage using the alternate method to determine Unidentified Leakage has risen more than allowed per LOS-AA-S101. Key Provided.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*11	<p>CALCULATE the GPM by dividing the gallons pumped by the Current Pumpdown Start Time (or current time) minus the previous Last Pumpdown Stop Date/Time (or previous time).</p> <p>GPM = $\frac{\text{Gallons Pumped}}{T_s - T_o}$</p>	<p>Candidate CALCULATES the GPM by dividing the gallons pumped by the Current Pumpdown Start Time (or current time) minus the previous Last Pumpdown Stop Date/Time (or previous time):</p> <p>GPM = $\frac{984 \text{ gallons}}{240 \text{ minutes}}$</p> <p>GPM = <u>4.1</u></p>	<input type="checkbox"/>	<input type="checkbox"/>	—
12	<p>If DWFDS totalizer has increased:</p> <ul style="list-style-type: none"> If the Gravity Drain Fill-up Rate Monitor caused the totalizer to advance, the totalizer values may be used to calculate Unidentified leakage at any time. 	<p>Candidate DETERMINES DWFDS Totalizer has increased and the Gravity Drain Fill-up Rate Monitor caused the totalizer to advance so the totalizer values can be used to calculate Unidentified leakage.</p>	<input type="checkbox"/>	<input type="checkbox"/>	—
*13	<p>COMPARE the values from Preferred and Alternate Unidentified Leakage figures. INVESTIGATE any large discrepancies of 1 GPM or more.</p>	<p>Candidate IDENTIFIES difference between Preferred and Alternate is < 1GPM.</p>	<input type="checkbox"/>	<input type="checkbox"/>	—
*14	<p>If DWFDS Totalizer is INOP, RECORD DWFDS Fill-up rate recorder value (use the highest value if both pens are in operation) once per 8 hours on Attachment A under GPM.</p>	<p>Candidate DETERMINES the Fill-up Rate is 4.1 GPM and records is GPM column.</p>	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
Candidate will take data from the Initial Conditions and calculate Identified Leakage using the normal method and Unidentified Leakage using the alternate method to determine Unidentified Leakage has risen more than allowed per LOS-AA-S101. Key Provided.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
15	CHECK that Unidentified Leakage is less than or equal to 5 gpm.	Candidate DETERMINES that Unidentified Leakage is less than 5 gpm.	<input type="checkbox"/>	<input type="checkbox"/>	—
16	Mode 1 , CHECK that Unidentified Leakage has NOT increased 2 gpm in last 24 hours by COMPARING current Unidentified Leakage Rate to leakage rates over last 24 hours.	Candidate VERIFIES Unidentified Leakage HAS increased more than 2 GPM over last 24 hours.	<input type="checkbox"/>	<input type="checkbox"/>	—
*17	DETERMINE and RECORD value of Total Leakage by adding value of: <ul style="list-style-type: none"> Identified Leakage—use higher value obtained from each shift. Unidentified Leakage—use highest value obtained for each shift, whether preferred or alternate. 	Candidate CALCULATES Identified and Unidentified leakage: Identified 2.3 GPM Unidentified <u>4.1 GPM</u> 6.4 GPM	<input type="checkbox"/>	<input type="checkbox"/>	—
18	CHECK that total leakage is ≤ 25 GPM.	Candidate VERIFIES total leakage ≤ 25 GPM by summing identified and unidentified leakage.	<input type="checkbox"/>	<input type="checkbox"/>	—
*19	Inform Unit Supervisor.	Candidate informs Unit Supervisor that calculations are completed with portions UNSAT.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____

Answer Key
ATTACHMENT A (Continued)
UNIT 1 SHIFTLY SURVEILLANCE FOR MODE 1, 2, OR 3

DWEDS Calculation				
E.1.8	Shift	Time	Totalizer	GPM
Previous Day's Data	Shift 1	0000	N/A	2.3
	Shift 2	0800	N/A	2.3
	Shift 3	1600	4350041	2.3
Today's Data	Shift 1	0000	4351147	2.3
	Shift 2	0800	4352254	2.3
	Shift 3	1600	4353356	2.3

Preferred DWFDS Calculation				
E.1.8	Shift	Time	Fill-up Rate (1UR-RF002)**	
			Red Ind.	Blue Ind.*
Previous Day's Data	Shift 1	0000	1.77 V	1.9
	Shift 2	0800	1.77 V	1.9
	Shift 3	1600	1.77 V	1.9
Today's Data	Shift 1	0000	1.77 V	1.9
	Shift 2	0800	1.80 V	2.0
	Shift 3	1600	2.64 V	4.1

* If the Gravity Drain Fill-up Rate Monitor is NOT in operation, 1UR-RF002 blue indicator steps are N/A.

** If 1UR-RF002 is inoperative, use the guidance in E.1.8.7.1.1 to determine FUR. Log the voltage in the Red Ind column and the calculated FUR in the Blue Ind column. If using 1FE-RF005, log the GPM in the Blue indication column. Blue indicator should be DWFDS MAG DSCH FLOW trend.

Alternate DWFDS Calculation						
E.1.8	Time	Pump Down Start Date/Time	Pump Down Stop Date/Time Note 1	Totalizer	Gallons Pumped	GPM Note 1
Previous Day's Data	0000	N/A	N/A	N/A	N/A	1.8
	0400	N/A	N/A	N/A	N/A	1.8
	0800	N/A	N/A	N/A	N/A	1.8
	1200	N/A	N/A	N/A	N/A	1.8
	1600	N/A	N/A	N/A	8840	N/A
Today's Data	2000	N/A	N/A	9276	N/A	1.8
	0000	N/A	N/A	9712	436	1.8
	0400	N/A	N/A	10159	447	1.9
	0800	N/A	N/A	10619	460	1.9
	1200	N/A	N/A	11139	520	2.2
	1600	N/A	N/A	12123	984	4.1
	2000					

Note 1: If Unit is starting up after an outage, Pump down Stop Date/Time should be Date/Time Unit entered mode 2 and "GPM" will be N/A until the first pump down.

**Level of Use
Continuous**

Answer Key
ATTACHMENT A (Continued)
UNIT 1 SHIFTLY SURVEILLANCE FOR MODE 1, 2, OR 3

E.1.8	Unidentified Leakage (Cont.)	1	2	3
(✓)	If totalizer increased due to DWFDS pump discharge flow (green indicator), CHECK DWFDS discharge flowrate >13 gpm.	N/A	N/A	N/A
(✓)	CHECK difference between Preferred and Alternate Unidentified Leakage is < 1 gpm	✓	✓	✓
(✓)	Unidentified Leakage is ≤ 5 gpm	✓	✓	✓
(✓)	MODE 1, Unidentified Leakage has <u>NOT</u> increased 2 gpm in last 24 hrs.	✓	✓	UNSAT
	RECORD Total Leakage use highest values recorded for identified/unidentified and CHECK ≤ 25 gpm	4.2	4.3	6.4
E.1.9	1PM10J			
(✓)	Channel Check Wind Direction 200' <u>and</u> 375'	✓		
(✓)	Channel Check Wind Speed 200' <u>and</u> 375'	✓		
(✓)	Channel Check Diff Temp 33/375' (or 33/200')	✓		
E.1.10	1N62-P600			
(✓)	Channel Check OG H2 Level and check < 4%	✓		

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO Cert**JPM Title:** Error! Reference source not found.**JPM Number:** A-RO-26 **Revision Number** 01**Task Number and Title:** 53.003 Check the Reactor Coolant System Leakage IAW LOS-AA-S101(S201)**Task Standard:** Candidate will take data from the Initial Conditions and calculate Identified Leakage using the normal method and Unidentified Leakage using the alternate method to determine Unidentified Leakage has risen more than allowed per LOS-AA-S101.**K/A Number and Importance:** 2.1.19 3.9**Suggested Testing Environment:** Classroom**Alternate Path:** Yes No **SRO Only:** Yes No **Time Critical:** Yes No**Reference(s):****Procedure:** LOS-AA-S101 **Revision:** 119**Procedure:** _____ **Revision:** _____**Procedure:** _____ **Revision:** _____**Procedure:** _____ **Revision:** _____**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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____

ATTACHMENT A (Continued)

UNIT 1 SHIFTLY SURVEILLANCE FOR MODE 1, 2, OR 3

DWEDS Calculation				
E.1.8	Shift	Time	Totalizer	GPM
Previous Day's Data	Shift 1	0000	N/A	2.3
	Shift 2	0800	N/A	2.3
	Shift 3	1600	4350041	2.3
Today's Data	Shift 1	0000	4351147	2.3
	Shift 2	0800	4352254	2.3
	Shift 3	1600		

Preferred DWFDS Calculation				
E.1.8	Shift	Time	Fill-up Rate (1UR-RF002)**	
			Red Ind.	Blue Ind.*
Previous Day's Data	Shift 1	0000	1.77 V	1.9
	Shift 2	0800	1.77 V	1.9
	Shift 3	1600	1.77 V	1.9
Today's Data	Shift 1	0000	1.77V	1.9
	Shift 2	0800	1.80 V	2.0
	Shift 3	1600		

- * If the Gravity Drain Fill-up Rate Monitor is NOT in operation, 1UR-RF002 blue indicator steps are N/A.
- ** If 1UR-RF002 is inoperative, use the guidance in E.1.8.7.1.1 to determine FUR. Log the voltage in the Red Ind column and the calculated FUR in the Blue Ind column. If using 1FE-RF005, log the GPM in the Blue indication column. Blue indicator should be DWFDS MAG DSCH FLOW trend.

Alternate DWFDS Calculation						
E.1.8	Time	Pump Down Start Date/Time	Pump Down Stop Date/Time Note 1	Totalizer	Gallons Pumped	GPM Note 1
Previous Day's Data	0000	N/A	N/A	N/A	N/A	1.8
	0400	N/A	N/A	N/A	N/A	1.8
	0800	N/A	N/A	N/A	N/A	1.8
	1200	N/A	N/A	N/A	N/A	1.8
	1600	N/A	N/A	8840	N/A	1.8
	2000	N/A	N/A	9276	N/A	1.8
Today's Data	0000	N/A	N/A	9712	436	1.8
	0400	N/A	N/A	10159	447	1.9
	0800	N/A	N/A	10619	460	1.9
	1200	N/A	N/A	11139	520	2.2
	1600					
	2000					

Note 1: If Unit is starting up after an outage, Pump down Stop Date/Time should be Date/Time Unit entered mode 2 and "GPM" will be N/A until the first pump down.

**Level of Use
Continuous**

ATTACHMENT A (Continued)

UNIT 1 SHIFTLY SURVEILLANCE FOR MODE 1, 2, OR 3

E.1.8	Unidentified Leakage (Cont.)	1	2	3
(✓)	If totalizer increased due to DWFDS pump discharge flow (green indicator), CHECK DWFDS discharge flowrate >13 gpm.	N/A	N/A	
(✓)	CHECK difference between Preferred and Alternate Unidentified Leakage is < 1 gpm	✓	✓	
(✓)	Unidentified Leakage is ≤ 5 gpm	✓	✓	
(✓)	MODE 1 , Unidentified Leakage has <u>NOT</u> increased 2 gpm in last 24 hrs.	✓	✓	
	RECORD Total Leakage use highest values recorded for identified/unidentified and CHECK ≤ 25 gpm	4.2	4.3	
E.1.9	1PM10J			
(✓)	Channel Check Wind Direction 200' <u>and</u> 375'	✓		
(✓)	Channel Check Wind Speed 200' <u>and</u> 375'	✓		
(✓)	Channel Check Diff Temp 33/375' (or 33/200')	✓		
E.1.10	1N62-P600			
(✓)	Channel Check OG H2 Level and check < 4%	✓		

Level of Use
Continuous



INITIAL CONDITIONS

You are the Assist NSO,

- The current time is 1600 Shift 3.
- DWEDS discharge flow totalizer reading at 1600 (Shift 3) is 4353356.
- 1UR-RF002 DWFDS Fill-Up Rate/Dsch Flow recorder is inoperable.
- 1UR-RF002 Totalizer is still functioning .
- The Unit 1 Gravity Drain Fill Up Rate Monitor is in operation.
- DC voltage reading taken today at 1600 from 1PM13J TB 34-10 to TB 34-11 is 2.64V.
- DWFDS Totalizer reading at 1600 (Shift 3) is 12,123.

INITIATING CUE

Calculate Reactor Coolant System Leakage IAW LOS-AA-S101, Unit 1 Shiftly Surveillance, Attachment A including identified and unidentified leakage over the last 24 hours. Inform the Unit Supervisor of the results.

Job Performance Measure**Print Reading Exercise**JPM Number: A-RO-34Revision Number: 01Date: 1/30/2023

Developed By: KARL HEUSER / [Signature] 1/30/23
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign Date

Revision Record (Summary)

Revision #	Summary
Revision 00	This JPM was developed new for ILT 09-1 NRC Exam.
Revision 01	This JPM was revised for the ILT 22-1 NRC Exam. Updated to new JPM Template and procedure revisions.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide referenced prints M-71 Sheet 1 and Sheet 2.
2. Provide a copy of OP-AA-109-101.

INITIAL CONDITIONS

You are an extra NSO,

- Fire Hose Reel FB 233 in the Lake Screen House was discovered damaged and leaking water.
- Outside Rounds was directed to close 0FP069 but the valve will not close.
- PassPort and eSOMS are currently unavailable due to server issues.

INITIATING CUE

The Unit Supervisor has directed you to Independently Verify the isolation points and required hang positions to isolate Hose Reel FB 233 using drawings M-71 Sheet 1 & 2 as required. Inform the Unit Supervisor when all isolation points and hang positions have been identified.

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 Candidate 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.

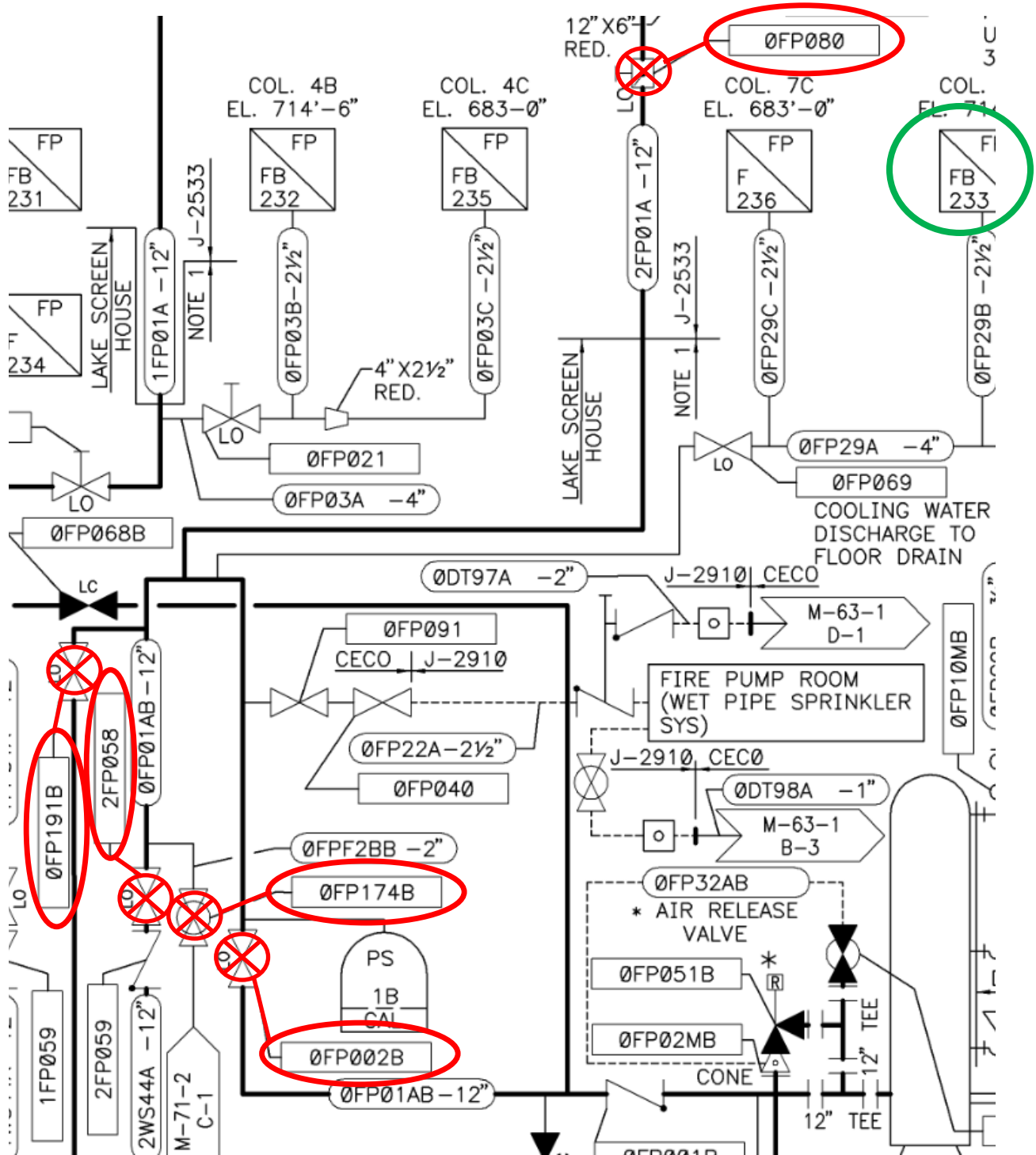
.....

