

2014 LASALLE COUNTY STATION

INITIAL LICENSE EXAMINATION

PROPOSED EXAM FILES

*Job PERFORMANCE
MEASURES (JPMs)*

Exelon Nuclear

Job Performance Measure

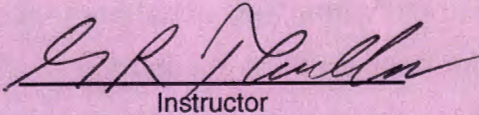
Perform a Manual Heat Balance

JPM Number: A-RO-41

Revision Number: 00

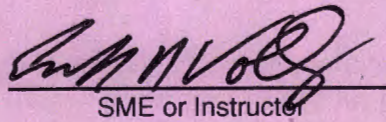
Date: 08/22/2014

Developed By:


Instructor

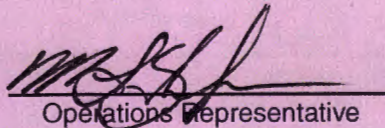
8/28/14
Date

Validated By:


SME or Instructor

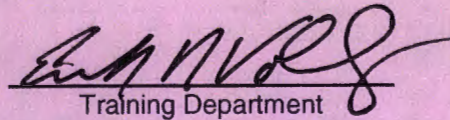
8/29/14
Date

Reviewed By:


Operations Representative

8/29/14
Date

Approved By:


Training Department

8/29/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 JPM developed new for the ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.

2. Materials:

- The following material is required to be provided to Candidate:
 - LOS-CX-S001 for Unit 1
 - A (Faulted) copy of CMSS Heat Balance (OD3)

INITIAL CONDITIONS

You are the Unit 1 NSO
Unit 1 is operating at rated power.
It is Monday evening Mid-Shift.

INITIATING CUE

Perform the Heat Balance Shiftly Surveillance, LOS-CX-S001.

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------|--|---|-----|-------|-------------------|
| 1. E.1 | If Core Power is > 60%, OBTAIN a copy of a CMSS Heat Balance | OD3 Heat Balance obtained | — | — | — |
| CUE | After a copy of OD3 has been properly demanded, provide the candidate with the faulted (Pre-printed OD-3) version for this JPM. Direct the candidate to use only these PPC Printout values for completion of this task. | | | | |
| 2. E.1.1 | CHECK the following points from the OD3 edit fall within characteristic curves of the attached graphs. <u>Feedwater flow vs. CTP</u> Identifies these points are inside the Attachment 1B curves | Feedwater flow vs. CTP accurately plotted inside the Attachment 1B curves | — | — | — |
| 3. E.1.1 | CHECK the following points from the OD3 edit fall within characteristic curves of the attached graphs. <u>Feedwater Temperature vs. CTP</u> Identifies these points are inside the Attachment 1C curves | Feedwater Temperature vs. CTP accurately plotted inside the Attachment 1C curves | — | — | — |
| 4. E.1.1 | CHECK the following points from the PPC Printout fall within characteristic curves of the attached graphs. <u>Individual RR Pump power vs. CTP</u> Identifies these points are inside the Attachment 1D curves | Individual RR Pump power vs. CTP accurately plotted inside the Attachment 1D curves | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------|--|---|-----|-------|----------------|
| *5. E.1.1 | CHECK the following points from the OD3 edit fall within characteristic curves of the attached graphs. <u>RWCU Temperatures vs. CTP</u> Identifies these points are outside the Attachment 1E curves | RWCU Temperatures vs. CTP accurately plotted OUTSIDE the Attachment 1E curves | — | — | — |
| 6. E.1.4 | IMMEDIATELY NOTIFY the Unit Supervisor of any discrepancies found during the performance of this surveillance. | Unit supervisor notified of the discrepancies on Attachment 1E | — | — | — |
| CUE | Role Play Unit Supervisor as necessary if notified of the points outside the Attachment 1E curves. | | | | |
| 7. E.1.1 | CHECK the following points from the OD3 edit fall within characteristic curves of the attached graphs. <u>RWCU Flow vs. CTP</u> Identifies these points are inside the Attachment 1F curves | RWCU Flow vs. CTP accurately plotted inside the Attachment 1F curves | — | — | — |
| 8. E.1.1 | CHECK the following points from the OD3 edit fall within characteristic curves of the attached graphs. <u>Control Rod Drive Flow vs. CTP</u> Identifies these points are inside the Attachment 1F curves | Control Rod Drive Flow vs. CTP accurately plotted inside the Attachment 1F curves | — | — | — |
| *9. E.1.2 | CHECK Control Valve Position (computer points may be utilized) vs. Core Thermal Power within limits of attachment 1G. Identifies these points are outside the Attachment 1G curves | Control Valve Position vs. Core Thermal Power accurately plotted OUTSIDE the Attachment 1G curves | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|--|-----|-------|-------------------|
| 10. E.1.4 | IMMEDIATELY NOTIFY the Unit Supervisor of any discrepancies found during the performance of this surveillance. | Unit supervisor notified of the discrepancies on Attachment 1G | — | — | — |
| CUE | Role Play Unit Supervisor as necessary if notified of the points outside the Attachment 1G curves. | | | | |
| 11. E.1.3 | Note discrepancies on Attachment 1A | Discrepancies noted on Attachment 1A | — | — | — |
| <p style="text-align: center;">TERMINATING CUE:</p> <p>This completes this JPM.</p> | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Perform a Manual Heat Balance**JPM Number:** A-RO-41**Revision Number:** 00**Task Number and Title:** 656.010 Given the proper procedure, perform the NSO Shiftly Surveillance IAW station procedures**K/A Number and Importance:** 2.1.25 RO3.9; Ability to interpret reference materials, such as graphs, curves, tables, etc.**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**LOS-CX-S001 Rev. 14, Heat Balance Shiftly Surveillance**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

PAGE

LaSalle-1 Cyc 16LV2

CORE POWER AND FLOW LOG

24-JUN-2014 15:00 CALCULATED
 19-AUG-2014 06:09 PRINTED
 CASEID PMLS1130118135955

ENERGY BALANCE
POWER (MW)

| | | |
|----------------|--------|-------|
| ELECTRICAL | 1202.7 | 98.1% |
| CORE | 3541.4 | 99.9% |
| FEEDWATER | 3534.1 | |
| CR DRIVES | 11.2 | |
| CLEAN-UP | 3.6 | |
| RADIATIVE LOSS | 4.1 | |
| PUMPS | 11.6 | |

FLOW (MLB/HR)

| | | |
|------------|--------|-------|
| TOTAL CORE | 102.56 | 94.5% |
| MEASURED | 102.56 | |
| SUBSTITUTE | 104.26 | |
| FEEDWATER | 15.19 | |
| CLEAN-UP | 0.12 | |
| RECIRC | 31.27 | |
| CR DRIVES | 0.03 | |

PRESSURE (PSIa)

| | |
|-------------|--------|
| DOMP | 1018.2 |
| DROP (MEAS) | 15.433 |

APRM CALIBRATION

| APRM ID | A | B | C | D | E | F |
|---------------|-------|-------|-------|-------|-------|-------|
| READING | 100.0 | 99.6 | 99.7 | 99.9 | 99.3 | 99.7 |
| AGAF | 0.999 | 1.003 | 1.002 | 0.999 | 1.006 | 1.001 |
| {APRM - %CTP} | 0.1 | -0.3 | -0.2 | 0.1 | -0.6 | -0.1 |

FAILED SENSORS: 0

ENTHALPY/SUBCOOLING (BTU/LB)

| | |
|--------------|--------|
| SUBC | 18.27 |
| FEEDWATER | 398.06 |
| RECIRC INLET | 527.55 |
| CLEAN-UP IN | 499.60 |
| CLEAN-UP OUT | 397.80 |

LOAD LINE SUMMARY

| | |
|------------|--------|
| CORE POWER | 99.9% |
| CORE FLOW | 94.5% |
| LOAD LINE | 103.7% |
| FLOW BASIS | MEAS. |

TEMPERATURE (Deg F)

| | |
|--------------|-------|
| FEEDWATER | 420.2 |
| RECIRC IN | 533.0 |
| CLEAN-UP IN | 510.0 |
| CLEAN-UP OUT | 420.0 |
| CR DRIVES | 80.0 |

[illegible]

7/18/2014

tabgrp1

15:15:48

ALA

ACTIVE A

Run

LGA
Curves

SPDS

SIAC

| | |
|-----------|--------------------------|
| DEMC_A018 | Control Valve 1 Position |
| DEMC_A019 | Control Valve 2 Position |
| DEMC_A020 | Control Valve 3 Position |
| DEMC_A021 | Control Valve 4 Position |

48.70000



N/A

44.00000

N/A

59.00000

N/A

43.00000

N/A

INITIAL CONDITIONS

You are the Unit 1 NSO
Unit 1 is operating at rated power.
It is Monday evening Mid-Shift.

INITIATING CUE

Perform the Heat Balance Shiftly Surveillance, LOS-CX-S001.

LaSalle-1 CyC 16LV2

CORE POWER AND FLOW LOG

24-JUN-2014 15:00 CALCULATED
 19-AUG-2014 06:09 PRINTED
 CASEID FMLS1130118135955

ENERGY BALANCE
POWER (MW)

| | | |
|----------------|--------|-------|
| ELECTRICAL | 1202.7 | 98.1% |
| CORE | 3541.4 | 99.9% |
| FEEDWATER | 3534.1 | |
| CR DRIVES | 11.2 | |
| CLEAN-UP | 3.6 | |
| RADIATIVE LOSS | 4.1 | |
| PUMPS | 11.6 | |

ENTHALPY/SUBCOOLING (BTU/LB)

| | |
|--------------|--------|
| SUBC | 18.27 |
| FEEDWATER | 398.06 |
| RECIRC INLET | 527.55 |
| CLEAN-UP IN | 499.60 |
| CLEAN-UP OUT | 397.80 |

LOAD LINE SUMMARY

| | |
|------------|--------|
| CORE POWER | 99.9% |
| CORE FLOW | 94.5% |
| LOAD LINE | 103.7% |
| FLOW BASIS | MEAS. |

FLOW (MLB/HR)

| | | |
|------------|--------|-------|
| TOTAL CORE | 102.56 | 94.5% |
| MEASURED | 102.56 | |
| SUBSTITUTE | 104.26 | |
| FEEDWATER | 15.19 | |
| CLEAN-UP | 0.12 | |
| RECIRC | 31.27 | |
| CR DRIVES | 0.03 | |

TEMPERATURE (Deg F)

| | |
|--------------|-------|
| FEEDWATER | 420.2 |
| RECIRC IN | 533.0 |
| CLEAN-UP IN | 510.0 |
| CLEAN-UP OUT | 420.0 |
| CR DRIVES | 80.0 |

PRESSURE (PSIa)

| | |
|-------------|--------|
| DOMES | 1018.2 |
| DROP (MEAS) | 15.433 |

APRM CALIBRATION

| APRM ID | A | B | C | D | E | F |
|---------------|-------|-------|-------|-------|-------|-------|
| READING | 100.0 | 99.6 | 99.7 | 99.9 | 99.3 | 99.7 |
| AGAF | 0.999 | 1.003 | 1.002 | 0.999 | 1.006 | 1.001 |
| (APRM - %CTP) | 0.1 | -0.3 | -0.2 | 0.1 | -0.6 | -0.1 |

FAILED SENSORS: 0

Exelon Nuclear

Job Performance Measure

Evaluate License Maintenance Requirements

JPM Number: A-RO-15

Revision Number: 04

Date: 08/22/2014

Developed By:

J R O'Neill
Instructor

8/13/14
Date

Validated By:

Emm N Volz
SME or Instructor

8/28/14
Date

Reviewed By:

MJD
Operations Representative

8/28/14
Date

Approved By:

Emm N Volz
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

- Revision 00** 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.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. Materials; The following material is required to be provided to Candidate:
 - A blank copy of Attachment 1 "Active License Tracking Log" from OP-AA-105-102

INITIAL CONDITIONS

You are a Reactor Operator with an active NRC license.

Today is 12/23/14.

You are currently assigned to relieve the assist NSO on Unit Two, January 2nd, 2015 on day shift.

During the current quarter:

- You covered three complete 12-hour day shifts as the Unit 1 Assist NSO during the outage on October 12th, 13th and 14th.
- You covered two 8-hour afternoon shifts as a Unit 2 NSO on October 23rd and 24th.
- You split 8-hour day shifts working four hours as the Unit 2 Assist NSO and the other four hours as a clearance writer 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 writer during the outage on November 10th, and 11th.
- The remainder of the time, you have worked 8-hour day shift as clearance writer Monday through Friday.
- All shifts covered were entered in the Shift Manager log.

INITIATING CUE

You are to document your shift coverage for the 4th quarter of 2014, evaluate your standing as an active licensed RO, and determine your ability to assume shift for January 2nd, 2015.

Give an explanation for your determination.

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|---|-------|-------|-------------------|
| Note | Provide the candidate with a blank copy of Attachment 1 "Active License Tracking Log" from OP-AA-105-102 | | | | |
| 1. | Records shift coverage from 4 th quarter of 2014 | Correctly records dates, shifts, length of shift, position filled, and signs attachment 1 using information from the initial conditions. | _____ | _____ | _____ |
| Note | ONLY full shifts, either 8 or 12 hours <u>with turnovers</u> count towards shift coverage time allowed. Candidates should NOT record any of the split shifts. The end result should show 2-8 hour shifts and 3-12 hour shifts, which is short of the required 7-8 hour shifts or 5-12 hour shifts. No truncation is allowed. | | | | |
| *2. | Reviews requirements to maintain active license. | Recognizes fact that he/she does NOT have the minimum number of required hours of shift watch to maintain their active license. | _____ | _____ | _____ |
| *3. | Reviews requirements to maintain active license. | Determines he/she is NOT eligible to stand shift on January 2 nd , 2015 due to not having the minimum number of required shifts. | _____ | _____ | _____ |
| CUE | When candidate has determined that they will not be eligible to assume the shift, ask them what additional requirements they need to be able to stand the shift on January 2nd, 2015. | | | | |
| *4. | Reviews requirements to maintain active license. | Determines that a minimum of two more complete eight hour or twelve hour shifts are needed to fulfill the requirements to maintain their license active | _____ | _____ | _____ |
| TERMINATING CUE: When the candidate determines that they cannot assume the shift for January 2nd, 2015 and has determined the correct amount of shifts needed to maintain their license active, inform candidate that the JPM is complete. (Two – 8 hour or Two – 12 hour shifts) | | | | | |

JPM Stop Time: _____

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

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Evaluate License Maintenance Requirements**JPM Number:** A-RO-15**Revision Number:** 04**Task Number and Title:** 785.010 During performance of tasks, apply the administrative requirements of Administrative Process for NRC License and Medical Requirements IAW station procedures**K/A Number and Importance:** 2.1.4, 3.3/3.8; Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc.**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**

OP-AA-105-102 Rev. 11

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 17 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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INITIAL CONDITIONS

You are a Reactor Operator with an active NRC license.