JPM Start Time: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will use mechanical P&ID diagrams to identify isolation points and tag hang positions to isolate a Fire Protection Hose Reel IAW drawings M-71 Sheet 1 & 2 as identified on Answer Key.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: Provide prints to Candidate once the JPM is started. Steps can be performed in any sequence.					
*1	Identify valve 0FP002B must be taken OOS in the closed position.	Candidate IDENTIFIES valve 0FP002B must be taken OOS in the closed position.	<input type="checkbox"/>	<input type="checkbox"/>	—
*2	Identify valve 0FP080 must be taken OOS in the closed position.	Candidate IDENTIFIES valve 0FP080 must be taken OOS in the closed position.	<input type="checkbox"/>	<input type="checkbox"/>	—
*3	Identify valve 0FP174B must be taken OOS in the closed position.	Candidate IDENTIFIES valve 0FP174B must be taken OOS in the closed position.	<input type="checkbox"/>	<input type="checkbox"/>	—
*4	Identify valve 0FP191B must be taken OOS in the closed position.	Candidate IDENTIFIES valve 0FP191B must be taken OOS in the closed position.	<input type="checkbox"/>	<input type="checkbox"/>	—
*5	Identify valve 2FP058 must be taken OOS in the closed position.	Candidate IDENTIFIES valve 2FP058 must be taken OOS in the closed position.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	Inform the Unit Supervisor.	Candidate informs the Unit Supervisor of identified components and required positions.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____

ANSWER KEY



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Print Reading ExerciseJPM Number: A-RO-34Revision Number: 01Task Number and Title: 801.000 Given a Clearance Order Request, process the request and create a Clearance Order Checklist that accomplishes the request in accordance with OP-AA-109-101.Task Standard: Candidate will use mechanical P&ID diagrams to identify isolation points and tag hang positions to isolate a Fire Protection Hose Reel IAW drawings M-71 Sheet 1 & 2 as identified on Answer Key.K/A Number and Importance: Generic 2.2.41 3.5/3.9Suggested Testing Environment: ClassroomAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: <u>M-71 Sheet 1</u>	Revision: <u>BF</u>
Procedure: <u>M-71 Sheet 2</u>	Revision: <u>Y</u>
Procedure: <u>OP-AA-109-101</u>	Revision: <u>18</u>
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are an extra NSO,

- Fire Hose Reel FB 233 in the Lake Screen House was discovered damaged and leaking water.
- Outside Rounds was directed to close 0FP069 but the valve will not close.
- PassPort and eSOMS are currently unavailable due to server issues.

INITIATING CUE

The Unit Supervisor has directed you to Independently Verify the isolation points and required hang positions to isolate Hose Reel FB 233 using drawings M-71 Sheet 1 & 2 as required. Inform the Unit Supervisor when all isolation points and hang positions have been identified.

Job Performance Measure

Review Surveillance and Determine Required Action

JPM Number: A-SRO-23

Revision Number: 01

Date: 12/05/2022

Developed By: KAZU HEUSER / [Signature] 12/5/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOS-RI-Q1</u>	Revision: <u>54</u>
Procedure: <u>ER-AA-321</u>	Revision: <u>14</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____/_____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____/_____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM for ILT, variation of ASRO11r01
Revision 01	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. The following material is required to be provided to Candidate:

- One copy of LOS-RI-Q1 att. 1A, pages 8 through 15 with applicable sheets from IST Surveillance Acceptance Criteria Manual. The data should be filled up to the US review. The stroke time of 1E51-F025 must be in the Maximum Alert range.

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

2. The following material may be located and utilized by the Candidate:

- LOS-RI-Q1, Unit 1 Reactor Core Isolation Cooling System Valve Inservice Testing
- ER-AA-321, Administrative Requirements for Inservice Testing
- Unit 1 Technical Specifications

INITIAL CONDITIONS

You are the Unit Supervisor,

- The Unit 1 NSO has just completed LOS-RI-Q1 Attachment 1A as scheduled by the normal surveillance schedule.

INITIATING CUE

Review the results and inform the Shift Manager of acceptability and any required actions.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate reviews completed surveillance and finds an out of tolerance reading and determines required action to retest IAW ER-AA-321.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1	Reviews the surveillance to verify all information is filled out on the attachment.	Candidate verifies all spaces are filled in on the attachment sheet.	<input type="checkbox"/>	<input type="checkbox"/>	—
*2	Reviews the surveillance to verify all readings are within limits as specified in the procedure.	Candidate determines that the stroke time for 1E51-F025 is in the maximum alert range.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, if required, inform the Candidate to determine required actions.				
3	Refers to ER-AA-321, Administrative Requirements for Inservice Testing for applicable actions.	Candidate refers to ER-AA-321, Administrative Requirements for Inservice Testing for applicable actions.	<input type="checkbox"/>	<input type="checkbox"/>	—
4	Identifies the applicable actions per ER-AA-321, Attachment 2.	Candidate refers to ER-AA-321, Administrative Requirements for Inservice Testing for applicable actions.	<input type="checkbox"/>	<input type="checkbox"/>	—
*5	Determine 1E51-F025 is not within IST limits and must be re-stroked.	Candidate determines that 1E51-F025 must be re-stroked.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	Inform Shift Manager.	Reports findings to Shift Manager.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Acknowledge report, JPM complete.				

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Review Surveillance and Determine Required ActionJPM Number: A-SRO-23 Revision Number: 01Task Number and Title: 657.010 Given the proper procedure, the applicable sheets from the LaSalle IST Surveillance Acceptance Criteria Manual and component test data, evaluate whether the component is operable, and if not initiate the appropriate corrective actions.Task Standard: Candidate reviews completed surveillance and finds an out of tolerance reading and determines required action to retest IAW ER-AA-321.K/A Number and Importance: 2.2.12 4.1

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure: <u>LOS-RI-Q1</u>	Revision: <u>54</u>
Procedure: <u>ER-AA-321</u>	Revision: <u>14</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Unit Supervisor,

- The Unit 1 NSO has just completed LOS-RI-Q1 Attachment 1A as scheduled by the normal surveillance schedule.

INITIATING CUE

Review the results and inform the Shift Manager of acceptability and any required actions.

Job Performance Measure**Determine Offsite Release Rate and if Release is in Progress**JPM Number: A-SRO-41Revision Number: 02Date: 12/06/2022

Developed By: KARL HEUSER / [Signature] 12/6/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u> LGA-009 </u>	Revision: <u> 9 </u>
Procedure: <u> EP-AA-114-F-02 </u>	Revision: <u> A </u>
Procedure: <u> EP-AA-1005 Add. 3 </u>	Revision: <u> 9 </u>
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM, created from A-RO-02 to include SRO only tasks
Revision 01	Updated for ILT Class 13-01 Cert Exam. Revised to include the latest JPM template and procedure revisions.
Revision 02	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revisions.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide the following material to the candidate:
 - EP-AA-1005 Add. 3, EAL's
 - EP-AA-114-F-02, Release in Progress Determination

INITIAL CONDITIONS

You are an Extra SRO,

- Both Units are at rated conditions.
- A Multi-Purpose Canister (MPC) has ruptured discharging highly contaminated material on Unit 1 RB 710'.
- On 0PM14J, OD18-R522, STACK WRGM EFF ACT, is reading $4.5e+07$ μ Ci/sec.
- On 1PM07J, OD18-R520, SBGT WRGM EFF ACT, is reading $3.8e+07$ μ Ci/sec.
- Unit 2 VG failed to start.
- Unit 1 VG is running.

INITIATING CUE

The Shift Manager has requested that you determine stack release, if a release is in progress, and what General Abnormal procedure to enter if applicable. Inform the Shift Manager of your determination.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will calculate Stack effluent, determine that a release is in progress, and LGA-009 must be entered IAW EP-AA-1005 Addendum 3, EP-AA-114-F-02, and LGA-009.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1	Determine stack release from ventilation systems other than SBGT.	Candidate determines Main Stack WRGM effluent is $4.5e+07 \mu\text{Ci}/\text{sec}$.	<input type="checkbox"/>	<input type="checkbox"/>	—
2	Determine stack release from SBGT.	Candidate determines SBGT WRGM effluent is $3.8e+07 \mu\text{Ci}/\text{sec}$.	<input type="checkbox"/>	<input type="checkbox"/>	—
*3	Determine total release rate IAW EP-AA-1005 Add. 3, RA1.	Candidate adds two releases from Main Vent Stack and SBGT WRGMs and determines total release rate is $8.3e+07 \mu\text{Ci}/\text{sec}$.	<input type="checkbox"/>	<input type="checkbox"/>	—
*4	Determine if a release is in progress IAW EP-AA-114-F-02.	Candidate determines there <u>IS</u> a release in progress.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE	Candidate may enter LGA-002 for VG failing to start. This is not a Critical Step for this JPM.				
*5	Determine which General Abnormal procedure to enter.	Candidate determines LGA-009 must be entered based on Offsite Release Rate above EAL "Alert" level at $8.26e+07 \mu\text{Ci}/\text{sec}$.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	Inform Shift Manager.	Candidate informs Shift Manager that total release is $8.3e+07 \mu\text{Ci}/\text{sec}$, there is a release in progress, and LGA-009 must be entered.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Acknowledge report, JPM complete.				

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Determine Offsite Release Rate and if Release is in ProgressJPM Number: A-SRO-41 Revision Number: 02Task Number and Title: 52.035 Given high rad levels resulting in an entry into LGA-009, respond to a High Rad Release rate in accordance with LOA-PR-101, LGA-009.Task Standard: Candidate will calculate Stack effluent, determine that a release is in progress, and LGA-009 must be entered IAW EP-AA-1005 Addendum 3, EP-AA-114-F-02, and LGA-009.K/A Number and Importance: 2.3.5 2.9

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: <u>LGA-009</u>	Revision: <u>9</u>
Procedure: <u>EP-AA-114-F-02</u>	Revision: <u>A</u>
Procedure: <u>EP-AA-1005 Add. 3</u>	Revision: <u>9</u>
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are an Extra SRO,

- Both Units are at rated conditions.
- A Multi-Purpose Canister (MPC) has ruptured discharging highly contaminated material on Unit 1 RB 710'.
- On 0PM14J, OD18-R522, STACK WRGM EFF ACT, is reading $4.5e+07$ $\mu\text{Ci}/\text{sec}$.
- On 1PM07J, OD18-R520, SBGT WRGM EFF ACT, is reading $3.8e+07$ $\mu\text{Ci}/\text{sec}$.
- Unit 2 VG failed to start.
- Unit 1 VG is running.

INITIATING CUE

The Shift Manager has requested that you determine stack release, if a release is in progress, and what General Abnormal procedure to enter if applicable. Inform the Shift Manager of your determination.

Job Performance Measure**Determine Reporting Requirements per OP-AA-106-101 (HPCS Inoperability)**JPM Number: A-SRO-51Revision Number: 03Date: 12/06/2022

Developed By: KARL HEUSER / [Signature] 12/6/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>OP-AA-106-101</u>	Revision: <u>25</u>
Procedure: <u>LS-AA-1020</u>	Revision: <u>34</u>
Procedure: <u>LS-AA-1110</u>	Revision: <u>33</u>
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM developed for LORT 2016 NRC Exam.
Revision 01	Updated for new procedure revisions.
Revision 02	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 03	Minor editorial changes.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of the Exelon Reportability Reference Manual and OP-AA-106-101.

INITIAL CONDITIONS

You are the Shift Manager,

- Both Units are operating at 100% power
- On Unit 1, LOS-HP-Q1, HPCS System Inservice Test, is being performed
- Isolations have been RESET
- The Unit Supervisor has just informed you that the HPCS Minimum Flow Valve, 1E22-F012, will not open

INITIATING CUE

Determine the reportability requirements, if any, and any on-site/off-site notification requirements based on the above information. Inform the SOS of the requirements you determine.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will determine reportability requirements for inoperable safety related equipment IAW OP-AA-106-101 & LS-AA-1110.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*1	Determine reporting requirements IAW LS-AA-1020 and/or Reportable Event SAF 1.8 Declaration LS-AA-1110. SAF 1.8 is an 8 Hour Report per 10 CFR 50.72(b)(3)(v).	Candidate determines the event: <ul style="list-style-type: none"> Is reportable per SAF 1.8 Requires notifying the NRC via ENS within 8 hours (NRC Operations Center) 	<input type="checkbox"/>	<input type="checkbox"/>	—
*2	Determine written report requirements IAW LS-AA-1110. Submit a LER within 60 days per 10 CFR 50.73(a)(2)(v)	Candidate determines the event requires a LER to the NRC within 60 days of event.	<input type="checkbox"/>	<input type="checkbox"/>	—
*3	Determine notification requirements IAW OP-AA-106-101, Significant Event Reporting per Attachment 1 (ENS).	Candidate determines the following individuals require notification: <ul style="list-style-type: none"> Site VP Plant Manager Operations Director Nuclear Duty Officer OPEX Coordinator / Regulatory Assurance Manager Senior Resident Inspector 	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As SOS, acknowledge the report. JPM is complete.				

JPM Stop Time: _____

.....

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Determine Reporting Requirements per OP-AA-106-101 (HPCS Inoperability)JPM Number: A-SRO-51 Revision Number: 03Task Number and Title: 604.010 Given events requiring information submission to either the NRC or the State of Illinois, determine notification requirements IAW LS-AA-1110Task Standard: Candidate will determine reportability requirements for inoperable safety related equipment IAW OP-AA-106-101 & LS-AA-1110.K/A Number and Importance: 2.1.23 4.1Suggested Testing Environment: ClassroomAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: <u>OP-AA-106-101</u>	Revision: <u>25</u>
Procedure: <u>LS-AA-1110</u>	Revision: <u>34</u>
Procedure: <u>LS-AA-1020</u>	Revision: <u>33</u>
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Shift Manager,

- Both Units are operating at 100% power.
- On Unit 1, LOS-HP-Q1, HPCS System Inservice Test, is being performed.
- Isolations have been RESET.
- The Unit Supervisor has just informed you that the HPCS Minimum Flow Valve, 1E22-F012, will not open.

INITIATING CUE

Determine the reportability requirements, if any, and any on-site/off-site notification requirements based on the above information. Inform the SOS of the requirements you determine.

Job Performance Measure**Complete a Short Duration Timeclock Sheet**JPM Number: A-SRO-57Revision Number: 03Date: 12/06/22

Developed By: KARL HEUSER / [Signature] 12/6/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LIP-DG-903</u>	Revision: <u>8</u>
Procedure: <u>OP-AA-108-104</u>	Revision: <u>4</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
SME / Instructor (Print/Sign) Date

_____/_____
SME / Instructor (Print/Sign) Date

_____/_____
SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
00	New JPM developed for the LORT 2015 NRC Annual Exam.
01	Revised to most recent revision of TQ-AA-150-J020.
02	Converted to current JPM template and updated procedure references and task standard.
03	Revised to most recent revision of procedures.

**SETUP INSTRUCTIONS:**

1. The following material is required to be provided to Candidate:
 - A Blank copy of IM Surveillance LIP-DG-903, Unit 0 Diesel Generator 0 Fuel Oil Day Tank Level Switch and Indication Calibration.
 - Work Order Package (including WO# 05051970-01 and OP-AA-107-F-01 Risk Screening-Mitigation Plan).
 - A Blank Copy of the Short Duration Timeclock Log, Attachment 1 of OP-AA-108-104.
 - All Tech Spec Books.



INITIAL CONDITIONS

You are the Unit 1 Supervisor,

- Unit 1 is at rated conditions.
- IMD is ready to start a scheduled surveillance, LIP-DG-903, Unit 0 Diesel Generator 0 Fuel Oil Day Tank Level Switch and Indication Calibration.
- WEC SRO will handle any PBI's and contingency actions.
- No other surveillance activities are currently in progress.

INITIATING CUE

The Shift Manager has directed you to perform Shift Authorization to start work for WO # 05051970-01 and Authorize the Start of procedure per E.1.1. If required, prepare a Short Duration Timeclock Log for this procedure per OP-AA-108-104. Notify the Unit 1 NSO when step E.1.2 is ready for their review.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will review work package to determine and record appropriate short duration timeclocks to authorize start of procedure and start of work IAW LIP-DG-903 and OP-AA-108-104. Key Provided					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	After the Candidate acknowledges the initial conditions, role play as an IMD Technician and provide the Candidate a blank copy of LIP-DG-903 and the Work Order Package and request approval to start work.				
1	Review detail of surveillance's interface with plant provided on Attachment B.	Candidate reviews the details of the surveillance's interface with plant provided on Attachment B.	<input type="checkbox"/>	<input type="checkbox"/>	—
2	VERIFY that performance of this surveillance is compatible with current plant conditions, including other tests and maintenance in progress.	Candidate determines from the initial conditions that no other test or maintenance is being performed and is acceptable for LIP-DG-903 to be performed.	<input type="checkbox"/>	<input type="checkbox"/>	—
3	REFER to Technical Specification 3.8.1.	Candidate REFERS to Technical Specification 3.8.1.	<input type="checkbox"/>	<input type="checkbox"/>	—
*4	DETERMINE the Timeclocks that apply.	Candidate DETERMINES the Timeclocks apply: <ul style="list-style-type: none"> • T.S. 3.8.1 RA B.1 • T.S. 3.8.1 RA B.2 • T.S. 3.8.1 RA B.3.1 <u>OR</u> B.3.2 • T.S. 3.8.1 RA B.4 	<input type="checkbox"/>	<input type="checkbox"/>	—
*5	RECORD the information on the Short Duration Timeclock sheet.	Candidate RECORDS the above timeclock information on the Short Duration Timeclock sheet.	<input type="checkbox"/>	<input type="checkbox"/>	—
*6	AUTHORIZE start of procedure.	Candidate AUTHORIZES start of the procedure by recording time, signature, and date on Step E.1.1.4 of LIP-DG-903.	<input type="checkbox"/>	<input type="checkbox"/>	—

JPM Start Time: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will review work package to determine and record appropriate short duration timeclocks to authorize start of procedure and start of work IAW LIP-DG-903 and OP-AA-108-104. Key Provided					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*7	AUTHORIZE start work.	Candidate AUTHORIZES start work by recording signature, date and time next to "Shift Authorization to start work" on the Work Order.	<input type="checkbox"/>	<input type="checkbox"/>	—
8	NOTIFY Unit 1 NSO surveillance is ready for their review.	Candidate NOTIFIES Unit 1 NSO surveillance is ready for their review.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 1 NSO, acknowledge the report. JPM is complete.				