Today is 12/23/14.

You are currently assigned to relieve the assist NSO on Unit Two, January 2nd, 2015 on day shift.

During the current quarter:

- You covered three complete 12-hour day shifts as the Unit 1 Assist NSO during the outage on October 12th, 13th and 14th.
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- You split two 12-hour midnight shifts, working six hours as the Unit 1 NSO and the other six hours as a clearance writer during the outage on November 10th, and 11th.
- The remainder of the time, you have worked 8-hour day shift as clearance writer Monday through Friday.
- All shifts covered were entered in the Shift Manager log.

INITIATING CUE

You are to document your shift coverage for the 4th quarter of 2014, evaluate your standing as an active licensed RO, and determine your ability to assume shift for January 2nd, 2015.

KEY

ATTACHMENT 1
Active License Tracking Log
Page 1 of 1

Employee Number: 012345 (EXAMPLE)

SHIFT COVERAGE FOR THE 4TH (1ST, 2ND, 3RD, 4TH) CALENDAR QUARTER OF 2014 (YEAR)

NAME

ACTIVE INACTIVE

Name of License Holder
(Print)

License Status At Start
Quarter (circle one)

RECORD OF 8 / 12 HOUR SHIFTS WORKED DURING QUARTER

Enter the date the shift ended, the shift, the shift length, the Unit, position covered, circle Y or N for logged in the SM log and signature. If working an 8 hour or 8 / 12 hour shift, enter a "1" for the midnight shift, "2" for the day shift, or a "3" for the afternoon shift (only enter shifts at least 8 hours length for which turnovers were conducted). Seven shifts at least 8 hours in length are required per quarter. If working a straight 12 hour shift, enter a "N" for night shift or a "D" for day shift (only enter shifts at least 12 hours in length for which turnovers were conducted). Five 12 hour shifts are required per quarter. The quarterly shift watch requirement may be completed with a combination of complete 8 and 12 hour shifts (in a position required by the plant's Technical Specifications) at sites having a mixed shift schedule (enter appropriate shift designator), and watches shall not be truncated when the minimum quarterly requirement (56 hours) is satisfied. (NUREG 1021, Revision 9)

| | DATE | SHIFT | LENGTH | UNIT | POSITION (circle one) | | | | SM Log | SIGNATURE OF LICENSE HOLDER |
|------------|----------|-------|--------|------|--------------------------|----|----|----|-----------------|--------------------------------|
| ONE | 10/12/14 | D * | 12 | 1 | FHS | SM | US | RO | Logged Y / N | |
| TWO | 10/13/14 | D * | 12 | 1 | FHS | SM | US | RO | Logged Y / N | |
| THREE | 10/14/14 | D * | 12 | 1 | FHS | SM | US | RO | Logged Y / N | |
| FOUR | 10/23/14 | 3 | 8 | 2 | FHS | SM | US | RO | Logged Y / N | |
| FIVE | 10/24/14 | 3 | 8 | 2 | FHS | SM | US | RO | Logged Y / N | |
| SIX* | | | | | FHS | SM | US | RO | Logged Y / N | |
| SEVEN * | | | | | FHS | SM | US | RO | Logged Y / N | |

*The 6th and 7th shifts are not required if a straight 12 hour schedule is being worked.

SM = Shift Manager
US = Unit Supervisor
RO = Unit RO or Assistant RO

FHS = Fuel Handling Supervisor
Logged- Verified in SM log for correct
position (If no, provide additional
documentation to verify)

* MAY ALSO PUT '2'

KEY

Operations Support Manager Date

SRRS 3D.106 or as determined by Records Management

FORWARD ORIGINAL TO LICENSE HOLDER'S LICENSE FILE

Exelon Nuclear

Job Performance Measure

Print Reading Exercise

JPM Number: A-RO-42

Revision Number: 00

Date: 08/22/2014

Developed By:

J.R. Phullen
Instructor

8/28/14
Date

Validated By:

E.A. N. Velly
SME or Instructor

8/28/14
Date

Reviewed By:

MBL
Operations Representative

8/28/14
Date

Approved By:

E.A. N. Velly
Training Department

8/28/14
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 8 and 12 below.

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Procedure _____ Rev: _____
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- _____ 11. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 12. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 This JPM was developed new for ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. Materials; the following material is required to be provided to Candidate:
 - HUMAN PERFORMANCE ALERT from July 2, 2014
 - (Unit 2) 1E-2-4232AC Schematic Diagram Primary Containment and Reactor Vessel Isolation System "PC" (B21H) Part 3.
 - LIS-MS-406A, "Unit 2 Condenser Low Vacuum MSIV Isolation Functional Test with Vacuum in Condenser"

INITIAL CONDITIONS

On July 2nd, with Unit 2 at rated power, LIS-MS-406A, Unit 2 Condenser Low Vacuum MSIV Isolation Functional Test, was being performed.

The IM Technician mishandled a jumper and caused a ½ isolation signal for the MSIVs.

The resultant HUMAN PERFORMANCE ALERT and the referenced electrical schematic are provided.

INITIATING CUE

Using the reference material provided, explain what happened during this event.

Your explanation must include the following:

- Identification of the following components reference in the HUMAN PERFORMANCE ALERT:
 - The contacts being jumpered
 - The fuse that blew
- An explanation of why the fuse blew

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|--|-------|-------|-------------------|
| Note | The following step may be performed in any order. | | | | |
| *1. | Identify the contacts being jumpered | Point AA-47 (directly above contacts 1-2 on K10C) and point T1 on 2B21-K100C (directly below contacts 1-2 on K10C) are correctly identified | _____ | _____ | _____ |
| *2. | Identify the fuse that blew | F6C (at the top of the logic string) is correctly identified | _____ | _____ | _____ |
| *3. | Explain why the fuse blew | Adequate explanation provided | _____ | _____ | _____ |
| Note | The end of the jumper at T1 became disconnected and touched ground. On a 102 VAC circuit like this, that is a "short", which draws high current through the F6C fuse and causes it to blow. | | | | |
| <p style="text-align: center;">TERMINATING CUE:</p> <p>This completes this JPM.</p> | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Print Reading Exercise**JPM Number:** A-RO-42**Revision Number:** 00**Task Number and Title:** 620.00.09, Identify standard Sargent & Lundy electrical symbols and explain the circuit function using LaSalle Station electrical diagrams.**K/A Number and Importance:** 2.2.41, 3.5/3.9; Ability to obtain and interpret station electrical and mechanical drawings.**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**

LIS-MS-406A, "Unit 2 Condenser Low Vacuum MSIV Isolation Functional Test with Vacuum in Condenser", Rev 4

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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HUMAN PERFORMANCE ALERT



Date: 7/2/2014

Description of Event: (IR 1678247) Inadvertent Half Isolation During LIS-MS-406A

During the performance of LIS-MS-406A, Unit 2 Condenser Low Vacuum, MSIV Isolation Functional Test, Instrument Maintenance installs a Banana Jack style jumper (engineered test points) across the contacts of the K10C relay to prevent an actuation while testing 2B21-N056C low vacuum switch.