JPM Stop Time: _____



ANSWER KEY
**Attachment 1
Short Duration Time Clock Log
Page 1 of 1**

 UNIT: 0

 SURVEILLANCE NUMBER: LIP-DG-903

DATE: _____

ACTIONS REQUIRED TO PLACE INSTRUMENTS IN TRIPPED CONDITION:	TECH SPEC	TIME CLOCK START TIME	TIME CLOCK STOPPED TIME	INITIALS	COMMENTS
Perform offsite circuit lineup within 1 hour and Once per 8 hours thereafter	T.S. 3.8.1 RA B.1				
Declare required features supported by the INOP DG INOP when the redundant required feature is INOP 4 hours from the discovery of INOP redundant feature.	T.S. 3.8.1 RA B.2				
Determine OPERABLE DG(s) are not INOP due to common cause within 24 hrs OR Perform SR 3.8.1.2 for OP DG(s) within 24 hours	T.S. 3.8.1 RA B.3.1 Or RA B.3.2				
Restore the DG to OPERABLE within 14 days	T.S. 3.8.1 RA B.4				



JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: EO RO SRO FS STA/IA SRO Cert

JPM Title:

JPM Number: A-SRO-57 Revision Number: 03

Task Number and Title: 747.010 During the performance of tasks, apply the administrative requirements of ON-LINE Maintenance, IAW OP-AA-101-111-1001

Task Standard: Candidate will review work package to determine and record appropriate short duration timeclocks to authorize start of procedure and start of work IAW LIP-DG-903 and OP-AA-108-104. Key Provided

K/A Number and Importance: 2.2.23 3.1/4.6

Suggested Testing Environment: Classroom

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

Reference(s):

Procedure: <u>LIP-DG-903</u>	Revision: <u>08</u>
Procedure: <u>OP-AA-108-104</u>	Revision: <u>04</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____

Actual Testing Environment: Simulator Control Room In-Plant Other

Testing Method: Simulate Perform

Estimated Time to Complete: 15 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date:** _____



INITIAL CONDITIONS

You are the Unit 1 Supervisor,

- Unit 1 is at rated conditions.
- IMD is ready to start a scheduled surveillance, LIP-DG-903, Unit 0 Diesel Generator 0 Fuel Oil Day Tank Level Switch and Indication Calibration.
- WEC SRO will handle any PBI's and contingency actions.
- No other surveillance activities are currently in progress.

INITIATING CUE

The Shift Manager has directed you to perform Shift Authorization to start work for WO # 05051970-01 and Authorize the Start of procedure per E.1.1. If required, prepare a Short Duration Timeclock Log for this procedure per OP-AA-108-104. Notify the Unit 1 NSO when step E.1.2 is ready for their review.

Job Performance Measure**Classify a GSEP Event and Complete a NARS Form**JPM Number: A-SRO-106Revision Number: 00Date: 11/13/22

Developed By: KARL HEUSER / [Signature] 11/13/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign Date

Revision Record (Summary)

Revision #	Summary
00	New JPM developed for the ILT 21-1 class NRC Exam

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of EP-MW-114-100-F-01.
2. Have a clock available.
3. Provide the SED Books.
4. Provide the EAL Boards.

INITIAL CONDITIONS

You are the Shift Manager,

- A condensate system rupture has occurred in the Turbine Building basement causing a loss of feedwater.
- The reactor failed to scram on low RPV water level.
- The ATC NSO reported that the reactor failed to scram when he pushed the Manual Scram Pushbuttons and it failed to scram when he placed the Mode Switch in Shutdown.
- ARI automatically initiated when RPV water level reached -50”.
- All control rods are now at 00 and all APRM downscale lights are lit.
- RPV water level reached -65” and is now at -55” and rising with HPCS injecting. Reactor pressure is 920 psig and slowly lowering due to HPCS.
- Computer average wind speed at 375 feet is 10 mph from 200°.
- Stack radiation release levels have been constant for the last several hours.
- Dose projections are not available.
- The Shift Communicator is available to assist you.

INITIATING CUE

As the Shift Emergency Director, determine if the event needs to be classified and then, if necessary, classify the event, complete a NARS form, and direct the Shift Communicator to transmit the completed NARS form.

This is a time critical JPM.

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

.....

Information For Evaluator’s Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will evaluate conditions, determine EAL declaration, and complete a NARS form within the allotted time IAW the referenced EP procedures. Key Provided					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: This JPM has two time critical portions: classifying the event (15 minutes) and completing a NARS form for transmission. T=0 for event classification is recorded in the "JPM Start Time" above and begins when the Candidate acknowledges the initial conditions and initiating cue and ends when the Candidate classifies the event. T=0 for the NARS form is Time Classified and ends with directing the Shift Communicator to transmit the form with 2 minutes allowed for transmission (13 minutes).					
*1	Classify the event.	Candidate classifies the GSEP as an UNUSUAL EVENT MU3 . Time Classified: _____	<input type="checkbox"/>	<input type="checkbox"/>	___
NOTE Once Candidate demonstrates where to find a NARS form, hand them the blank NARS form from the end of this JPM.					
2	Obtain blank NARS form.	Candidate demonstrates where NARS forms can be obtained.	<input type="checkbox"/>	<input type="checkbox"/>	___
3	In Utility Message block write 1 .	Candidate writes the number 1 in Utility Message block.	<input type="checkbox"/>	<input type="checkbox"/>	___
4	In State Message block write N/A .	Candidate writes the number N/A in State Message block.	<input type="checkbox"/>	<input type="checkbox"/>	___
*5	In Item 1, marks B .	Candidate marks Item 1 B .	<input type="checkbox"/>	<input type="checkbox"/>	___
*6	In Item 2, marks E .	Candidate marks Item 2 E .	<input type="checkbox"/>	<input type="checkbox"/>	___
*7	In Item 3, marks A .	Candidate marks Item 3 A .	<input type="checkbox"/>	<input type="checkbox"/>	___
*8	In Item 4, write (time & date) and EAL MU3 .	Candidate writes (time & date) and MU3 in Item 4.	<input type="checkbox"/>	<input type="checkbox"/>	___

<u>Task Standard:</u>					
Candidate will evaluate conditions, determine EAL declaration, and complete a NARS form within the allotted time IAW the referenced EP procedures. Key Provided					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
9	In ACCIDENT TERMINATED section write N/A in each blank.	Candidate writes N/A in each blank of ACCIDENT TERMINATED section.	<input type="checkbox"/>	<input type="checkbox"/>	___
*10	In Item 5, marks A .	Candidate marks Item 5 A .	<input type="checkbox"/>	<input type="checkbox"/>	___
*11	In Item 6, marks A .	Candidate marks Item 6 A .	<input type="checkbox"/>	<input type="checkbox"/>	___
*12	In Item 7, write 200 .	Candidate writes 200 in Item 7.	<input type="checkbox"/>	<input type="checkbox"/>	___
*13	In Item 8 B, write 10 .	Candidate writes 10 in Item 8 B.	<input type="checkbox"/>	<input type="checkbox"/>	___
*14	In Item 9, mark A .	Candidate marks Item 9 A .	<input type="checkbox"/>	<input type="checkbox"/>	___
15	In Item 10, write " none ".	Candidate writes " none " in Item 10.	<input type="checkbox"/>	<input type="checkbox"/>	___
16	Leave Items 11 and 12 blank.	Candidate leaves Items 11 and 12 blank.	<input type="checkbox"/>	<input type="checkbox"/>	___
17	DIRECT the Shift Communicator to transmit the completed NARS form.	Candidate DIRECTS the Shift Communicator to transmit the completed NARS form. Time Completed: _____			
CUE	Acknowledge report, JPM is complete.				

JPM Stop Time: _____



ANSWER KEY
EP-MW-114-100-F-01

Revision K

Page 1 of 2

NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM

OR ELECTRONIC FACSIMILE

 UTILITY MESSAGE NO. 1

 STATE MESSAGE NO. N/A

1. STATUS [A] ACTUAL <input checked="" type="radio"/> [B] DRILL/EXERCISE	2. STATION [A] BRAIDWOOD [C] CLINTON <input checked="" type="radio"/> [E] LASALLE [B] BYRON [D] DRESDEN [F] QUAD CITIES
---	--

3. ONSITE CONDITION <input checked="" type="radio"/> [A] UNUSUAL EVENT [B] ALERT [C] SITE AREA EMERGENCY [D] GENERAL EMERGENCY [E] RECOVERY [F] TERMINATED	4. ACCIDENT CLASSIFIED TIME (3[A-E]): <u>Now</u> DATE (3[A-E]): <u>Today</u> EAL#: <u>MU3</u>	ACCIDENT TERMINATED TIME (3[F]): <u>N/A</u> DATE (3[F]): <u>N/A</u>
---	---	--

5. RELEASE STATUS <input checked="" type="radio"/> [A] NONE [B] OCCURRING [C] TERMINATED	6. TYPE OF RELEASE <input checked="" type="radio"/> [A] NOT APPLICABLE [B] GASEOUS [C] LIQUID	7. WIND DIR <u>200</u> (DEGREES FROM)	8. WIND SPEED [A] METERS/SEC.: <u>N/A</u> <input checked="" type="radio"/> [B] MILES/HR.: <u>10</u>
--	---	--	--

9. RECOMMENDED ACTIONS
UTILITY RECOMMENDATION
 [A] NONE (UE, Alert and SAE Only)

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

[B] SHELTER ILLINOIS SUB-AREAS: _____

[C] SHELTER IOWA SUB-AREAS: _____

[D] EVACUATE ILLINOIS SUB-AREAS: _____

[E] EVACUATE IOWA SUB-AREAS: _____

AND
 ADVISE THE REMAINDER OF THE 10 MILE EPZ TO MONITOR AND PREPARE
AND
 FOR ILLINOIS ONLY, CONSIDER JIC ADVISORY WITH POTASSIUM IODIDE (KI) STATEMENT IN ACCORDANCE WITH STATE PROCEDURES

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

10. ADDITIONAL INFORMATION NONE

Verified With: _____	Approved By: _____
11. TRANSMITTED BY: NAME _____	PHONE NUMBER _____ TIME/DATE _____
[A] EXELON: _____	_____
[B] STATE: _____	_____
[C] COUNTY: _____	_____

12. RECEIVED BY: NAME _____	ORGANIZATION _____	TIME/DATE _____
_____	_____	_____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Classify a GSEP Event and Complete a NARS FormJPM Number: A-SRO-106 Revision Number: 00Task Number and Title: 708.001 Given an event resultant in the declaration of an emergency action level, classify the event, IAW EP-AA-1005715.001 Given an event resultant in the declaration of an emergency action level, complete and transmit a NARS form, IAW EP-AA-114 and EP-MW-114-100Task Standard: Candidate will evaluate conditions, determine EAL declaration, and complete a NARS form within the allotted time IAW the referenced EP procedures.K/A Number and Importance: 2.4.41 4.6 Generic

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: <u>EP-AA-1005, Addendum 3</u>	Revision: <u>9</u>
Procedure: <u>EP-AA-111</u>	Revision: <u>23</u>
Procedure: <u>EP-AA-112-100-F-01</u>	Revision: <u>AD</u>
Procedure: <u>EP-MW-114-100</u>	Revision: <u>20</u>
Procedure: <u>EP-MW-114-100- F-01</u>	Revision: <u>K</u>

Actual Testing Environment: Simulator Control Room In-Plant Other**Testing Method:** Simulate Perform**Estimated Time to Complete:** 28 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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____

NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM

OR ELECTRONIC FACSIMILE

UTILITY MESSAGE NO. _____ STATE MESSAGE NO. _____

1. STATUS [A] ACTUAL [B] DRILL/EXERCISE	2. STATION [A] BRAIDWOOD [C] CLINTON [E] LASALLE [B] BYRON [D] DRESDEN [F] QUAD CITIES
--	---

3. ONSITE CONDITION [A] UNUSUAL EVENT [B] ALERT [C] SITE AREA EMERGENCY [D] GENERAL EMERGENCY [E] RECOVERY [F] TERMINATED	4. ACCIDENT CLASSIFIED TIME (3[A-E]): _____ DATE (3[A-E]): _____ EAL#: _____	ACCIDENT TERMINATED TIME (3[F]): _____ DATE (3[F]): _____
--	--	--

5. RELEASE STATUS [A] NONE [B] OCCURRING [C] TERMINATED	6. TYPE OF RELEASE [A] NOT APPLICABLE [B] GASEOUS [C] LIQUID	7. WIND DIR _____ (DEGREES FROM)	8. WIND SPEED [A] METERS/SEC.: _____ [B] MILES/HR.: _____
---	--	---	--

9. RECOMMENDED ACTIONS

UTILITY RECOMMENDATION
 [A] NONE (UE, Alert and SAE Only)

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

[B] SHELTER ILLINOIS SUB-AREAS: _____

[C] SHELTER IOWA SUB-AREAS: _____

[D] EVACUATE ILLINOIS SUB-AREAS: _____

[E] EVACUATE IOWA SUB-AREAS: _____

AND
 ADVISE THE REMAINDER OF THE 10 MILE EPZ TO MONITOR AND PREPARE
AND
 FOR ILLINOIS ONLY, CONSIDER JIC ADVISORY WITH POTASSIUM IODIDE (KI) STATEMENT IN ACCORDANCE WITH STATE PROCEDURES

STATE RECOMMENDATION

[F] NONE

[G] SHELTER SUB-AREAS: _____

[H] EVACUATE SUB-AREAS: _____

[I] RECOMMEND POTASSIUM IODIDE (KI) PER PROCEDURES

[J] COMMENCE RETURN OF PUBLIC

[K] OTHER _____

10. ADDITIONAL INFORMATION _____

Verified With: _____ Approved By: _____

11. TRANSMITTED BY:	<u>NAME</u>	<u>PHONE NUMBER</u>	<u>TIME/DATE</u>
[A] EXELON:	_____	_____	_____
[B] STATE:	_____	_____	_____
[C] COUNTY:	_____	_____	_____

12. RECEIVED BY:	<u>NAME</u>	<u>ORGANIZATION</u>	<u>TIME/DATE</u>
	_____	_____	_____



INITIAL CONDITIONS

You are the Shift Manager,

- A condensate system rupture has occurred in the Turbine Building basement causing a loss of feedwater.
- The reactor failed to scram on low RPV water level.
- The ATC NSO reported that the reactor failed to scram when he pushed the Manual Scram Pushbuttons and it failed to scram when he placed the Mode Switch in Shutdown.
- ARI automatically initiated when RPV water level reached -50”.
- All control rods are now at 00 and all APRM downscale lights are lit.
- RPV water level reached -65” and is now at -55” and rising with HPCS injecting. Reactor pressure is 920 psig and slowly lowering due to HPCS.
- Computer average wind speed at 375 feet is 10 mph from 200°.
- Stack radiation release levels have been constant for the last several hours.
- Dose projections are not available.
- The Shift Communicator is available to assist you.

INITIATING CUE

As the Shift Emergency Director, determine if the event needs to be classified and then, if necessary, classify the event, complete a NARS form, and direct the Shift Communicator to transmit the completed NARS form.

This is a time critical JPM.

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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOA-DG-201</u>	Revision: <u>10</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 03	Revised task numbers to reflect current task numbers. Revised K/A numbers to reflect NUREG 1021 Rev 8. Revised format to meet NTAFT JLOR03 Rev 1. Changed JPM to Revised steps to reflect LOA-DG-201 Rev1. Made JPM unit specific.
Revision 04	Revised task number for new operations task list.
Revision 05	Revised JPM for Windows 2000 computers and validation time.
Revision 06	Added step to check DC Power Available and initiating cue to the Candidate's initial conditions.
Revision 07	Minor formatting and editorial changes. Updated to reflect criteria from NuReg 1021, Rev. 9, Supplement 1 and NuReg 1123, Rev. 2, Supplement 1.
Revision 08	Changed JPM (based on NRC comments) such that the Candidate is provided a marked up copy of LOA-DG-201 and is directed to begin at step B.1.3 per the initial conditions. This resulted in changing the steps and cues in the JPM body.
Revision 09	Revised to incorporate procedure changes and formatting.
Revision 10	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 11	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 12	Minor formatting and editorial changes.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of LOA-DG-201.
2. Have a laser pointer and a flashlight.

INITIAL CONDITIONS

You are an extra NSO,

- A LOCA has occurred on Unit 2.
- The Unit 2 SAT has TRIPPED.
- The '0' DG has failed to START.
- The '0' DG READY FOR AUTO START light is lit.
- DC Power for the '0' DG is available.
- You have a Wi-Fi phone.

INITIATING CUE

The Unit 2 Supervisor has directed you to locally start the '0' DG per LOA-DG-201, DG Failure, section B.1. Notify the Unit 2 Supervisor when the '0' DG is running.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will simulate performance of emergency starting the "0" DG using the U2 LOCA K098A relay in the AEER IAW LOA-DG-201.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: Candidate should determine from the Initial Conditions that the READY FOR AUTO START light is lit.					
1	CHECK '0' DG READY FOR AUTO START light – LIT.	Candidate CHECKS '0' DG READY FOR AUTO START light – LIT.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As required, the READY FOR AUTO START light is lit.				
NOTE: Candidate should determine from the Initial Conditions that DC power is AVAILABLE.					
2	CHECK DC power – AVAILABLE.	Candidate CHECKS DC power – AVAILABLE.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As required, DC power is available.				
3	ESTABLISH communications between Unit 2 Control Room and 0 DG Room to OBSERVE Air Start Motor operation during start attempts.	Candidate ESTABLISHES communications between Unit 2 Control Room and 0 DG Room.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Acknowledge as the Unit 2 Assist NSO communications established.				
*4	From the Main Control Room START - 0 DG.	Candidate DIRECTS the Assist NSO from the Main Control Room START - 0 DG.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 2 Assist NSO, acknowledge report. '0' DG START C/S taken to START. You hear no noise nor see any movement on the DG.				
5	CHECK '0' DG – <u>NOT</u> RUNNING.	Candidate determines the '0' DG is <u>NOT</u> RUNNING.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard:					
Candidate will simulate performance of emergency starting the “0” DG using the U2 LOCA K098A relay in the AEER IAW LOA-DG-201.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
6	CHECK Air Start Motors – DID NOT ENGAGE.	Examine determines the Air Start Motors did NOT ENGAGE.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As required, you hear no noise changes nor see any movement on the DG.				
*7	PLACE 0DG02JB, 0HS-DGS001, 0 DG Engine Control Switch to - MAN.	Candidate PLACES 0DG02JB, 0HS-DGS001, 0 DG Engine Control Switch to - MAN.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
*8	DEPRESS and HOLD, 0HS-DGS004, 0 Diesel Generator Engine Start Pushbutton for a minimum of 2 seconds.	DEPRESS and HOLD, 0HS-DGS004, 0 Diesel Generator Engine Start Pushbutton for a minimum of 2 seconds.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described. You hear no noise nor see any movement on the DG.				
9	CHECK 0 DG – NOT RUNNING.	Candidate determines the ‘0’ DG is NOT RUNNING.	<input type="checkbox"/>	<input type="checkbox"/>	—
10	CHECK Air Start Motors – DID NOT ENGAGE.	Candidate determines the Air Start Motors did NOT ENGAGE.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As required, you hear no noise nor see any movement on the DG.				
*11	PLACE 0DG02JB, 0HS-DGS001, 0 DG Engine Control Switch to - AUTO.	Candidate PLACES 0DG02JB, 0HS-DGS001, 0 DG Engine Control Switch to - AUTO.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
12	From the Main Control Room CHECK LOCA initiation signal – PRESENT.	Candidate CHECKS with Unit 2 Assist NSO if LOCA initiation signal – PRESENT.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard:					
Candidate will simulate performance of emergency starting the "0" DG using the U2 LOCA K098A relay in the AEER IAW LOA-DG-201.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	As Unit 2 Assist NSO, LOCA signal is present.				
13	ESTABLISH communications between Unit 2 Control Room and Unit 2, Div 1, Auxiliary Electric Equipment Room.	Candidate ESTABLISHES communications between Unit 2 Control Room and Unit 2, Div 1, Auxiliary Electric Equipment Room.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 2 Assist NSO, acknowledge report.				
14	CHECK Low Level/ Hi Drywell Pressure relay 2E12A-K098A at 2H13-P629 - CLOSED.	Candidate CHECKS Low Level/ Hi Drywell Pressure relay 2E12A-K098A at 2H13-P629 - CLOSED.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	When the Candidate identifies the Low Level/ Hi Drywell Pressure relay 2E12A-K098A and checks it to be closed, inform them that the relay is OPEN.				
ALTERNATE PATH BEGINS HERE					
*15	REMOVE relay 2E12A-K098A cover.	Candidate REMOVES relay 2E12A-K098A cover.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
*16	MANUALLY INITIATE and HOLD relay 2E12A-K098A for a minimum of 20 seconds.	Candidate MANUALLY INITIATES and HOLDS relay 2E12A-K098A for a minimum of 20 seconds.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described. Time Compression is in effect – 20 seconds has elapsed.				
17	CHECK 0 DG – NOT RUNNING.	Candidate determines the '0' DG is RUNNING.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard:

Candidate will simulate performance of emergency starting the “0” DG using the U2 LOCA K098A relay in the AEER IAW LOA-DG-201.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	As the Unit 2 Assist NSO, report that the ‘0’ DG RUNNING light is lit, Breaker 2413 is closed energizing Bus 241Y, and the Unit Supervisor has been notified. JPM is complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Emergency Start of the '0' DG IAW LOA-DG-201 via the K98 RelayJPM Number: P-DG-04 Revision Number: 12Task Number and Title: 11.003 Given a valid start signal with a failure to start, perform the in plant actions for a Diesel Generator start failure, IAW LOA-DG-101/201.Task Standard: Candidate will simulate performance of emergency starting the "0" DG using the U2 LOCA K098A relay in the AEER IAW LOA-DG-201.K/A Number and Importance: 264000 A2.11 4.6 / 4.3Suggested Testing Environment: PlantAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: LOA-DG-201 Revision: 10

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are an extra NSO,

- A LOCA has occurred on Unit 2.
- The Unit 2 SAT has TRIPPED.
- The '0' DG has failed to START.
- The '0' DG READY FOR AUTO START light is lit.
- DC Power for the '0' DG is available.
- You have a Wi-Fi phone.

INITIATING CUE

The Unit 2 Supervisor has directed you to locally start the '0' DG per LOA-DG-201, DG Failure, section B.1. Notify the Unit 2 Supervisor when the '0' DG is running.

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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LGA-NB-101</u>	Revision: <u>00</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
SME / Instructor (Print/Sign) _____
Date

_____/_____
SME / Instructor (Print/Sign) _____
Date

_____/_____
SME / Instructor (Print/Sign) _____
Date

Revision Record (Summary)

Revision #	Summary
Revision 11	Utilized new template & made minor editorial changes.
Revision 12	05/23/00 Verified against current procedure and revised procedure reference. Revised task number to comply with new task list. Revised K&A number to comply with current task list. Minor editorial changes for clarity. Verified format IAW NTAFT JLOR-3 Rev. 2
Revision 13	Revised to reflect new procedure changes.
Revision 14	Revised to rev. 7 of LGA-NB-01. The Candidate's sheet was updated to add a cue. JPM was modified due to ALARA concerns and a photograph was added to keep the evaluators and the Candidate off the catwalk because of a hotspot.
Revision 15	Revised for procedure and JPM template changes.
Revision 16	Removed certain cues & inserted note for alternate path designation.
Revision 17	Added new checklist. Changed Fuse Removal Attachment Letter designations for new attachments.
Revision 18	Revised to most current JPM template.
Revision 19	Updated to procedure revision
Revision 20	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision. Changed to remove Main Control Room portion and no longer an Alternate Path JPM. JPM performed in the plant.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of LGA-NB-101.
2. Have a flashlight or laser pointer.
3. Provide the colored picture of SCRAM Air Header Filter Assembly with isolation valves when directed by appropriate Note.

INITIAL CONDITIONS

You are an extra NSO,

- An ATWS has occurred on Unit 1 from full power, NO rod movement was observed.
- RPS Manual SCRAM Pushbuttons have been depressed and the Mode Switch was taken to SHUTDOWN.
- ARI Pushbuttons have been depressed but ARI did not initiate.
- All SCRAM Valves are still closed.
- Both SDV Vent and Drain valves are OPEN.
- LGA-NB-101 Method 1 Fuse Removal was unsuccessful.
- SDV Level is normal.
- Both CRD Pumps are TRIPPED and will not restart.
- You have a Wi-Fi phone.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform LGA-NB-101, Alternate Rod Insertion, Method 2. Coordinate with the Unit 1 NSO until all Control Rods are FULL-IN.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will vent and remove the CRD HCU air supply filter to vent the SCRAM Air Header to insert the control rods IAW LGA-NB-101.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: Candidate may go to the filter without the LGA-NB-101 Support Locker bag since a crescent wrench is located in the YELLOW box near the HCUs for HCU LOR response, or may acquire the wrench from the Equipment Cage on 761' Elevation.					
*1	Obtain LGA-NB-101 Method 2 bag containing a 12" crescent wrench from LGA-Support Locker.	Candidate obtains LGA-NB-101 Method 2 bag containing a 12" crescent wrench from LGA-Support Locker.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: Candidate should note warning for rapidly changing radiological conditions during emergency event. If asked , provide the following cue: CUE: RP reports that radiation readings on the 761' Elevation of Reactor Building are normal.					
NOTE: Due to ALARA concerns, <u>DO NOT GO UP ON THE CATWALK</u> . Have the Candidate point to the components that will be manipulated with a laser pointer, then go to a low dose area on RB 761' and use the attached photograph for the rest of the JPM.					
2	VENT and REMOVE CRD HCU AIR SUPPLY FILTER from Northwest HCU catwalk as follows:	Candidate locates CRD HCU AIR SUPPLY FILTER and vents and removes, as follows:			
*3	ISOLATE CRD HCU AIR Supply Filter, 1C11-D006, at U1 RB 761' G-14 N.W. on HCU Walkway: <ul style="list-style-type: none"> • CLOSE 11A187, CRD HCU AIR FILTER INLET VALVE. • CLOSE 11A188, CRD HCU AIR FILTER OUTLET VALVE. • CLOSE 11A189, CRD HCU AIR FILTER BYPASS VALVE. 	Candidate locates and isolates the CRD HCU AIR Supply Filter, 1C11-D006, at U1 RB 761' G-14 N.W. on HCU Walkway, as follows: <ul style="list-style-type: none"> • CLOSES 11A187, CRD HCU AIR FILTER INLET VALVE. • CLOSES 11A188, CRD HCU AIR FILTER OUTLET VALVE. • CLOSES 11A189, CRD HCU AIR FILTER BYPASS VALVE. 	<input type="checkbox"/>	<input type="checkbox"/>	—

JPM Start Time: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will vent and remove the CRD HCU air supply filter to vent the SCRAM Air Header to insert the control rods IAW LGA-NB-101.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	After each valve manipulation - The component you identified is in the condition you described.				
*4	REMOVE plug on the bottom of CRD HCU AIR SUPPLY FILTER, 1C11-D006, to vent filter.	Candidate removes the plug on the bottom of CRD HCU AIR SUPPLY FILTER, 1C11-D006.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
*5	REMOVE CRD HCU AIR SUPPLY FILTER, 1C11-D006.	Candidate removes the CRD HCU AIR SUPPLY FILTER, 1C11-D006.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
*6	RAPIDLY FULLY OPEN 1IA188, CRD HCU AIR FILTER OUTLET VALVE, to vent scram air header.	Candidate RAPIDLY FULLY OPENS 1IA188, CRD HCU AIR FILTER OUTLET VALVE.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described. A rush of air is heard and numerous accumulators can be heard discharging then the sound stops.				
CUE	If the Candidate begins actions to re-install the CRD HCU AIR SUPPLY FILTER, inform the Candidate that the filter and plug are installed and CRD HCU AIR FILTER INLET VALVE 1IA187 is open.				
7	CONTACT Unit 1 NSO to determine status of Control Rods.	Candidate CONTACTS Unit 1 NSO to determine status of Control Rods.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 1 NSO, report that all Control Rods are FULL-IN. JPM is complete.				

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____ Emp. ID#: _____

Job Title: EO RO SRO FS STA/IA SRO CertJPM Title: Perform Alternate Rod Insertion IAW LGA-NB-101/201JPM Number: P-NB-04 Revision Number: 20Task Number and Title: 431.000 Given entry in LGA-010, Failure to SCRAM, evaluate plant conditions and shutdown the reactor, IAW LGA-NB-101/201Task Standard: Candidate will vent and remove the CRD HCU air supply filter to vent the SCRAM Air Header to insert the control rods IAW LGA-NB-101.K/A Number and Importance: 295037 EA1.05 3.9

Suggested Testing Environment: Plant

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

Reference(s):

Procedure: LGA-NB-101 Revision: 00

Procedure: _____ Revision: _____

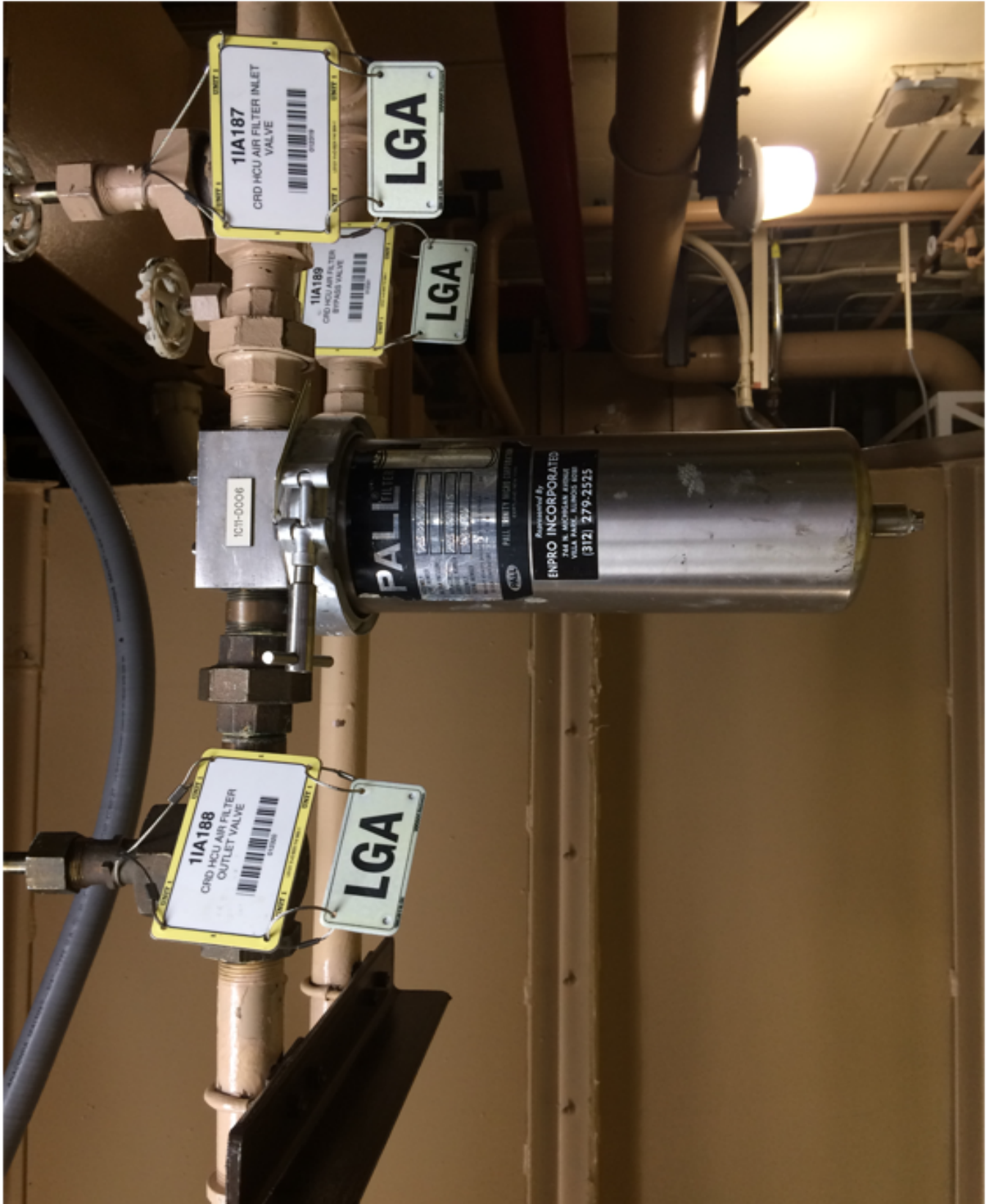
Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Actual Testing Environment: Simulator Control Room In-Plant OtherTesting 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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ Date: _____



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

INITIAL CONDITIONS

You are an extra NSO,

- An ATWS has occurred on Unit 1 from full power, NO rod movement was observed.
- RPS Manual SCRAM Pushbuttons have been depressed and the Mode Switch was taken to SHUTDOWN.
- ARI Pushbuttons have been depressed but ARI did not initiate.
- All SCRAM Valves are still closed.
- Both SDV Vent and Drain valves are OPEN.
- LGA-NB-101 Method 1 Fuse Removal was unsuccessful.
- SDV Level is normal.
- Both CRD Pumps are TRIPPED and will not restart.
- You have a Wi-Fi phone.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform LGA-NB-101, Alternate Rod Insertion, Method 2. Coordinate with the Unit 1 NSO until all Control Rods are FULL-IN.

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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOP-WR-02</u>	Revision: <u>26</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
_____ / _____ SME / Instructor (Print/Sign)	_____ Date
_____ / _____ SME / Instructor (Print/Sign)	_____ Date

Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM developed for the LORT 2015 NRC Annual Exam.
Revision 01	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 02	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 03	Minor formatting changes.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Provide a copy of LOP-WR-02.

INITIAL CONDITIONS

You are an Extra NSO,

- Unit 1 and Unit 2 are at rated conditions.
- The 2WR01PA is running.
- The 2WR01PB will be taken OOS.
- The 1WR01PA is RUNNING on Unit 1.
- The 0WR01P is SECURED.
- Both RBCCW Expansion Tanks are online and level is being maintained in automatic.
- The Unit 2 BOP NSO is standing by to assist you.
- You have a plant radio.