These jumpers are installed in the Main Control Room (MCR) back panel in 2H13-P609 AA-47 and on T1 of the 2B21-K100C relay. This jumper prevents actuation of a half trip of the MSIV isolation.

The jumper was first installed at the AA-47 point. The technician then proceeded to route the jumper through the panel for support and install the jumper at the T1 of 2B21-K100C relay.

Once the jumper was installed at the 2B21-K100C relay the technician backed out of the 2H13-P609 panel and noticed that the jumper had come free from the AA-47 position. He then reached for the end of the jumper, but did not realize the jumper had become lodged between his low voltage glove and his long sleeve shirt. When the technician reached forward and down to secure the jumper it allowed the jumper to drop lower and come in contact with a ground cable.

This caused a short in the relay logic due to a direct path to ground and blew the 6C fuse for the logic. This then caused a half isolation signal for the MSIV's.

Immediate actions taken:

IMD immediately stopped work, contacted the Unit Supervisor, and restored the equipment to a safe condition. IMD then verified that the fuse 6C had blown during the event and caused the half isolation signal.

IMD then coordinated with operations to assist in fuse change out and relay logic reset to clear the half isolation signal. A stand down will be held for all IMD shifts to discuss the events.

INITIAL CONDITIONS

On July 2nd, with Unit 2 at rated power, LIS-MS-406A, Unit 2 Condenser Low Vacuum MSIV Isolation Functional Test, was being performed.

The IM Technician mishandled a jumper and caused a ½ isolation signal for the MSIVs.

The resultant HUMAN PERFORMANCE ALERT and the referenced electrical schematic are provided.

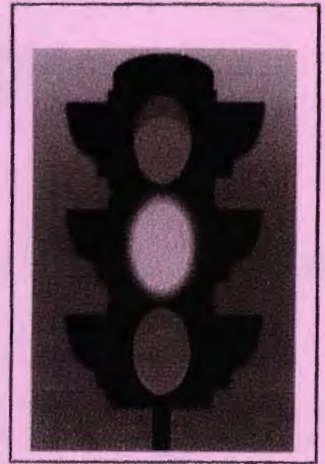
INITIATING CUE

Using the reference material provided, explain what happened during this event.

Your explanation must include the following:

- Identification of the following components reference in the HUMAN PERFORMANCE ALERT:
 - The contacts being jumpered
 - The fuse that blew
- An explanation of why the fuse blew

HUMAN PERFORMANCE ALERT



Date: 7/2/2014

Description of Event: (IR 1678247) Inadvertent Half Isolation During LIS-MS-406A

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These jumpers are installed in the Main Control Room (MCR) back panel in 2H13-P609 AA-47 and on T1 of the 2B21-K100C relay. This jumper prevents actuation of a half trip of the MSIV isolation.

The jumper was first installed at the AA-47 point. The technician then proceeded to route the jumper through the panel for support and install the jumper at the T1 of 2B21-K100C relay.

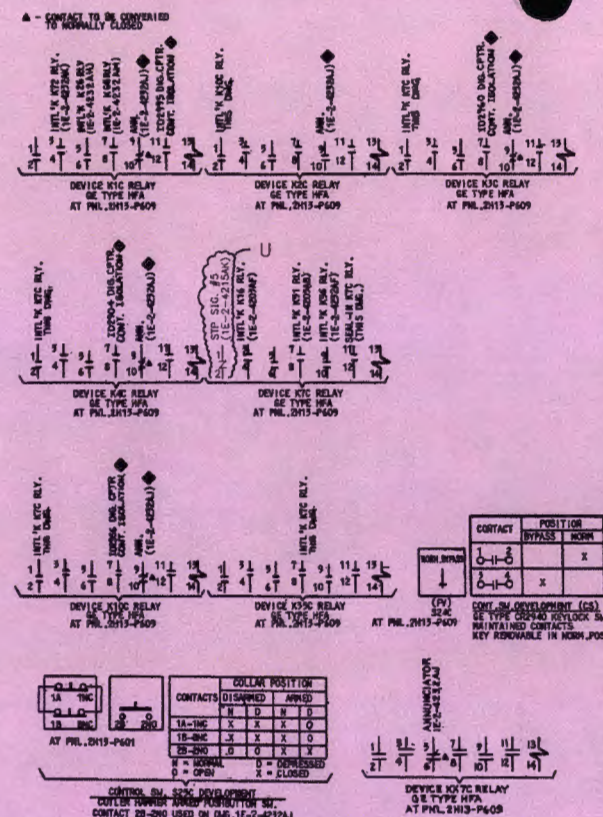
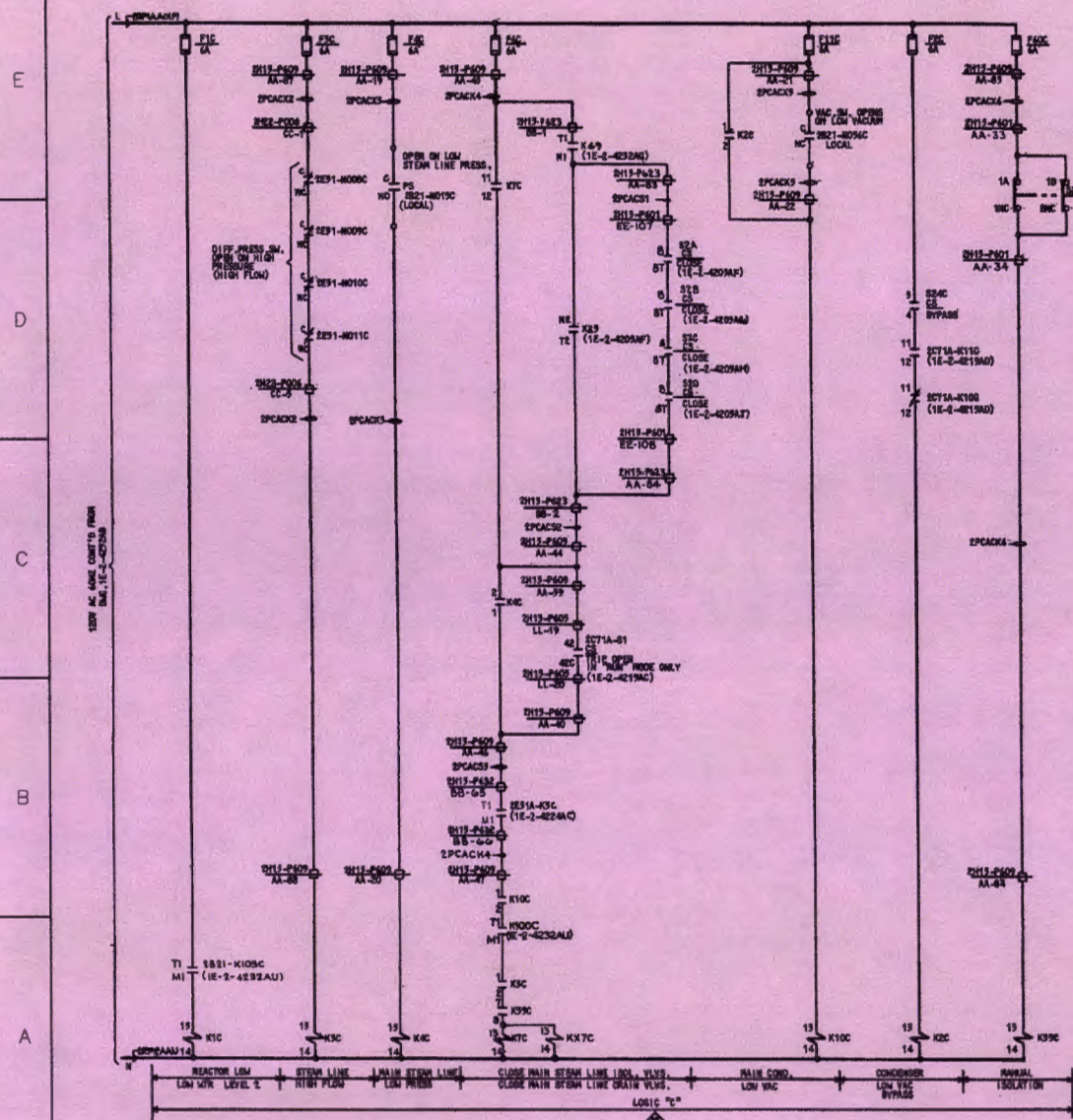
Once the jumper was installed at the 2B21-K100C relay the technician backed out of the 2H13-P609 panel and noticed that the jumper had come free from the AA-47 position. He then reached for the end of the jumper, but did not realize the jumper had become lodged between his low voltage glove and his long sleeve shirt. When the technician reached forward and down to secure the jumper it allowed the jumper to drop lower and come in contact with a ground cable.

This caused a short in the relay logic due to a direct path to ground and blew the 6C fuse for the logic. This then caused a half isolation signal for the MSIV's.

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IMD then coordinated with operations to assist in fuse change out and relay logic reset to clear the half isolation signal. A stand down will be held for all IMD shifts to discuss the events.



| | | | | | | | | | |
|--|----------|--------------------------|--|--|----------|----------|----------|----|------|
| REF. GE. CO. DWG. 8074-15210-141 REV 17 SH-1A REV 20 & SH-5 REV 20 | | | | | | | | | |
| NO. | DATE | DESCRIPTION | | | DATE | BY | DATE | BY | DATE |
| 1 | 02/07/80 | FOR RECORD FOR EC 355118 | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 2 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 3 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 4 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 5 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 6 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 7 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 8 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 9 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 10 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 11 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 12 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 13 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 14 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 15 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 16 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 17 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 18 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 19 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 20 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 21 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 22 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 23 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 24 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 25 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 26 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 27 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 28 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 29 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 30 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 31 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 32 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 33 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 34 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 35 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 36 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 37 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 38 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 39 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 40 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 41 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 42 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 43 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 44 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |
| 45 | 02/07/80 | | | | 02/07/80 | 02/07/80 | 02/07/80 | | |

| | | | | |
|---|--|--|------------------|--|
| SCHEMATIC DRAWING PRIMARY CONTAINMENT & REACTOR VESSEL ISOLATION SYSTEM "PC" (B21H) PART 3 | | | | |
| 1E-2-4232AC | | | | |
| SCALE: 1/8"=1'-0" | | | SHEET NO: | |
| DATE: 02/07/80 | | | SIZE: D E07 | |
| DRAWN BY: CMC | | | CHECKED BY: 154H | |
| CRITICAL CONTROL ROOM DRAWING | | | | |

| | | |
|---|---|--|
| Exelon LaSalle Station 1 Unit | 2 | NUCLEAR SAFETY RELATED EQUIPMENT IS SHOWN ON THIS DRAWING. |
| | | |

Exelon Nuclear

Job Performance Measure

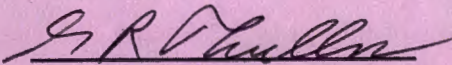
Determine Brief and Protective Clothing Requirements

JPM Number: A-RO-35

Revision Number: 01

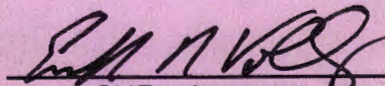
Date: 08/22/2014

Developed By:


Instructor

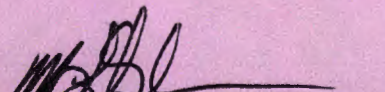
8/14/14
Date

Validated By:


SME or Instructor

8/28/14
Date

Reviewed By:


Operations Representative

8/28/14
Date

Approved By:


Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

- Revision 00** This JPM was created for use during the ILT Class 01-1 NRC Exam and updated for ILT 09-1 NRC Exam.
- Revision 01** Updated to current template and procedures for ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. Materials:
 1. Copy of RP-AA-460.
 2. Copy of Survey Map for Unit 1 Reactor Building, El 761' General Area.
 3. Copy of Survey Map for Unit 1 Reactor Building, El. 761' RWCU Pumproom.
 4. RWP 10010996.

INITIAL CONDITIONS

You are an extra licensed operator on shift.

Bob Smith, a contractor, reported that valve 1G33-F043A, A RWCU pump suction header upstream stop valve appeared to have a packing leakage.

The Shift Manager is unable to obtain any more information regarding the packing leakage.

INITIATING CUE

The Shift Manager has informed you to quantify the leak.

He directs you to inform him of the requirements to access the valve which is located in the Unit 1 "A" Reactor Water Cleanup Pump room.