INITIATING CUE

The Unit 2 BOP NSO has directed you to place the Common RBCCW Pump, 0WR01P, on Unit 2 per LOP-WR-02, Startup and Operation of the Reactor Building Closed Cooling Water System. Notify the Unit 2 BOP NSO when the Common RBCCW Pump, 0WR01P, is ready to be started on Unit 2.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate simulates establishing a valve lineup to align the common WR pump to Unit 2 IAW LOP-WR-02.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1	VERIFY the Common RBCCW Pump, 0WR01P, is off.	Candidate determines from the Initial Conditions that the Common RBCCW Pump, 0WR01P, is off.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, the Common RBCCW Pump, 0WR01P, is off.				
*2	VERIFY the following valves are closed: <ul style="list-style-type: none"> • 1WR043C, Unit 1 Common Plant RBCCW Pump Suction Stop. • 1WR002C, Unit 1 Common Plant RBCCW Pump Discharge Stop 	Candidate CLOSES the following valves: <ul style="list-style-type: none"> • 1WR043C, Unit 1 Common Plant RBCCW Pump Suction Stop. • 1WR002C, Unit 1 Common Plant RBCCW Pump Discharge Stop 	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	For each valve: The component you identified is in the condition you described.				
3	VERIFY the following valves are closed: <ul style="list-style-type: none"> • 2WR043C, Unit 2 Common Plant RBCCW Pump Suction Stop. • 2WR002C, Unit 2 Common Plant RBCCW Pump Discharge Stop. 	Candidate VERIFIES the following valves are closed: <ul style="list-style-type: none"> • 2WR043C, Unit 2 Common Plant RBCCW Pump Suction Stop. • 2WR002C, Unit 2 Common Plant RBCCW Pump Discharge Stop. 	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	For each valve: The component you identified is in the condition you described.				
4	To line up the Common RBCCW Pump on Unit 2, PERFORM the following:	Candidate PERFORMS the following to line up the Common RBCCW Pump on Unit 2:			

<u>Task Standard:</u>					
Candidate simulates establishing a valve lineup to align the common WR pump to Unit 2 IAW LOP-WR-02.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*5	OPEN 2WR043C, Unit 2 Common Plant RBCCW Pump Suction Stop.	Candidate OPENS 2WR043C, Unit 2 Common Plant RBCCW Pump Suction Stop.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
*6	OPEN 2WR002C, Unit 2 Common Plant RBCCW Pump Discharge Stop.	Candidate OPENS 2WR002C, Unit 2 Common Plant RBCCW Pump Discharge Stop.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	The component you identified is in the condition you described.				
7	<p>VENT the 0WR01P suction and discharge piping on U-2 by OPENING the following valves until all the air is vented then CLOSE and CAP the valves:</p> <ul style="list-style-type: none"> • 2WR250, RBCCW Heat Exchr 0WR01A Outlet to U2 RBCCW High Point Vent Stop (02 RB C-15, 786 S Wall by Pumps) • 2WR251, RBCCW Pump 0WR01P Discharge to U2 RBCCW High Point Vent Stop (02 RB C-15, 786 S Wall by Pumps) • 2WR249, RBCCW Pump Suction Cross-Tie Vent Stop (02 RB C-15, 786 S Wall by Pumps) 	<p>Candidate VENTS the 0WR01P suction and discharge piping on U-2 by OPENING the following valves until all the air is vented then CLOSING and CAPPING the valves:</p> <ul style="list-style-type: none"> • 2WR250, RBCCW Heat Exchr 0WR01A Outlet to U2 RBCCW High Point Vent Stop (02 RB C-15, 786 S Wall by Pumps) • 2WR251, RBCCW Pump 0WR01P Discharge to U2 RBCCW High Point Vent Stop (02 RB C-15, 786 S Wall by Pumps) • 2WR249, RBCCW Pump Suction Cross-Tie Vent Stop (02 RB C-15, 786 S Wall by Pumps) 	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u> Candidate simulates establishing a valve lineup to align the common WR pump to Unit 2 IAW LOP-WR-02.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
CUE	For each valve: When valve is opened - the component you identified is in the condition you described. You hear air passing through the vent followed a seeing a solid stream of water. When valve is closed - the component you identified is in the condition you described.				
9	NOTIFY the Unit 2 Supervisor the Common RBCCW Pump, 0WR01P is aligned to Unit 2 and ready to be started.	Candidate NOTIFIES the Unit 2 Supervisor the Common RBCCW Pump, 0WR01P is aligned to Unit 2 and ready to be started.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 2 BOP NSO, acknowledge the report. JPM is complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Re-Align the 0WR01P Pump from Unit 1 to Unit 2JPM Number: P-WR-01 Revision Number: 03Task Number and Title: 114.009 Given Unit Supervisor authorization, perform the in plant actions to shift the reactor building closed cooling water (RBCCW) pumps, IAW LOP-WR-02.Task Standard: Candidate simulates establishing a valve lineup to align the common WR pump to Unit 2 IAW LOP-WR-02.K/A Number and Importance: 400000 A2.01 4.1 / 3.9Suggested Testing Environment: PlantAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: LOP-WR-02 Revision: 26

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____ **Date:** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are an Extra NSO,

- Unit 1 and Unit 2 are at rated conditions.
- The 2WR01PA is running.
- The 2WR01PB will be taken OOS.
- The 1WR01PA is RUNNING on Unit 1.
- The 0WR01P is SECURED.
- Both RBCCW Expansion Tanks are online and level is being maintained in automatic.
- The Unit 2 BOP NSO is standing by to assist you.
- You have a plant radio.

INITIATING CUE

The Unit 2 BOP NSO has directed you to place the Common RBCCW Pump, 0WR01P, on Unit 2 per LOP-WR-02, Startup and Operation of the Reactor Building Closed Cooling Water System. Notify the Unit 2 BOP NSO when the Common RBCCW Pump, 0WR01P, is ready to be started on Unit 2.



Job Performance Measure

Perform Loss of Bus 141Y Hard Card

JPM Number: S-AP-05

Revision Number: 07

Date: 11/23/2022

Developed By: KARL HEUSER / [Signature] Instructor: Print / Sign 1/5/23 Date

Reviewed By: THOMAS SULLIVAN / [Signature] SME or Instructor: Print / Sign 3/1/23 Date

Reviewed By: Eric Burt / [Signature] Operations Representative: Print / Sign 4/14/23 Date

Approved By: Scott Arebaugh / [Signature] Training Department: Print / Sign 4/13/23 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOA-AP-101</u>	Revision: <u>62</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

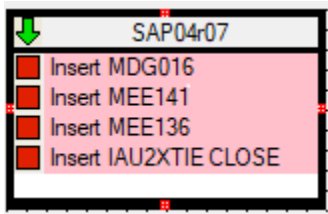
_____/_____
 SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	Information Not Available
Revision 01	Information Not Available
Revision 02	Revised for current procedure revision and JPM template.
Revision 03	Made steps 1 and 3 critical and 7 non-critical because it could not be completed.
Revision 04	Added new checklist. Added success criteria for the alternate path. Simulator setup steps were added for 1B WR pump and 1B CRD Pump being verified off.
Revision 05	Updated for procedure revision.
Revision 06	Updated to current template and procedures for ILT 13-1 NRC Exam
Revision 07	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision. Converted CAEP file to Smart Scenario.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset the simulator to 151, 100% Power
2. Go to RUN
3. Verify the following:
 - 1B CRD Pump is running
 - 1B WR is off
 - 0 WR pump is aligned to Unit 2
4. Run the Smart Scenario for this JPM: **SAP05r07.ssf**
 - **imf mdg016** (0 DG Engine fails to start)
 - **imf mee141** (Bus Tie Breaker 1415 fails to close)
 - **imf mee136** (Breaker 1412 fails open)
 - **irf iau2xtie close** (Unit Tie Breaker 2414 closed)



5. Silence and acknowledge annunciators.
6. Freeze the simulator until the first Candidate enters.
7. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist located on page.
8. This completes the setup for this JPM.

INITIAL CONDITIONS

You are an assist NSO,

- Unit 1 has had a Loss of 141Y due to Breaker 1412 opening.
- 0 DG did not start and LOA-DG-101 is in progress.
- Unit 2 is at 100% Power with a normal electric plant lineup.
- 0 WR Pump is lined up to Unit 2.
- Operators are standing by to assist you.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform Loss of 141Y Hard Card. Inform the Unit 1 Supervisor when Bus 141Y is energized. Another NSO will perform the RPS Quick Swap Hardcard and the IN Cross-Tie Hardcard.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate attempts to reenergizes Bus 141Y via the Bus Tie but it fails to close. Candidate reenergizes Bus 141Y using the Unit 2 Cross Tie Breaker IAW LOA-AP-101.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*1	CHECK RBCCW header discharge pressure – GREATER THAN 50 psig.	Candidate identifies that RBCCW discharge header pressure is LESS THAN 50 psig and STARTS 1B WR Pump.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, another NSO will follow up with LOA-WR-101.				
2	Verify one CRD Pump running.	Candidate identifies the 1B CRD Pump is running.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Another NSO will follow up with LOP-RD-01.				
3	PERFORM RPS Quick Swap Hardcard.	Candidate identifies from the Initial Conditions that another NSO will perform the RPS quick swap hardcard.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, another NSO will perform the RPS quick swap hardcard.				
4	PERFORM IA to IN Cross-Tie Hardcard.	Candidate identifies from the Initial Conditions that another NSO will perform the IA to IN Cross-Tie hardcard.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, another NSO will perform the IA to IN Cross-Tie hardcard.				
5	VERIFY annunciator 1PM01J-A214, 4KV Bus 141X/Y Overcurrent alarm is CLEAR.	Candidate VERIFIES annunciator 1PM01J-A214, 4KV Bus 141X/Y Overcurrent alarm is CLEAR.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	VERIFY all three phase voltages are approximately equal using 141X/Y Voltmeter switch.	Candidate VERIFIES all three phase voltages are approximately equal using 141X/Y Voltmeter switch.	<input type="checkbox"/>	<input type="checkbox"/>	—
ALTERNATE PATH BEGINS HERE					

Task Standard:					
Candidate attempts to reenergizes Bus 141Y via the Bus Tie but it fails to close. Candidate reenergizes Bus 141Y using the Unit 2 Cross Tie Breaker IAW LOA-AP-101.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*7	If 141X is energized, SYNCHRONIZE and CLOSE ACB 1415.	Candidate places Synchroscope Select Switch to ON for breaker 1415, attempts to close ACB 1415, and determines it will not close.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor acknowledge report that ACB 1415 did not close. If necessary, repeat the initiating cue: "Inform me when Bus 141Y is energized."				
8	CHECK BUS 241Y powered from Unit-2 SAT.	Candidate identifies from the Initial Conditions that Bus 241Y is powered from the Unit 2 SAT.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, Bus 241Y is powered from the Unit 2 SAT.				
9	CHECK ACB 2415 is OPEN.	Candidate CHECKS that ACB 2415 is open.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 2 NSO, report ACB 2415 is open.				
*10	SYNCHRONIZE and CLOSE ACB 2414.	Candidate directs Unit 2 to close ACB 2414.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit 2 NSO, report ACB 2414 is closed.				
*11	SYNCHRONIZE and CLOSE ACB 1414.	Candidate places Synchroscope Select Switch to ON for breaker 1414 and closes ACB 1414.	<input type="checkbox"/>	<input type="checkbox"/>	—
12	INFORM the Unit Supervisor.	Candidate informs the Unit Supervisor that Bus 141Y is energized from Bus 241Y.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Perform Loss of Bus 141Y Hard CardJPM Number: S-AP-05 Revision Number: 07Task Number and Title: 5.008, Provided initial conditions respond to a loss of 4KV ESS bus IAW station procedures.Task Standard: Candidate attempts to reenergizes Bus 141Y via the Bus Tie but it fails to close. Candidate reenergizes Bus 141Y using the Unit 2 Cross Tie Breaker IAW LOA-AP-101.K/A Number and Importance: 295003, AA1.01, 4.0Suggested Testing Environment: SimulatorAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: <u>LOA-AP-101</u>	Revision: <u>62</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are an assist NSO,

- Unit 1 has had a Loss of 141Y due to Breaker 1412 opening.
- 0 DG did not start and LOA-DG-101 is in progress.
- Unit 2 is at 100% Power with a normal electric plant lineup.
- 0 WR Pump is lined up to Unit 2.
- Operators are standing by to assist you.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform Loss of 141Y Hard Card. Inform the Unit 1 Supervisor when Bus 141Y is energized. Another NSO will perform the RPS Quick Swap Hardcard and the IN Cross-Tie Hardcard.



Job Performance Measure

Swap to the MDRFP from the TDRFP with a Failure of the TDRFP to Trip

JPM Number: S-FW-17

Revision Number: 01

Date: 12/15/2022

Developed By: KARL HEUSER / [Signature] 1/5/23
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOP-FW-05</u>	Revision: <u>39</u>
Procedure: <u>LOA-FW-101</u>	Revision: <u>13</u>
Procedure: <u>LOP-RL-01</u>	Revision: <u>27</u>
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

_____/_____
 SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM developed for 2014 LORT NRC Annual Operating Exam
Revision 01	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset simulator to IC #238, (Password 1238), Power 88%

<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.</p>
--

2. Load and Run **SFW17r01.ssf**.
3. Initial setup includes Reactor power reduced 88% for swap to MDRFP for 1A TDRFP OOS. The MDRFP should be online per LOP-FW-03 and swapped per LOP-RL-05 with the 'A' TDRFP running without injecting. Verify 1A TDRFP control valve at a value >0.
4. Provide a marked-up copy of LOP-FW-05.
5. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
6. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Assist NSO,

- 1A TDRFP is being shutdown in preparation for maintenance.
- The MDRFP is in operation per LOP-FW-03, Startup of Motor Driven Reactor Feed Pump MDRFP.
- Automatic transfer sequence from '1A' TDRFP to FRV has been completed per LOP-RL-01, Operation of the Reactor Level Control System.
- The '1A' TDRFP is no longer feeding the RPV.
- LOS-FW-SR1 will NOT be required during shutdown of 1A TDRFP.

INITIATING CUE

The Unit Supervisor has directed you to complete the shutdown the '1A' TDRFP per LOP-FW-05, Shutdown of the Turbine Driven Reactor Feedwater Pump, starting at step E.6. Notify the Unit Supervisor when the '1A' TDRFP is TRIPPED.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
During the shutdown of the 1A TDRFP, Candidate will attempt to trip the 1A TDRFP. The TDRFP will fail to trip requiring the Candidate to use alternate methods to trip the TDRFP IAW LOA-FW-101.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE Once Candidate acknowledges the Initial Conditions and Initiating Cue, hand them LOP-FW-05.					
1	DEPRESS FW TURB 'A' TURNING GEAR ENGAGE RESET pushbutton.	Candidate DEPRESSES FW TURB 'A' TURNING GEAR ENGAGE RESET pushbutton.	<input type="checkbox"/>	<input type="checkbox"/>	—
2	If performance of LOS-FW-SR1 is required, PERFORM the following.	Candidate DETERMINES LOS-FW-SR1 is NOT required per Initial Conditions and N/A's Step E.6.2.1.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required provide the following cue: Performance of LOS-FW-SR1 is not required.				
*3	When TDRFP is no longer feeding the RPV, DEPRESS 'A' TDRFP Turbine TRIP pushbutton on 1PM03J for at least 10 seconds.	Candidate DEPRESSES 'A' TDRFP Turbine TRIP pushbutton on 1PM03J for at least 10 seconds.	<input type="checkbox"/>	<input type="checkbox"/>	—
ALTERNATE PATH BEGINS HERE					
4	Identifies '1A' TDRFP failed to TRIP and notify Unit Supervisor.	Candidate identifies the '1A' TDRFP failed to TRIP and notifies the Unit Supervisor.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. If required, direct the Candidate to enter LOA-FW-101.				
5	Enter LOA-FW-101.	Candidate enters LOA-FW-101.	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
During the shutdown of the 1A TDRFP, Candidate will attempt to trip the 1A TDRFP. The TDRFP will fail to trip requiring the Candidate to use alternate methods to trip the TDRFP IAW LOA-FW-101.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: In the following step, the Candidate may elect to perform all open bulleted steps or only one to trip the TDRFP. All actions are considered an acceptable means to trip the TDRFP satisfactorily. The Candidate may also elect to not depress the Trip Pushbutton a second time based on its failure to trip initially. It is acceptable to consider this part of the step as previously completed.					
6	DEPRESS the Trip Pushbutton.	Candidate DEPRESSES the Trip Pushbutton.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: The Candidate will only be required to perform Steps 7-8 <u>OR</u> 9-11 to satisfactorily trip the TDRFP. In this case the steps not performed may be N/A'ed.					
*7	PLACE the Manual Backup Station in Manual.	Candidate PLACES the Manual Backup Station in Manual.	<input type="checkbox"/>	<input type="checkbox"/>	—
*8	DEPRESS Fast Lower until CV is CLOSED.	Candidate DEPRESSES Fast Lower until CV is CLOSED.	<input type="checkbox"/>	<input type="checkbox"/>	—
*9	CLOSE the 1B21-F422A.	Candidate CLOSES the 1B21-F422A.	<input type="checkbox"/>	<input type="checkbox"/>	—
*10	CLOSE the 1B21-F423A.	Candidate CLOSES the 1B21-F423A.	<input type="checkbox"/>	<input type="checkbox"/>	—
*11	CLOSE the 1FW010A.	Candidate CLOSES the 1FW010A.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: If requested, there will be no Equipment Operators available to manually trip the TDRFP at the Front Standard requiring the Candidate to perform another method. If this is not requested, then the step may be N/A'ed.					
12	DISPATCH an operator to Manually TRIP the TDRFP at the Front Standard.	Candidate DISPATCHES an operator to Manually TRIP the TDRFP at the Front Standard.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If requested, there are currently no Equipment Operators available to trip the TDRFP locally at the Front Standard.				

Task Standard:

During the shutdown of the 1A TDRFP, Candidate will attempt to trip the 1A TDRFP. The TDRFP will fail to trip requiring the Candidate to use alternate methods to trip the TDRFP IAW LOA-FW-101.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
13	Notify the Unit Supervisor the '1A' TDRFP is tripped.	Candidate notifies the Unit Supervisor the '1A' TDRFP is tripped.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge the report. JPM is complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Swap to the MDRFP from the TDRFP with a Failure of the TDRFP to TripJPM Number: S-FW-17 Revision Number: 01Task Number and Title: 77.035 Given Unit Supervisor authorization, respond to a failure of the Turbine Driven Reactor Feed Pump to trip IAW LOA-FW-101Task Standard: During the shutdown of the 1A TDRFP, Candidate will attempt to trip the 1A TDRFP. The TDRFP will fail to trip requiring the Candidate to use alternate methods to trip the TDRFP IAW LOA-FW-101.K/A Number and Importance: 259001 A4.02 4.0

Suggested Testing Environment:

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

Reference(s):

Procedure: <u>LOP-FW-05</u>	Revision: <u>39</u>
Procedure: <u>LOA-FW-101</u>	Revision: <u>13</u>
Procedure: <u>LOP-RL-01</u>	Revision: <u>27</u>
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Assist NSO,

- 1A TDRFP is being shutdown in preparation for maintenance.
- The MDRFP is in operation per LOP-FW-03, Startup of Motor Driven Reactor Feed Pump MDRFP.
- Automatic transfer sequence from '1A' TDRFP to FRV has been completed per LOP-RL-01, Operation of the Reactor Level Control System.
- The '1A' TDRFP is no longer feeding the RPV.
- LOS-FW-SR1 will NOT be required during shutdown of 1A TDRFP.