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|--|---|-------|-------|-------------------|
| Note | WHEN the examinee asks RP for the survey map of the area, THEN provide the map attached to this JPM. WHEN the examinee asks RP for the RWPs for the job THEN provide RWP 10010996 attached to this JPM. If the student asks for the procedure for Control of High and Very High Radiation Areas, RP-AA-460, provide them with a copy. | | | | |
| Note | Steps 1 and 2 may be performed in any order. | | | | |
| *1. | Examinee reviews RWPs and survey maps and determines proper protective clothing requirements. | Determines following protective clothing requirements: <ul style="list-style-type: none"> • Modesty Garments • Double Coveralls • Rubber shoe covers and reusable or disposable booties • Waterproof Boots or Hi Top Rubber Shoe Covers • Cotton Liners • 2 pair rubber gloves with cuffs • Full hood • Personal Hardhat with a Hardhat Cover | _____ | _____ | _____ |
| *2. | States briefing requirements to enter a Locked High Rad Area (in accordance with RP-AA-460, step 4.7.1) | Determines a briefing from Radiation Protection is required. | | | |
| 3. | Informs Shift Manager of clothing and briefing requirements. | Informs shift manager of information from steps 1 and 2. | _____ | _____ | _____ |
| TERMINATING CUE: The JPM is considered complete at this time. | | | | | |

JPM Stop Time: _____

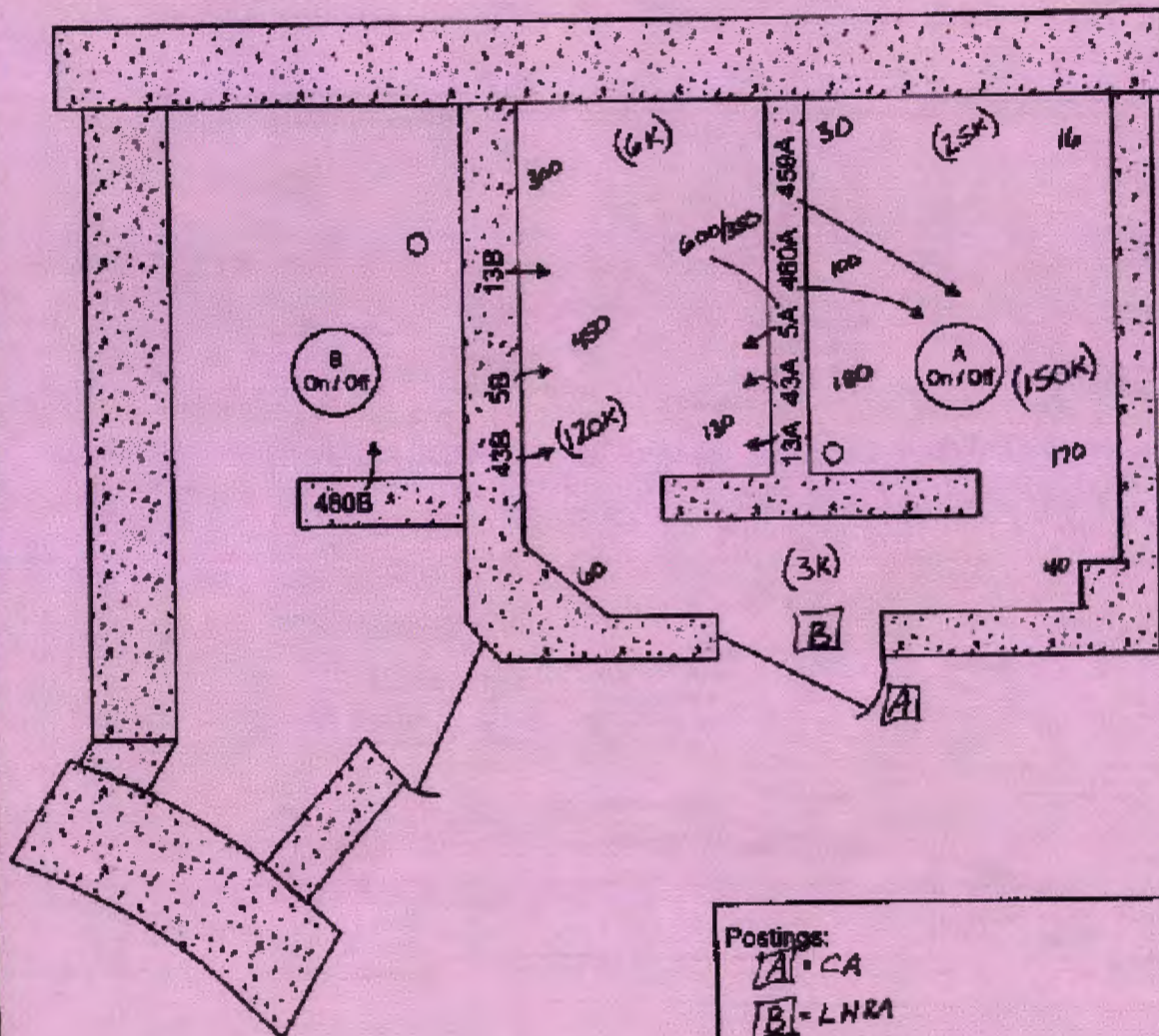
JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Determine Brief and Protective Clothing Requirements**JPM Number:** A-RO-35**Revision Number:** 01**Task Number and Title:** 638.010, Demonstrate on-shift licensed operator responsibilities**K/A Number and Importance:** 2.3.7; RO 3.5; Ability to comply with radiation work permit requirements during normal or abnormal conditions.**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**

RP-AA-460 Rev. 26, Controls for High and Locked High Radiation Areas

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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Postings:

[A] - CA

[B] - LHRA

Rx BLOC IS POSTED RA

LaSalle Station

1RB761

RT Pump Rooms

Map # 820

Rx Pwr: 1200 MWe

Survey Purpose:

Routine / Job Coverage (Other (circle))

RWP: 10015625

NOTES: PRE-MAINTENANCE

Instrumentation

Model / Ser# / Cal Due

A3506 / 26219 / 12/19/14

A7315 / 16321 / 12/20/14

Smears Assessed for a & DRPs?

☒ Yes ☐ N/A

β Dose Rates Assessed?

☐ Yes ☒ N/A

Air Sample Collected? ☐ Yes ☒ No
(See Air Sample Log for Results)

RPT Dose: 7.4

Survey Date: 9/10/14

Survey Time: 1000

Surveyed By: [Signature]

Peer Checked By: SG

Reviewed By: [Signature]

POSTINGS

① 2 CA
3440
of 6414

U 1 RX 761 GENERAL AREA

LaSalle

UNIT
REACTOR BLDG
ELEV 761'

MW(E) ~1200
SCFM. HYDROGEN 14

INST. SER. #

CP 6604-037
CAL DUE 4/8/15
SC DM
GM 15975
CAL DUE 2/17/15
SC NC
AIR NA
CAL DUE 1/1/15
OTHER

☐ ROUTINE
☐ RWP#
☒ Scaffold build

SURVEY# NA
AIR SAMPLE RESULTS NA DA

DATE 6/4/14
TIME 16:30
BY J.R. 1/85
REV. BY J.W.

COMMENTS MAP # 819

AREA# 1040

INITIAL CONDITIONS

You are an extra licensed operator on shift.

Bob Smith, a contractor, reported that valve 1G33-F043A, A RWCU pump suction header upstream stop valve appeared to have a packing leakage.

The Shift Manager is unable to obtain any more information regarding the packing leakage.

INITIATING CUE

The Shift Manager has informed you to quantify the leak.

He directs you to inform him of the requirements to access the valve which is located in the Unit 1 "A" Reactor Water Cleanup Pump room.

Exelon Nuclear

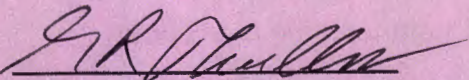
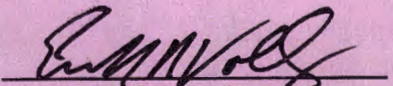
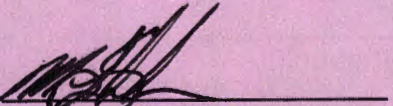
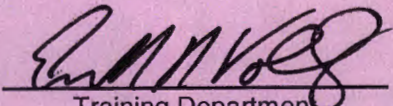
Job Performance Measure

Handling Personnel Injuries

JPM Number: A-SRO-35

Revision Number: 02

Date: 08/22/2014

| | | |
|---------------|---|------------------------|
| Developed By: |  Instructor | <u>8/14/14</u> Date |
| Validated By: |  SME or Instructor | <u>8/28/14</u> Date |
| Reviewed By: |  Operations Representative | <u>8/28/14</u> Date |
| Approved By: |  Training Department | <u>8/28/14</u> Date |

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

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- _____ 3. Performance location specified. (in-plant, control room, simulator, or other)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating cue (and terminating cue if required) are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure(s) referenced by this JPM reflects the current revision:
Procedure _____ Rev: _____
Procedure _____ Rev: _____
Procedure _____ Rev: _____
- _____ 9. Verify cues both verbal and visual are free of conflict.
- _____ 10. Verify performance time is accurate
- _____ 11. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 12. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

1. **Revision 00:** This JPM was written by G. W. Beale for the 2005 NRC Annual Examination.
2. **Revision 01:** Updated to current procedures and JPM Template for ILT 11-1 NRC Exam. Revision includes a major modification to the initiating cue.
3. **Revision 02:** Updated to current template and procedures for ILT 13-1 NRC Exam.

MATERIALS

1. The following procedures are required to be available should the student request them:
 - a. A blank LAP-911-1 Attachment A Form
 - b. LAP 950-3, Handling Personnel Injuries
 - c. LAP-911-1, Reporting Emergencies

INITIAL CONDITIONS

You are the Unit 1 Supervisor.

- It is a normal working day.
- Unit-1 is at near rated conditions.
- Unit-1 Reactor Water Cleanup (RWCU) is being returned to service following maintenance.
- The Emergency Phone is ringing at Extension 2211.

INITIATING CUE

Respond to the incoming phone message at extension 2211.

Perform the necessary procedures in response to the information received until relieved.

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.
- Denotes critical elements of a critical step.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of the page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------------------|---|---|-------|-------|-------------------|
| NOTE | It is NOT the intent of this JPM to have the examinee complete the ENS Form. Therefore, IF during the performance of this JPM the examinee begins to work on the ENS Form, THEN tell the examinee "The Unit-2 Unit Supervisor will fill out the ENS form for you." | | | | |
| 1. | Respond to the incoming phone message at extension 2211. | Call on Extension 2211 answered | _____ | _____ | _____ |
| CUE | <p>Role Play as the RP Tech supporting the RWCU work, and provide the following report:</p> <ul style="list-style-type: none"> • This is TOM DORAN calling from Extension 2344 at the Unit 1 RWCU Heat Exchanger Room. • Darrell Hovious, an EO supporting the RWCU job has been injured. <ul style="list-style-type: none"> ○ The other EO thinks that the A RWCU Non-Regenerative Heat Exchanger Tube Side Relief Valve (1G33-F341A) lifted and subsequently closed. ○ Hovious leaned on the relief valve's tail pipe and received at least a 2nd degree burn on his left arm. • Hovious is out of the Heat Exchanger Room and across the step off pad. • He is NOT contaminated. • He is in severe pain and may be going into shock. <p>Verify correct repeat back.</p> | | | | |
| CUE | <p>When student demonstrates ability to obtain current controlled copy of LAP-911-1 Attachment A, provide a (Yellow) blank copy of this form.</p> <p>Student may elect to go directly to LAP-950-3. If so, steps 2 through 4 are not applicable.</p> | | | | |
| 2. LAP-911-1 Step B.3.1 | Select the appropriate emergency checklist: | Candidate selects LAP-911-1 Attachment A "Onsite Emergency" | _____ | _____ | _____ |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|---|-----|-------|-------------------|
| 3. LAP-911-1 Attachment A | Record the necessary information in the General Information section of Attachment A: <ul style="list-style-type: none"> • Date • Time • Name of Caller • Location of Emergency • Telephone number of caller • Nature of Emergency • Extent of Damage or Injuries | General Information recorded: | — | — | — |
| 4. LAP-911-1 Attachment A | Record the necessary information in the "Personnel Accident, Injury, or Illness" section of Attachment A: <ul style="list-style-type: none"> • Number of Injured? • Radiologically contaminated? • Can injured be moved? • Confined space rescue? | "Personnel Accident, Injury, or Illness" information recorded: | — | — | — |
| *5. LAP-911-1 Attachment A Step 1 and LAP-950-3 Step E.1.3 | Notify the Shift Manager | Shift Manager notified (Critical due to Reportability time requirements) | — | — | — |
| CUE | ROLE PLAY as the Shift Manager to receive this report. Inform the candidate that you will perform the necessary notifications. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|--|------------|--------------|---------------------------|
| NOTE | It is not the intent of this JPM to exercise SA-AA-123 "Injury and Illness Reporting and Recordkeeping", which is essentially a record of the investigation into the incident. | | | | |
| 6. LAP-911-1 Attachment A Step 2 | Initiate the applicable actions and notifications of: LAP-950-3 and SA-AA-123 | Demonstrates ability to obtain current controlled copies of LAP-950-3 | — | — | — |
| CUE | When student demonstrates ability to obtain current controlled copy of the procedure, then provide the candidate with a (Working) JPM copy of LAP-950-3. | | | | |
| NOTE | Steps 3 & 4 of the Personnel Accident, Injury, or Illness section of Attachment A apply only to Confined space rescues. | | | | |
| *7. LAP-950-3 Step E.1.4.1 | NOTIFY the Rad Protection Department at 2241 for radiological assistance as necessary. | Rad Protection assistance obtained (May also take credit for Tom Duran who is on the scene) | — | — | — |
| CUE | Respond as Rad Protection and tell the US that they will respond. | | | | |
| *8. LAP-950-3 Step E.1.4.1 | NOTIFY the Nurse at 4204 for first aid | Correct extension. 4204, provided and Nurse notified | — | — | — |
| CUE | Respond as Nurse and tell the US that they will respond with first aide. | | | | |
| 9. LAP-950-3 Step E.1.4.2 | DESIGNATE an individual to assume command and control at the accident scene or where individual has taken ill. This will normally be the Field Supervisor. | Examinee designates an individual (probably the Field Supervisor) to take command and control. | — | — | — |
| CUE | Respond as the designated individual and inform the US that you have command and control. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|--|---|-----|-------|-------------------|
| *10. LAP-950-3 Step E.1.4.3 | NOTIFY the Seneca Emergency Services at (815) 357-6442 to send an ambulance to the station. | Examinee provides the correct phone number (815) 357-6442 for Seneca Emergency Services and requests an ambulance be sent to the station. | — | — | — |
| CUE | Respond as Seneca Emergency Services and say the ambulance will be at LaSalle Station in 15 minutes. | | | | |
| 11. LAP-950-3 Step E.1.4.3.1 | <p>VERIFY Seneca Emergency Services has sent an ambulance to the station within 15 minutes by:</p> <p>Call-back from Seneca Emergency Services stating that an ambulance is in route.</p> <p>Calling the Seneca Emergency Services and requesting the status of the ambulance requested.</p> | Examinee receives information that ambulance will be at the station in 15 minutes. | — | — | — |
| CUE | Respond as Seneca Emergency Services and say the ambulance is on its way | | | | |
| NOTE | Step E.1.4.3.2 is not applicable because Seneca Emergency Services has been contacted. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|---|--|-----|-------|-------------------|
| *12. LAP-950-3 Step E.1.4.4 | NOTIFY security at 2940 that an ambulance has been called to respond to the Station. | Correct extension, 2940, provided And Security informed that an ambulance will arrive at the Station | — | — | — |
| CUE | Respond as Security and inform US that the ambulance will be allowed through the MAF. | | | | |
| 13. LAP-950-3 Step E.1.4.5 | VERIFY the status of the victim from Field Supervisor, Nurse or Rad Protection at the scene. | Examinee contacts the Field Supervisor, Nurse or Rad Protection for status of the EO. | — | — | — |
| CUE | Respond Field Supervisor, Nurse or Rad Protection that: The EO has second degree burns. The EO has gone into shock and is <u>now unconscious</u>. Rad Protection has verified that the EO is not contaminated. The Site Nurse is treating him now. | | | | |
| 14. LAP-950-3 Step E.1.4.6 | VERIFY with Rad Protection whether or not the victim is leaving the station contaminated prior to calling the hospital. | Examinee marks this step as completed based on the previous CUE | — | — | — |
| *15. LAP-950-3 Step E.1.4.7 & (Caution) | NOTIFY the appropriate hospital: CAUTION: Personnel who are unconscious or have potentially life threatening injuries or illness should be taken to Morris Community Hospital | A correct phone number provided for Morris Community Hospital (815) 942-6837 or (815) 942-2932 | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|---|-----|-------|-------------------|
| CUE | ROLE PLAY as Morris Community Hospital as necessary. Come to the phone as the Nursing Supervisor and ROLE PLAY as necessary to receive the next report. | | | | |
| 16. LAP-950-3 Step E.1.4.7 | INFORM the individual answering the phone to put you in contact with the Nursing Supervisor immediately. The Nursing Supervisor must be told: the nature or extent of the injury and if the person is not contaminated, potentially contaminated or contaminated. | Nursing Supervisor informed of: The extent of the injury and That the individual is NOT contaminated | — | — | — |
| 17. LAP-950-3 Step E.1.4.8 | ENSURE notifications are performed per OP-AA-106-101 if the injured person being transported to the hospital is contaminated or potentially contaminated. | OP-AA-106-101 notifications verified by contacting Shift Manager | — | — | — |
| CUE | ROLE PLAY Shift Manager. Report that the OP-AA-106-101 notifications have been completed. | | | | |
| 18. LAP-950-3 Step E.1.4.9 | ENSURE notification of the cognizant Department Head for Exelon employees or the Contractor Supervisor for contractor personnel. | Operations Director notified about the injured EO | — | — | — |
| Note | The above step can also be accomplished by verifying that the Shift Manager notified the Operations Director in the previous step. | | | | |
| CUE | ROLE PLAY Operations Director as necessary to acknowledge this report. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|--|-----|-------|-------------------|
| 19. LAP-950-3 Step E.1.4.10 | ENSURE a management representative is assigned to accompany injured Exelon personnel to the hospital. During normal working hours the Department Head should designate the management employee | The management representative assigned to accompany injured Exelon personnel to the hospital is identified | — | — | — |
| CUE | ROLE PLAY Operations Director as necessary. Respond that the SOS has been directed to accompany the injured EO to the hospital. | | | | |
| CUE | Report that the ambulance has arrived onsite and the burned EO has been evacuated. Inform the student that this JPM is complete. Enter the JPM Stop Time in the blank provided below. | | | | |