INITIATING CUE

The Unit Supervisor has directed you to complete the shutdown the '1A' TDRFP per LOP-FW-05, Shutdown of the Turbine Driven Reactor Feedwater Pump, starting at step E.6. Notify the Unit Supervisor when the '1A' TDRFP is TRIPPED.

Job Performance Measure**Startup Rod Withdrawals with a Loss of Rod Position Indication**JPM Number: S-NR-11Revision Number: 04Date: 11/26/2022

Developed By: KARL HEUSER / [Signature] 11/26/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LGP-1-1</u>	Revision: <u>132</u>
Procedure: <u>LOP-RM-01</u>	Revision: <u>48</u>
Procedure: <u>LOA-RM-101</u>	Revision: <u>25</u>
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____
 SME / Instructor (Print/Sign) Date

_____ / _____
 SME / Instructor (Print/Sign) Date

_____ / _____
 SME / Instructor (Print/Sign) Date



Revision Record (Summary)

Revision #	Summary
Revision 00	New Alternate Path JPM developed for the LORT 2015 NRC Annual Exam.
Revision 01	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 02	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 03	Revised to current procedure revisions.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset simulator to IC # 237, 7% Power. Password 1237.

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

2. Verify Malfunction MRD156 CRD 22-11 Reed Switch “___” Stuck Open is in Instructor Summary (Initial 6, Final 6).
3. Have a marked up copy of the current ReMA for the rod sequence loaded into the Simulator RWM. The ReMA should be modified to include notes that state single notch withdrawal required per QNE based on potential fuel failure concerns. This note is only required to be on the step of the ReMA that the fault is on. (Step 108, rod 22-11)
4. Provide a copy of LOP-RM-01 and a copy of LGP-1-1 marked up to and including Step E.6.1 with Step E.6.1 circled.
5. Verify on RCMS control panel the RWM block is set to Prompting: Raise and Rod 38-51 is selected. (It is snapped into IC).
6. Verify PPC Panel B Display has Bypass Valve display for BPV's 1&2. **SET SCALE** to 0-100.
7. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
8. This completes the setup for this JPM.



INITIAL CONDITIONS

You are the ATC NSO,

- Unit 1 is in Mode 1 and performing a fast turn-around startup after an automatic scram caused by a grid transient.
- Pre-Rod Movement Verification is complete per LOP-RM-01 Section E.1.
- Rod withdrawals are in-progress to establish 1 ½ Bypass Valves open per LGP-1-1, Normal Unit Startup, Step E.6.1.
- Single notch withdrawal is required per QNE.

INITIATING CUE

The Unit Supervisor has directed you to continue with control rod withdrawals to establish 1 ½ Bypass Valves open per LGP-1-1, Normal Unit Startup, Step E.6.1. Notify the Unit Supervisor when 1 ½ Bypass Valves are open.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: The following steps are from LOP-RM-01 and the procedure is "Information Level" of use. If the Candidate determines to use the procedure, provide them with a copy of LOP-RM-01.					
*1	SELECT Control Rod 22-11.	Candidate SELECTS Control Rod 22-11.	<input type="checkbox"/>	<input type="checkbox"/>	—
*2	VERIFY the following switch position at panel 1H13-P603: CRD Drive Flow Trip Circuit Bypass Switch is in the BYPASS position.	Candidate PLACES CRD Drive Flow Trip Circuit Bypass Switch in the BYPASS position.	<input type="checkbox"/>	<input type="checkbox"/>	—
3	VERIFY the following switch position at panel 1H13-P603: CRD Drive Flow Trip Circuit Test Switch is in the NORMAL position.	Candidate VERIFIES CRD Drive Flow Trip Circuit Test Switch is in the NORMAL position.	<input type="checkbox"/>	<input type="checkbox"/>	—
*4	DEPRESS rod WITHDRAW push-button and CHECK Control Rod Withdraw sequence begins.	Candidate DEPRESSES rod WITHDRAW push-button and CHECKS Control Rod Withdraw sequence begins.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard:

During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.

<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*5	RELEASE rod WITHDRAW push button and CHECK: <ul style="list-style-type: none"> • Rod position indication on ROD SELECT Display, STATUS Display or CORE Map shows new rod position. • OBSERVE changes in nuclear instrumentation indications. • Rod SETTLE indication is lit for approximately 2 seconds. 	Candidate RELEASES rod WITHDRAW push button and CHECKS: <ul style="list-style-type: none"> • Rod position indication on ROD SELECT Display, STATUS Display or CORE Map shows new rod position. (02) • OBSERVE changes in nuclear instrumentation indications. • Rod SETTLE indication is lit for approximately 2 seconds. 	<input type="checkbox"/>	<input type="checkbox"/>	—
*6	DEPRESS rod WITHDRAW push-button and CHECK Control Rod Withdraw sequence begins.	Candidate DEPRESSES rod WITHDRAW push-button and CHECKS Control Rod Withdraw sequence begins.	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*7	RELEASE rod WITHDRAW push button and CHECK: <ul style="list-style-type: none"> Rod position indication on ROD SELECT Display, STATUS Display or CORE Map shows new rod position. OBSERVE changes in nuclear instrumentation indications. Rod SETTLE indication is lit for approximately 2 seconds. 	Candidate RELEASES rod WITHDRAW push button and CHECKS: <ul style="list-style-type: none"> Rod position indication on ROD SELECT Display, STATUS Display or CORE Map shows new rod position. (04) OBSERVE changes in nuclear instrumentation indications. Rod SETTLE indication is lit for approximately 2 seconds. 	<input type="checkbox"/>	<input type="checkbox"/>	—
*8	DEPRESS rod WITHDRAW push-button and CHECK Control Rod Withdraw sequence begins.	Candidate DEPRESSES rod WITHDRAW push-button and CHECKS Control Rod Withdraw sequence begins.	<input type="checkbox"/>	<input type="checkbox"/>	—
ALTERNATE PATH BEGINS HERE					

<u>Task Standard:</u>					
During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*9	RELEASE rod WITHDRAW push button and CHECK: <ul style="list-style-type: none"> Rod position indication on ROD SELECT Display, STATUS Display or CORE Map shows new rod position. OBSERVE changes in nuclear instrumentation indications. Rod SETTLE indication is lit for approximately 2 seconds. 	Candidate RELEASES rod WITHDRAW push button and IDENTIFIES loss of Control Rod positions indication.	<input type="checkbox"/>	<input type="checkbox"/>	—
10	NOTIFY Unit Supervisor of lost Control Rod position indication.	Candidate NOTIFIES Unit Supervisor of lost Control Rod position indication.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge the report. Direct the Candidate to notify you when the Control Rod indicates a valid position.				
NOTE: Candidate should refer to LOA-RM-101 for Alternate Path.					
11	IMMEDIATELY: <ul style="list-style-type: none"> NOTIFY Shift Manager (SM) CONTACT QNE REFER to TS 3.1.3 	Candidate IMMEDIATELY: <ul style="list-style-type: none"> NOTIFY Shift Manager (SM) CONTACT QNE REFER to TS 3.1.3 	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Shift Manager and QNE, acknowledge report.				
12	CHECK Control Rod Position – INDICATES “XX”. SELECT ROD.	Candidate DETERMINES Control Rod Position INDICATES “XX” and SELECTS ROD.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard:					
During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.					
STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
13	CHECK Control Rod – <u>NOT</u> at position 00/FI prior to indication loss.	Candidate DETERMINES Control Rod <u>NOT</u> at position 00/FI prior to indication loss.	<input type="checkbox"/>	<input type="checkbox"/>	—
14	CHECK Control Rod – <u>NOT</u> at position FULL OUT (48/FO/++) or being notched out from 46 to FULL OUT prior to indication loss.	Candidate DETERMINES Control Rod <u>NOT</u> at position FULL OUT (48/FO/++) or being notched out from 46 to FULL OUT prior to indication loss.	<input type="checkbox"/>	<input type="checkbox"/>	—
*15	INSERT control rod one notch: <ul style="list-style-type: none"> • PLACE CRD DRIVE FLOW TRIP CIRCUIT BYPASS Switch to BYPASS. • Perform one of the following: <ul style="list-style-type: none"> ○ SET RWM Blocks to LPSP. ○ Bypass the Rod within RCMS per LOP-RM-02. ○ Bypass RWM. If ≤ 10% RTP, REFER to TS 3.3.2.1. • APPLY one single notch Insert command only. 	Candidate INSERTS control rod one notch: <ul style="list-style-type: none"> • Candidate VERIFIES CRD DRIVE FLOW TRIP CIRCUIT BYPASS Switch in BYPASS. ○ Candidate BYPASSES RWM by placing the RWM BYPASS switch to BYPASS. • Candidate APPLIES one single notch Insert command only. 	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, as the Unit Supervisor, direct the Candidate to BYPASS the Rod Worth Minimizer.				
16	OBSERVE Drive Flow and INSERT/SETTLE Indicators as part of previous Step 15.	Candidate OBSERVES Drive Flow and INSERT/SETTLE Indicators.	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
17	CHECK Control Rod – INDICATES new valid position.	Candidate DETERMINES Control Rod INDICATES new valid position.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As the Unit Supervisor, inform the Candidate that another NSO will print the H-V Matrix.				
18	CHECK Sequence – CURRENTLY REQUIRES rod to be withdrawn or inserted past the Data Faulted (XX) position.	Candidate DETERMINES Sequence CURRENTLY REQUIRES rod to be withdrawn past the Data Faulted (XX) position.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, as QNE, direct Candidate to continue with control rod withdrawal.				
*19	POSITION control rod per approved Sequence.	Candidate POSITIONS control rod per approved Sequence by DEPRESSING the WITHDRAW push-button twice until control rod indicates position “08”.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: An approved sequence position is position 8. The ReMA states it may be withdrawn to 48. Initiating cue states to notify when 1 ½ Bypass Valves open, which will not be completed in this JPM. It is acceptable to give terminating cue after this point.					
20	Notify Unit Supervisor that Control Rod 22-11 indicates a valid position.	Candidate notifies Unit Supervisor that Control Rod 22-11 indicates a valid position.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Startup Rod Withdrawals with a Loss of Rod Position IndicationJPM Number: S-NR-11 Revision Number: 04Task Number and Title: 47.012 Provided initial conditions, perform the Main Control Room actions for a Loss of Control Rod Position Information System, IAW LOA-RM-101/201.Task Standard: During withdrawal of a control rod, Candidate loses position indication and enters LOA-RM-101. Candidate inserts control rod one notch and confirms valid position indication and then positions the rod to the approved sequence position.K/A Number and Importance: 214000 A2.01 3.1/3.3Suggested Testing Environment: SimulatorAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: <u>LGP-1-1</u>	Revision: <u>132</u>
Procedure: <u>LOP-RM-01</u>	Revision: <u>48</u>
Procedure: <u>LOA-RM-101</u>	Revision: <u>25</u>
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the ATC NSO,

- Unit 1 is in Mode 1 and performing a fast turn-around startup after an automatic scram caused by a grid transient.
- Pre-Rod Movement Verification is complete per LOP-RM-01 Section E.1.
- Rod withdrawals are in-progress to establish 1 ½ Bypass Valves open per LGP-1-1, Normal Unit Startup, Step E.6.1.
- Single notch withdrawal is required per QNE based on potential fuel failure concerns for flagged control rods.

INITIATING CUE

The Unit Supervisor has directed you to continue with control rod withdrawals to establish 1 ½ Bypass Valves open per LGP-1-1, Normal Unit Startup, Step E.6.1. Notify the Unit Supervisor when 1 ½ Bypass Valves are open.

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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOS-RD-M3</u>	Revision: <u>11</u>
Procedure: <u>LOP-RM-01</u>	Revision: <u>48</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

Revision Record (Summary)

Revision #	Summary
00	This JPM was written by G.W. Beale for the 2012 11-1 ILT Cert Exam.
01	Revised JPM steps to more closely align with procedural steps and to add evaluator notes. Revised task associated with JPM.
02	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset the simulator to IC 151, 100% Power.
2. Place Simulator in Run.
3. Flag annunciator P603-A501.
4. Provide marked-up copy of LOS-RD-M3 up to and including E.1.6.1.4.
5. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
6. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Assist NSO,

- Unit 1 is at rated power.

INITIATING CUE

The Unit Supervisor has directed you to perform the Full Out Rod Cycling/Stall flows/Timing portion of LOS-RD-M3, Control Rod Monthly Surveillances, for control rod 10-43 starting at Step E.1.6.2. Notify the Unit Supervisor when the surveillance is complete through step E.1.6.3.3.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u> Candidate will perform the monthly surveillance on Control Rod 10-43 IAW LOS-RD-M3.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: The surveillance has already been started. Once the Candidate acknowledges the Initial Conditions and Initiating Cue, hand them LOS-RD-M3.					
1	SETUP RCMS for Full Out Exercising with coupling check and Withdraw Stall Flow Capture as follows:	Candidate SETS UP RCMS for Full Out Exercising with coupling check and Withdraw Stall Flow Capture as follows:			
2	At the ROD SELECT Display, or STATUS Display, whichever is in CONTROL Mode, PERFORM the following:	At the ROD SELECT Display, or STATUS Display, whichever is in CONTROL Mode, Candidate PERFORMS the following:			
*3	SELECT the 'SURVEILLANCE' softkey.	Candidate SELECTS the 'SURVEILLANCE' softkey.	<input type="checkbox"/>	<input type="checkbox"/>	—
*4	SELECT the 'ROD EXERCISE' softkey.	Candidate SELECTS the 'ROD EXERCISE' softkey.	<input type="checkbox"/>	<input type="checkbox"/>	—
5	SELECT 'FULL OUT' on the ROD EXERCISE screen.	Candidate SELECTS 'FULL OUT' on the ROD EXERCISE screen.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	SELECT 'STALL FLOW' on the ROD EXERCISE screen.	Candidate SELECTS 'STALL FLOW' on the ROD EXERCISE screen.	<input type="checkbox"/>	<input type="checkbox"/>	—
7	If necessary, SELECT and CONFIRM "CLEAR LOG".	Candidate SELECTS and CONFIRMS "CLEAR LOG" if necessary.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: In following step, annunciator 1H13-P603-A501 will alarm. The Candidate should identify this as an expected alarm and inform the Unit Supervisor.					

<u>Task Standard:</u> Candidate will perform the monthly surveillance on Control Rod 10-43 IAW LOS-RD-M3.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*8	VERIFY in BYPASS position the CRD Drive Flow Trip Circuit Bypass Switch.	Candidate PLACES CRD Drive Flow Trip Circuit Bypass Switch to the BYPASS position.	<input type="checkbox"/>	<input type="checkbox"/>	—
*9	Using Notch Insert, INSERT each Full Out Control Rod one (1) notch individually to position 46 while monitoring the Rod position.	Candidate INSERTS control rod 10-43 one (1) notch to position 46 while monitoring the Rod position using Notch Insert.	<input type="checkbox"/>	<input type="checkbox"/>	—
10	OBSERVE that the Rod has moved and latched at 46.	Candidate OBSERVES that the Rod has moved and latched at 46.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: If Control Rod 10-43 moves and latches at 46, Step 11 will be N/A.					
11	If rod settles back to Full Out, repeat attempt holding notch insert button depressed slightly longer, as needed.	Candidate repeats attempt holding notch insert button depressed slightly longer, if rod settles back to Full Out.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: Procedure Steps E.1.6.3.2.1.2 through E.1.6.3.2.1.2.4 will not be applicable and should be N/A'ed by the Candidate.					
12	If position indication 46 is unexpectedly not working at the new position:	Candidate identifies that position indication 46 is working and N/A's subsection steps.	<input type="checkbox"/>	<input type="checkbox"/>	—
*13	Using Notch Withdraw/Extended Lift, RETURN the Rod to Full Out and OBSERVE rod does not go to the overtravel position.	Candidate RETURNS the Rod to Full Out using Notch Withdraw/Extended Lift and OBSERVES rod does not go to the overtravel position.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Perform Monthly Surveillance on Control Rod 10-43JPM Number: S-RD-01 Revision Number: 02Task Number and Title: 47.001 Given Unit Supervisor authorization, perform a notch withdrawal of a control rod in accordance with LOP-RM-01.Task Standard: Candidate will perform the monthly surveillance on Control Rod 10-43 IAW LOS-RD-M3.K/A Number and Importance: 201002 A4.01 4.1Suggested Testing Environment: SimulatorAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: <u>LOS-RD-M3</u>	Revision: <u>11</u>
Procedure: <u>LOP-RM-01</u>	Revision: <u>48</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Assist NSO,

- Unit 1 is at rated power.

INITIATING CUE

The Unit Supervisor has directed you to perform the Full Out Rod Cycling/Stall flows/Timing portion of LOS-RD-M3, Control Rod Monthly Surveillances, for control rod 10-43 starting at Step E.1.6.2. Notify the Unit Supervisor when the surveillance is complete through step E.1.6.3.3.

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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOP-RH-07</u>	Revision: <u>83</u>
Procedure: <u>LOA-RH-101</u>	Revision: <u>23</u>
Procedure: <u>LOA-FLD-001</u>	Revision: <u>23</u>
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

Revision Record (Summary)

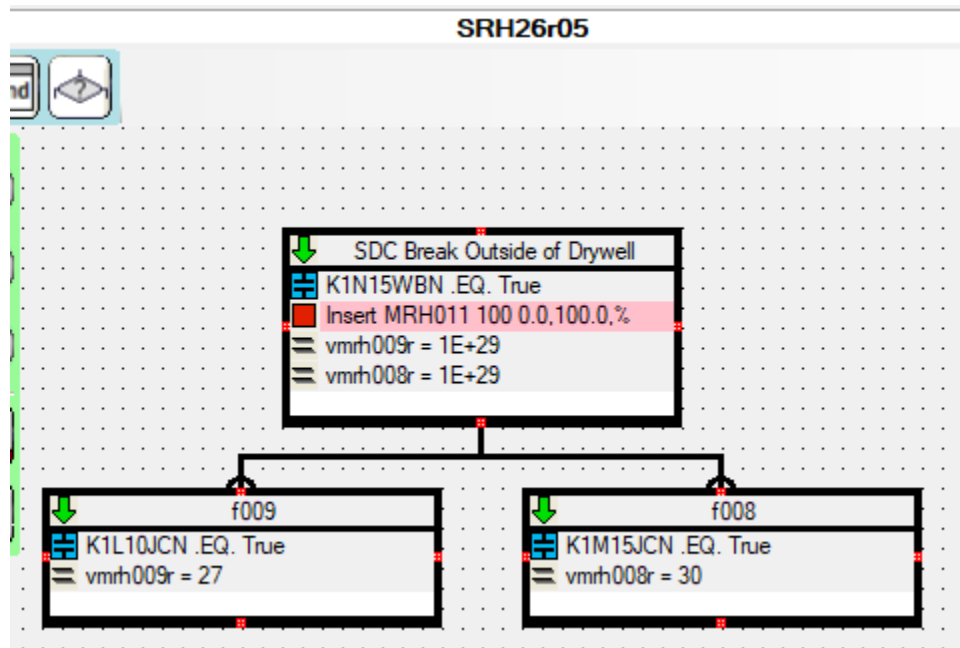
Revision #	Summary
Revision 00	New JPM written by G.W. Beale for the 2011 NRC Annual Exam.
Revision 01	Added new checklist. Updated for new procedure revision.
Revision 02	Updated for ILT Class 13-01 Cert Exam. Revised to include the latest JPM template and procedure revisions.
Revision 03	Revised to the current JPM Template and to incorporate procedure revisions. Updated Task Number to more accurately reflect the actions being performed for the alternate path.
Revision 04	Revised for new procedure revision.
Revision 05	Revised JPM to change fault from Min Flow Valve fails to close to Suction Line failure. Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset simulator to IC #239, 0% Power, Password 1239

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

2. LOAD and RUN SmartScenario file for this JPM: **SRH26r05.ssf**
3. Verify the following Control Panel Lineups:
 - Align the simulator so it matches LOP-RH-07 up to and including step E.6.5.
 - Place Robust Barriers (clear tubes) on the 1E12-F024A and 1E12-F027A.
 - As a minimum, 1E12-F064A and 1E12-F003A need to be closed and 1E12-F048A needs to be OPEN.
 - Place Plant Display #23 on Overhead C.
4. Provide a copy of LOP-RH-07 marked up through step E.6.5.
5. Place EST on 1E12-F064A Control Switch per step E.1.6
6. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
7. This completes the setup for this JPM.



INITIAL CONDITIONS

You are the Assist NSO,

- Unit 1 is in Mode 4.
- LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer, is in progress and completed up to and including step E.6.5.
- The 1A RR Pump was secure less than one hour ago in preparation for Shutdown Cooling operations.
- An Equipment Operator is standing by to assist you.
- The RPV Head is installed.

INITIATING CUE

The Unit Supervisor has directed you to startup the 1A RHR Pump in SDC IAW LOP-RH-07 Step 6.6. Notify the Unit Supervisor prior to commencing cool down.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate Starts 'A' RHR in SDC and determines a Suction line break occurs and secures the SDC lineup to stop the inadvertent drain down of the vessel IAW LOA-RH-101 or LOA-FLD-001.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1	VERIFY CLOSED 1E12-F053A, A RHR Shtdn Clg Return Isol.	Candidate VERIFIES CLOSED 1E12-F053A, A RHR Shtdn Clg Return Isol.	<input type="checkbox"/>	<input type="checkbox"/>	—
2	If 1E12-F053A has no power, MANUALLY OPEN the valve the required number of turns to ensure approximately 2,000 gpm flow when the pump is started.	Candidate DETERMINES 1E12-F053A has power.	<input type="checkbox"/>	<input type="checkbox"/>	—
3	VERIFY CLOSED 1E12-F003A, A RHR Hx Outlet Vlv.	Candidate VERIFIES CLOSED 1E12-F003A, A RHR Hx Outlet Vlv.	<input type="checkbox"/>	<input type="checkbox"/>	—
4	If the reactor vessel head is installed, VERIFY Reactor Level is between 40" and 340" on the Shutdown Range or on the Alternate RX Vessel Level – Instrument Zero Referenced (between 804.9' and 829.9'on the Alternate RX Vessel Level – Sea Level Referenced.	Candidate VERIFIES Reactor Level is between 40" and 340".	<input type="checkbox"/>	<input type="checkbox"/>	—
*5	START 'A' RHR Pump.	Candidate STARTS 'A' RHR Pump.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	THROTTLE OPEN 1E12-F053A, A RHR Shtdn Clg Return Isol, to obtain 4000 to 5000 gpm flow.	Candidate THROTTLES OPEN 1E12-F053A, A RHR Shtdn Clg Return Isol, and identifies that flow indication is not changing.	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
Candidate Starts 'A' RHR in SDC and determines a Suction line break occurs and secures the SDC lineup to stop the inadvertent drain down of the vessel IAW LOA-RH-101 or LOA-FLD-001.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
ALTERNATE PATH BEGINS HERE					
<p>NOTE: The Candidate should identify no change on 1A RHR flow indicator and RPV level lowering through several different indications:</p> <p>Level 8 Alarms clearing (LOR-1H13-P601-A108 & LOR-1H13-P601-D405)</p> <p>Level 7 Alarm clearing (LOR-1H13-P603-A309)</p> <p>Level 4 Alarm (LOR-1H13-P601-A409)</p> <p>Display #23 on Overhead C</p>					
<p>NOTE: Suction Leak is outside of Drywell upstream of the 1E12-F008 valve. Successful completion of securing the leak will require closing the 1E12-F009 valve.</p> <p>Candidate may trip the 1A RHR Pump and close 1E12-F008 and 1E12-F009 prior to entering LOA-RH-101 or LOA-FLD-001.</p>					
7	Identifies no change in pump flow and lowering RPV level	Candidate identifies no change in pump flow and lowering RPV level	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As necessary, report as EO: There is a large water leak coming from RB 740 N.E. Valve Room.				
NOTE: Candidate may or may not close the 1E12-F006A in the following Step. This valve is <u>NOT</u> a Critical Step.					
*8	VERIFY CLOSED: <ul style="list-style-type: none"> • 1E12-F008, RHR Shtdn Clg Suct Outboard Isol Vlv. • 1E12-F009, RHR Shtdn Clg Suct Inboard Isol Vlv. ○ 1E12-F006A, 1A RHR Shtdn Clg Suction Vlv. 	Candidate CLOSES: <ul style="list-style-type: none"> • 1E12-F008, RHR Shtdn Clg Suct Outboard Isol Vlv. • 1E12-F009, RHR Shtdn Clg Suct Inboard Isol Vlv. ○ 1E12-F006A, 1A RHR Shtdn Clg Suction Vlv. 	<input type="checkbox"/>	<input type="checkbox"/>	—

<u>Task Standard:</u>					
Candidate Starts 'A' RHR in SDC and determines a Suction line break occurs and secures the SDC lineup to stop the inadvertent drain down of the vessel IAW LOA-RH-101 or LOA-FLD-001.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
9	VERIFY CLOSED per LOA-RH-101: <ul style="list-style-type: none"> • 1E12-F053A, A RHR Shtdn Clg Return Isol. • 1E12-F053B, B RHR Shtdn Clg Return Isol. • 1E12-F023, RHR Head Spray Vlv. • 1E12-F099A, A RHR Shtdn Clg Return Check Bypass • 1E12-F099B, B RHR Shtdn Clg Return Check Bypass 	Candidate VERIFIES CLOSED per LOA-RH-101: <ul style="list-style-type: none"> • 1E12-F053A, A RHR Shtdn Clg Return Isol. • 1E12-F053B, B RHR Shtdn Clg Return Isol. • 1E12-F023, RHR Head Spray Vlv. • 1E12-F099A, A RHR Shtdn Clg Return Check Bypass • 1E12-F099B, B RHR Shtdn Clg Return Check Bypass 	<input type="checkbox"/>	<input type="checkbox"/>	—
10	VERIFY Shutdown Cooling RHR Pump tripped.	Candidate VERIFIES Shutdown Cooling RHR Pump tripped.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Once the 1E12-F009 is closed, as EO: The large water leak coming from RB 740 N.E. Corner Room Outboard has stopped. It was coming from upstream of the 1E12-F008, RHR SDC Outboard Isolation Valve.				
11	Inform Unit Supervisor SDC Suction Line break is isolated.	Candidate informs Unit Supervisor SDC Suction Line break is isolated.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Startup 1A RHR in SDC with a Suction Line FailureJPM Number: S-RH-26 Revision Number: 05Task Number and Title: 064.051 Given shutdown operation conditions, perform control room actions to respond to a trip or isolation of shutdown cooling IAW LOA-RH-101.Task Standard: Candidate Starts 'A' RHR in SDC and determines a Suction line break occurs and secures the SDC lineup to stop the inadvertent drain down of the vessel IAW LOA-RH-101 or LOA-FLD-001.K/A Number and Importance: 205000 A2.12 3.6 / 3.6Suggested Testing Environment: SimulatorAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: <u>LOP-RH-07</u>	Revision: <u>82</u>
Procedure: <u>LOA-RH-101</u>	Revision: <u>23</u>
Procedure: <u>LOA-FLD-001</u>	Revision: <u>23</u>
Procedure: _____	Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Assist NSO,

- Unit 1 is in Mode 4.
- LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer, is in progress and completed up to and including step E.6.5.
- The 1A RR Pump was secure less than one hour ago in preparation for Shutdown Cooling operations.
- An Equipment Operator is standing by to assist you.
- The RPV Head is installed.

INITIATING CUE

The Unit Supervisor has directed you to startup the 1A RHR Pump in SDC IAW LOP-RH-07 Step 6.6. Notify the Unit Supervisor prior to commencing cool down.

Job Performance Measure**Place 1B RHR in Suppression Pool Cooling from the RSDP**JPM Number: S-RX-01Revision Number: 07Date: 11/26/2022

Developed By: KARL HEUSER / [Signature] 11/26/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: Eric Baeth / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOP-RX-06</u>	Revision: <u>8</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

/

SME / Instructor (Print/Sign) Date

/

SME / Instructor (Print/Sign) Date

/

SME / Instructor (Print/Sign) Date

Revision Record (Summary)

Revision #	Summary
Revision 00	This JPM was written by G.W. Beale for the 2007 NRC Annual Examination.
Revision 01	Updated for the latest LOA-RX-101 procedure and current JPM template.
Revision 02	Changed Throttle closed 1E12-F-48B to a noncritical step. Added an additional initial condition.
Revision 03	Added new checklist. Changed lineup on Remote Shutdown Panel to place all Div II switches and Nuclear Boiler Instrument Xfer switch to Emergency.
Revision 04	Revised for editorial changes.
Revision 05	Updated for editorial changes.
Revision 06	Reformatted to the most recent version of TQ-AA-150-J020 and revised to current procedure revision.
Revision 07	Updated for editorial changes.

SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset Simulator to IC 237, 7% Power. (Password 1237)

<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.</p>
--

2. Provide a copy of LOP-RX-06.
3. Verify all transfer Switches are in the EMERGENCY position at the RSDP.
4. Verify RSDP Suppression Pool Temperature indication is approximately 90°F.
5. ACKNOWLEDGE and RESET all alarms.
6. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
7. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Assist NSO,

- The Control Room has been evacuated per LOA-RX-101.
- Control has been transferred to the Remote Shutdown Panel IAW LOP-RX-03, Transfer of Shutdown Control to the Remote Shutdown Panel.
- Lake Temperature is 85°F and Suppression Pool Temperature is 91°F.
- RHR has been placed in standby per LOP-RH-11, Preparation for Standby Operation of the Low Pressure Coolant Injection (LPCI) System.
- An Equipment Operator is standing by to assist you.

INITIATING CUE

The Unit Supervisor has directed you to place 1B RHR in Suppression Pool Cooling IAW LOP-RX-06, Startup of Suppression Pool Cooling from the Remote Shutdown Panel. Notify the Unit Supervisor when LOP-RX-06 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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate lines up and starts 1B RHR in Suppression Pool Cooling mode from the RSDP IAW LOP-RX-06.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*1	OPEN 1E12-F068B, 1B RHR Hx Serv Wtr Otlt Vlv.	Candidate OPENS 1E12-F068B, 1B RHR Hx Serv Wtr Otlt Vlv.	<input type="checkbox"/>	<input type="checkbox"/>	—
*2	Approximately 9 to 10 seconds after taking the 1E12-F068B switch to OPEN, START 1B RHR Serv Wtr Pmp C.	Approximately 9 to 10 seconds after taking the 1E12-F068B switch to OPEN, Candidate STARTS 1B RHR Serv Wtr Pmp C.	<input type="checkbox"/>	<input type="checkbox"/>	—
*3	When 1B Hx WS Flow on 1E12-R507 increases to 3000 gpm, START 1B RHR Serv Wtr Pmp D.	Candidate STARTS 1B RHR Serv Wtr Pmp D when 1B Hx WS Flow on 1E12-R507 increases to 3000 gpm.	<input type="checkbox"/>	<input type="checkbox"/>	—
4	MONITOR 1B Hx WS Flow increase on 1E12-R507.	Candidate MONITORS 1B Hx WS Flow increase on 1E12-R507.	<input type="checkbox"/>	<input type="checkbox"/>	—
5	VERIFY 1E12-F068B opens fully.	Candidate VERIFIES 1E12-F068B opens fully.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	CHECK 1B Hx WS Flow is at least 7400 gpm on 1E12- R507.	Candidate CHECKS 1B Hx WS Flow is at least 7400 gpm on 1E12- R507.	<input type="checkbox"/>	<input type="checkbox"/>	—
7	Locally on Panel 1PL74J in Diesel Generator Building Penthouse, VERIFY RHR Service Water Pumps C&D Cubicle Supply Fan 1VY06C is running.	Candidate directs Equipment Operator to locally on Panel 1PL74J in Diesel Generator Building Penthouse, VERIFY RHR Service Water Pumps C&D Cubicle Supply Fan 1VY06C is running.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Equipment Operator, report that the 1VY06C is RUNNING.				

Task Standard:					
Candidate lines up and starts 1B RHR in Suppression Pool Cooling mode from the RSDP IAW LOP-RX-06.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
8	Locally on panel 1E12-P450B, VERIFY RHR Service Water Strainer Backwash Control Switch is in AUTO.	Candidate directs Equipment Operator to locally on panel 1E12-P450B, VERIFY RHR Service Water Strainer Backwash Control Switch is in AUTO.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Equipment Operator, report that the 1B RHRWS Strainer Backwash Control Switch is in AUTO.				
9	Locally START the 1B RHR Service Water Process Radiation Monitor per applicable local actions of LOP-PR-06.	Candidate directs Equipment Operator to locally START the 1B RHR Service Water Process Radiation Monitor per applicable local actions of LOP-PR-06.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Equipment Operator, report that the 1B RHRWS PRM is RUNNING IAW LOP-PR-06.				
10	NOTIFY Chemistry to collect and analyze grab samples at least once every 8 hours of RHR Service Water operation and to start a 30 day timeclock. [ODCM 12.2.1.A]	Candidate NOTIFIES Chemistry to collect and analyze grab samples at least once every 8 hours of RHR Service Water operation and NOTIFIES Unit Supervisor to start a 30 day timeclock. [ODCM 12.2.1.A]	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Chemistry/Unit Supervisor, acknowledge report.				

Task Standard:					
Candidate lines up and starts 1B RHR in Suppression Pool Cooling mode from the RSDP IAW LOP-RX-06.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
11	VERIFY the following valves are closed: <ul style="list-style-type: none"> • 1E12-F006B, 1B RHR Shtdn Clg Suction Vlv. • 1E12-F049B, 1B RHR Hx Blowdown Upstrm Iso. • 1E12-F026B, 1B RHR Hx Drain To RCIC • 1E12-F052B, 1B RHR Hx Stm Inlet Vlv 	Candidate VERIFIES the following valves are closed: <ul style="list-style-type: none"> • 1E12-F006B, 1B RHR Shtdn Clg Suction Vlv. • 1E12-F049B, 1B RHR Hx Blowdown Upstrm Isol • 1E12-F026B, 1B RHR Hx Drain To RCIC • 1E12-F052B, 1B RHR Hx Stm Inlet Vlv 	<input type="checkbox"/>	<input type="checkbox"/>	—
12	VERIFY the following valves are open: <ul style="list-style-type: none"> • 1E12-F004B, 1B RHR Pmp Suction Vlv. • 1E12-F047B, 1B RHR Hx Inlet Vlv • 1E12-F048B, 1B RHR Hx Bypass Vlv 	Candidate VERIFIES the following valves are open: <ul style="list-style-type: none"> • 1E12-F004B, 1B RHR Pmp Suction Vlv. • 1E12-F047B, 1B RHR Hx Inlet VI • 1E12-F048B, 1B RHR Hx Bypass Vlv 	<input type="checkbox"/>	<input type="checkbox"/>	—
13	If SP and Lake Water ΔT is known to be less than 100°F, VERIFY 1E12-F003B, 1B RHR Hx Outlet Vlv, is OPEN.	Candidate DETERMINES SP and Lake Water ΔT is less than 100°F and VERIFIES 1E12-F003B, 1B RHR Hx Outlet Vlv, is OPEN.	<input type="checkbox"/>	<input type="checkbox"/>	—
14	If SP and Lake Water ΔT is (or may be) greater than 100°F, CLOSE 1E12-F003B, 1B RHR Hx Outlet Vlv.	Candidate DETERMINES SP and Lake Water ΔT is NOT greater than 100°F and step is N/A.	<input type="checkbox"/>	<input type="checkbox"/>	—
*15	START 1B RHR Pmp.	Candidate STARTS 1B RHR Pmp from the RSDP.	<input type="checkbox"/>	<input type="checkbox"/>	—

Task Standard:					
Candidate lines up and starts 1B RHR in Suppression Pool Cooling mode from the RSDP IAW LOP-RX-06.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*16	THROTTLE following valves to establish and maintain RHR Pump flow between 2000 gpm and 7400 gpm on 1C61-R005: <ul style="list-style-type: none"> 1E12-F024B, 1B RHR Test To SP Vlv 	Candidate THROTTLES following valves to establish and maintain RHR Pump flow between 2000 gpm and 7400 gpm on 1C61-R005: <ul style="list-style-type: none"> 1E12-F024B, 1B RHR Test To SP Vlv 	<input type="checkbox"/>	<input type="checkbox"/>	—
*17	If 1E12-F003B, 1B RHR Hx Outlet Vlv, is open, CLOSE 1E12-F048B, 1B RHR Hx Bypass Vlv.	Candidate CLOSES 1E12-F048B, 1B RHR Hx Bypass Vlv.	<input type="checkbox"/>	<input type="checkbox"/>	—
18	LOCALLY VERIFY the following: <ul style="list-style-type: none"> RHR Pump Room Ventilation Fan 1VY03C is running RHR Minimum Flow Valve 1E12-F064B, 1B RHR Pump Min Flow Isol Valve, is full closed 	Candidate directs Equipment Operator to LOCALLY VERIFY the following: <ul style="list-style-type: none"> RHR Pump Room Ventilation Fan 1VY03C is running RHR Minimum Flow Valve 1E12-F064B, 1B RHR Pump Min Flow Isol Valve, is full closed 	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Equipment Operator, report that 1VY03C is RUNNING and 1E12-F064B is CLOSED.				
19	NOTIFY the Unit Supervisor LOP-RX-06 is complete.	Candidate NOTIFIES the Unit Supervisor LOP-RX-06 is complete.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Place 1B RHR in Suppression Pool Cooling from the RSDPJPM Number: S-RX-01 Revision Number: 07Task Number and Title: 421.010 Given LGA-003, Primary Containment Control, in progress, cool the Suppression Pool, IAW LGA-003Task Standard: Candidate lines up and starts 1B RHR in Suppression Pool Cooling mode from the RSDP IAW LOP-RX-06.K/A Number and Importance: 295026 EA1.06 4.0Suggested Testing Environment: SimulatorAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: LOP-RX-06 Revision: 8

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Assist NSO,

- The Control Room has been evacuated per LOA-RX-101.
- Control has been transferred to the Remote Shutdown Panel IAW LOP-RX-03, Transfer of Shutdown Control to the Remote Shutdown Panel.
- Lake Temperature is 85°F and Suppression Pool Temperature is 91°F.
- RHR has been placed in standby per LOP-RH-11, Preparation for Standby Operation of the Low Pressure Coolant Injection (LPCI) System.
- An Equipment Operator is standing by to assist you.

INITIATING CUE

The Unit Supervisor has directed you to place 1B RHR in Suppression Pool Cooling IAW LOP-RX-06, Startup of Suppression Pool Cooling from the Remote Shutdown Panel. Notify the Unit Supervisor when LOP-RX-06 is complete.

Job Performance Measure**Perform LOS-TG-Q3 on #2 Main Turbine BPV**JPM Number: S-TG-03Revision Number: 03Date: 11/23/2022

Developed By: KARL HEUSER / [Signature] 11/23/22
Instructor: Print / Sign Date

Reviewed By: THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By: ERIC BAETH / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By: SCOTT AREBAUGH / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOS-TG-Q3</u>	Revision: <u>1</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
--	---------------

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
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Revision Record (Summary)

Revision #	Summary
Revision 00	New JPM developed for the LORT 2016 NRC Exam.
Revision 01	Revised to new JPM template.
Revision 02	Reformatted to the most recent version of TQ-AA-150-J020 and revised to new procedure.
Revision 03	Updated for editorial changes.



SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Recall IC #151, 100% Power.

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

2. Verify copies of LOS-TG-Q3 are available to provide to the Candidate.
 - N/A and initial Steps for Bypass Valves NOT being Tested.(A.1.4, A.1.5, A.1.6, A.1.7, A.1.8)
3. Verify both DEHC HMIs are on the STATUS displays.
4. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
5. This completes the setup for this JPM.



INITIAL CONDITIONS

You are the Assist NSO,

- Unit 1 is at 88% power for Load Following.

INITIATING CUE

The Unit Supervisor has directed you to perform LOS-TG-Q3, Turbine Bypass Valve Surveillance, Attachment 1A on the #2 Turbine Bypass Valve as a PMT for MMD maintenance. Generation Dispatch has been notified and permission has been granted to perform the surveillance. Notify the Unit Supervisor when LOS-TG-Q3 Attachment 1A is complete on #2 Turbine Bypass Valve.

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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate will cycle Bypass Valve #2 from the DEHC HMI IAW LOS-TG-Q3.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
1	OBTAIN permission from Generation Dispatch to perform this surveillance.	Candidate identifies from Initiating Cue that Generation Dispatch has given permission.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	If required, as Unit Supervisor, permission is granted from Generation Dispatch to perform the surveillance.				
2	If Bypass Valves are controlling Reactor Pressure: <ul style="list-style-type: none"> Do <u>NOT</u> perform this attachment. STATE reason this attachment not performed in Comments Section. MAKE a DEL entry to ensure Bypass Valves are tested to meet Tech Specs. 	Candidate determines Bypass Valves are NOT controlling Reactor Pressure and test can be performed.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	Another NSO will monitor parameters on the P603.				
3	If at any time, Bypass Valve testing is not working as expected, SELECT "Test OFF" to allow the selected BPV to re-close.	Candidate place keeps step.	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: This test can be performed at either DEHC HMIs.					

Task Standard: Candidate will cycle Bypass Valve #2 from the DEHC HMI IAW LOS-TG-Q3.					
STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*4	At the DEHC HMI, NAVIGATE to the "BV #2" screen by SELECTING the following: <Tests>, <BPV Test>, <Bypass Valve #2>	At the DEHC HMI, Candidate NAVIGATES to the "BV #2" screen by SELECTING the following: <Tests>, <BPV Test>, <Bypass Valve #2>	<input type="checkbox"/>	<input type="checkbox"/>	—
*5	On the "BV #2" screen, TEST Bypass Valve #2 as follows: PUSH the Test START pushbutton and OBSERVE: <ul style="list-style-type: none"> • Bypass Valve #2 fully OPENS in approximately 10 seconds. • Bypass Valve #2 exhibits Fast OPEN characteristics. • Approximately 10 seconds after reaching full open, Bypass Valve #2 fully closes. 	Candidate PUSHES the Test START pushbutton and OBSERVES: <ul style="list-style-type: none"> • Bypass Valve #2 fully OPENS in approximately 10 seconds. • Bypass Valve #2 exhibits Fast OPEN characteristics. • Approximately 10 seconds after reaching full open, Bypass Valve #2 fully closes. 	<input type="checkbox"/>	<input type="checkbox"/>	—
6	NOTIFY the Unit Supervisor LOS-TG-Q3 Attachment 1A is complete for the #2 Bypass Valve.	Candidate NOTIFIES the Unit Supervisor LOS-TG-Q3 Attachment 1A is complete for the #2 Bypass Valve.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	As Unit Supervisor, acknowledge report. JPM complete.				

JPM Stop Time: _____



JPM SUMMARY**Operator's Name:** _____ **Emp. ID#:** _____**Job Title:** EO RO SRO FS STA/IA SRO CertJPM Title: Perform LOS-TG-Q3 on #2 Main Turbine BPVJPM Number: S-TG-03 Revision Number: 03Task Number and Title: 71.042 Given normal at power conditions, perform Control Room actions for main turbine generator surveillances, IAW LOS-TG-Q3, LOS-TG-M2, LOS-TG-W1, LOS-TG-W2, and LOS-TG-W3.Task Standard: Candidate will cycle Bypass Valve #2 from the DEHC HMI IAW LOS-TG-Q3.K/A Number and Importance: 241000 A4.06 4.2Suggested Testing Environment: SimulatorAlternate Path: Yes No SRO Only: Yes No Time Critical: Yes No

Reference(s):

Procedure: LOS-TG-Q3 Revision: 01

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

Procedure: _____ Revision: _____

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**NOTE:** Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).**Evaluator's Name (Print):** _____**Evaluator's Signature:** _____ **Date:** _____



INITIAL CONDITIONS

You are the Assist NSO,

- Unit 1 is at 88% power for Load Following.

INITIATING CUE

The Unit Supervisor has directed you to perform LOS-TG-Q3, Turbine Bypass Valve Surveillance, Attachment 1A on the #2 Turbine Bypass Valve as a PMT for MMD maintenance. Generation Dispatch has been notified and permission has been granted to perform the surveillance. Notify the Unit Supervisor when LOS-TG-Q3 Attachment 1A is complete on #2 Turbine Bypass Valve.

Job Performance Measure
Respond to High Control Room Radiation

JPM Number: S-VC-01

Revision Number: 07

Date: 11/26/2022

Developed By:

KARL HEUSER / [Signature] 11/26/22
Instructor: Print / Sign Date

Reviewed By:

THOMAS SULLIVAN / [Signature] 3/1/23
SME or Instructor: Print / Sign Date

Reviewed By:

Eric Baetz / [Signature] 4/14/23
Operations Representative: Print / Sign Date

Approved By:

Scott Arebaugh / [Signature] 4/13/23
Training Department: Print / Sign 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 instructor or SME review. _____
7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*). _____
8. IAW NUREG 1021 Appendix C, clearly identify the task standard (i.e., the predetermined qualitative or quantitative outcome) against which task performance will be measured. _____
9. Verify the procedure(s) referenced by this JPM reflects the current revision:

Procedure: <u>LOR-1PM13J-B401</u>	Revision: <u>10</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
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. For subsequent validations, sign and date below: _____

_____ / _____ SME / Instructor (Print/Sign)	_____ Date
_____ / _____ SME / Instructor (Print/Sign)	_____ Date
_____ / _____ SME / Instructor (Print/Sign)	_____ Date



Revision Record (Summary)

Revision #	Summary
00	New JPM written for 2010 Annual Exam by Gordon W. Beale
01	Added cue about VC Makeup Run Timer not moving. Removed steps after the Emergency Makeup Train is placed on-line.
02	Updated JPM to current procedures and JPM Template for the ILT 11-1 NRC Exam. The revised JPM is no longer considered Alternate Path.
03	Added new check list. Made JPM for any IC set.
04	Revised for editorial changes
05	Updated for editorial changes.
06	Reformatted to the most recent version of TQ-AA-150-J020.
07	Updated for editorial changes.

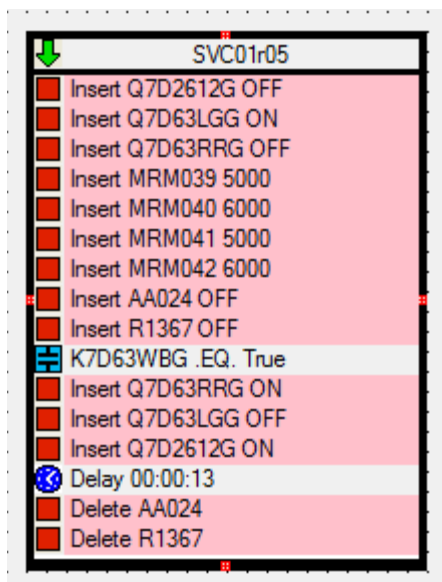


SETUP INSTRUCTIONS (Add instructions as required for specific JPM setting; e.g., simulator, mock-up, etc.)

1. Reset the simulator to IC 151, 100% Power.

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

2. LOAD and RUN the SmartScenario file: **SVC01r05.ssf**.
3. VERIFY 0A CR EMER M/U FAN Switch is in NAT.
4. VERIFY all four VC Rad Monitors are in alarm and messages are on the SER.
5. Acknowledge annunciators.
6. When the above steps are completed for this and other JPMs to be run concurrently then validate, if not previously validated, the concurrently run JPMs using the JPM Validation Checklist.
7. This completes the setup for this JPM.





INITIAL CONDITIONS

You are the Assist NSO,

- The 'B' VC/VE Train is Out of Service for a Work Window.
- Annunciator 1PM13J-B401, Control Room HVAC or Radwaste Reboiler Steam Outlet High Radiation or Instrument Failure, has just alarmed.

INITIATING CUE

The Unit Supervisor has directed you to respond to the Alarm 1PM13J-B401. Notify the Unit Supervisor when all LOR actions are 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 Candidate 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: _____ JPM Sequence #: _____ of _____

<u>Task Standard:</u>					
Candidate responds to alarm and determines alarm is due to Control Room HVAC High Radiation. Candidate starts EMU and places Recirculation Charcoal Filter in Filter position IAW LOR-1PM13J-B401.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
NOTE: Step B.1 is NOT APPLICABLE since the 'B' VC/VE train is Out of Service based on the Initial Conditions.					
1	If 0A Emer MU Fan 0VC03CA is running on the non-operating VC train (B VC Train is running).	Candidate determines step is NOT APPLICABLE based on Initial Conditions.	<input type="checkbox"/>	<input type="checkbox"/>	—
2	CHECK alarm typer printout to determine if alarm is due to Control Room HVAC High Radiation, Reboiler High Radiation, or Rad Instrument Failure.	Candidate CHECKS alarm typer printout to determine alarm is due to Control Room HVAC High Radiation. (SER Points: R1387 & 1389)	<input type="checkbox"/>	<input type="checkbox"/>	—
NOTE: The following steps are for alarm caused by Control Room Outside Air High Radiation (Step B.3).					
3	At 1PM05J, PERFORM the following:	Candidate PERFORMs the following at 1PM05J:			
NOTE: The 0VC03CA Fan in the next Step has a 20 second start delay after the switch is placed in Start. Annunciators 1PM06J-A109 and 1PM06J-B107 will alarm when starting the fan.					
*4	VERIFY 0A CR HVAC Emer MU Fan 0VC03CA is RUNNING.	Candidate STARTS 0A CR HVAC Emer MU Fan 0VC03CA.	<input type="checkbox"/>	<input type="checkbox"/>	—



<u>Task Standard:</u>					
Candidate responds to alarm and determines alarm is due to Control Room HVAC High Radiation. Candidate starts EMU and places Recirculation Charcoal Filter in Filter position IAW LOR-1PM13J-B401.					
<u>STEP</u>	<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*5	MANUALLY ALIGN CR HVAC Recirculation Charcoal Filter by placing 0A CR HVAC Charcoal Filter Damper Control switch to FILTER position.	Candidate MANUALLY ALIGNS CR HVAC Recirculation Charcoal Filter by placing 0A CR HVAC Charcoal Filter Damper Control switch to FILTER position.	<input type="checkbox"/>	<input type="checkbox"/>	—
6	VERIFY following Charcoal Filter damper positions: <ul style="list-style-type: none"> • Inlet 0VC11YA is OPEN • Outlet 0VC12YA is OPEN • Bypass 0VC13YA is CLOSED. 	Candidate VERIFIES following Charcoal Filter damper positions: <ul style="list-style-type: none"> • Inlet 0VC11YA is OPEN • Outlet 0VC12YA is OPEN • Bypass 0VC13YA is CLOSED. 	<input type="checkbox"/>	<input type="checkbox"/>	—
7	VERIFY 0A VC Purge Damper Control Switch is in OFF position.	Candidate VERIFIES 0A VC Purge Damper Control Switch is in OFF position.	<input type="checkbox"/>	<input type="checkbox"/>	—
CUE	When Candidate directs an Equipment Operator to perform the local actions at 0PA09J (Step B.3.b), inform the Candidate that the JPM is complete.				

JPM Stop Time: _____



JPM SUMMARY

Operator's Name: _____ **Emp. ID#:** _____

Job Title: EO RO SRO FS STA/IA SRO Cert

JPM Title: Respond to High Control Room Radiation

JPM Number: S-VC-01 Revision Number: 07

Task Number and Title: 117.016 Given a valid alarm on the VC/VE system, respond to VC/VE system abnormalities (i.e. hi rad, smoke, etc.), IAW LOR-1PM13J-B401.

Task Standard: Candidate responds to alarm and determines alarm is due to Control Room HVAC High Radiation. Candidate starts EMU and places Recirculation Charcoal Filter in Filter position IAW LOR-1PM13J-B401.

K/A Number and Importance: 290003 A2.03 3.5/3.8

Suggested Testing Environment: Simulator

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

Reference(s):

Procedure: <u>LOR-1PM13J-B401</u>	Revision: <u>10</u>
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____
Procedure: _____	Revision: _____

Actual Testing Environment: Simulator Control Room In-Plant Other

Testing Method: Simulate Perform

Estimated Time to Complete: 10 minutes **Actual Time Used:** _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

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

NOTE: Enter finalized grading, comments, and notes relevant to this evaluation in the associated TQ-AA-150-F03A/B. (See AR [4282419](#)).

Evaluator's Name (Print): _____

Evaluator's Signature: _____ **Date:** _____



INITIAL CONDITIONS

You are the Assist NSO,

- The 'B' VC/VE Train is Out of Service for a Work Window.
- Annunciator 1PM13J-B401, Control Room HVAC or Radwaste Reboiler Steam Outlet High Radiation or Instrument Failure, has just alarmed.

INITIATING CUE

The Unit Supervisor has directed you to respond to the Alarm 1PM13J-B401. Notify the Unit Supervisor when all LOR actions are complete.