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____

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

JPM Title: Handling Personnel Injuries

JPM Number: A-SRO-35

Revision Number: 02

Task Number and Title: 722.010

Given a postulated personnel injury, complete the required administrative sections related to a personnel injury IAW station procedures

K/A Number and Importance: 2.1.08 SRO 4.1

Ability to coordinate personnel activities outside the control room.

Suggested Testing Environment: Simulator or Classroom

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

Reference(s):

LAP 911-1, Reporting Emergencies, Rev. 7

LAP 950-3, Handling Personnel Injuries, Rev. 7

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 20 minutes

Actual Time Used: _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

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INITIAL CONDITIONS

You are the Unit 1 Supervisor.

- It is a normal working day.
- Unit-1 is at near rated conditions.
- Unit-1 Reactor Water Cleanup (RWCU) is being returned to service following maintenance.
- The Emergency Phone is ringing at Extension 2211.

INITIATING CUE

Respond to the incoming phone message at extension 2211.

Perform the necessary procedures in response to the information received until relieved.

Exelon Nuclear

Job Performance Measure

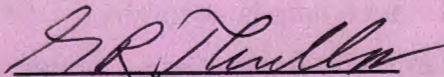
Determine Reporting Requirements per OP-AA-106-101 (HPCS Inoperability)

JPM Number: A-SRO-51

Revision Number: 00

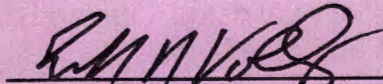
Date: 08/22/2014

Developed By:


Instructor

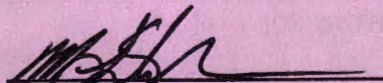
8/28/14
Date

Validated By:


SME or Instructor

8/28/14
Date

Reviewed By:


Operations Representative

8/28/14
Date

Approved By:


Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 This JPM was developed new for ILT 13-1 NRC Exam. It is modeled after bank JPM A-SRO-22, which is about determining reportability for loss of Offsite Sirens.

SETUP INSTRUCTIONS

1. This JPM should be conducted in a location that provides easy access to the required reference procedures (simulator, library, SM office, etc.).
2. A current revision of the following procedures are required to be available should the candidate request them:
 - Exelon Reportability Reference Manual, including:
 - LS-AA-1020, Reportability Tables And Decision Trees
 - LS-AA-1110, Reportable Event
 - LS-AA-1120, Reportability Reference Manual Volume 1 Table SAF
 - OP-AA-106-101, Significant Event Reporting
3. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Shift Manager.
- Both Units are operating at rated power.
- On Unit 1, LOS-HP-Q1, "HPCS System Inservice Test", is being performed.
- You have just been informed that, during performance of the HPCS test, 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.

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|---|-------|-------|-------------------|
| *1. | Determine reporting requirements IAW: Exelon Reportability Reference Manual, LS-AA-1020 and/or Reportable Event SAF 1.8 Declaration, LS-AA-1110 <u>SAF 1.8 is a 8 Hour Report</u> | Determines event: <ul style="list-style-type: none">• Is reportable per SAF 1.8• Requires notification of the NRC via ENS within 8 hours. (NRC Operations Center) | _____ | _____ | _____ |
| *2. | Determine notification requirements IAW OP-AA-106-101, Significant Event Reporting per Attachment 1 (ENS) | Notification of following individuals determined to be required: <ul style="list-style-type: none">• Site VP• Plant Manager• Operations Director• Nuclear Duty Officer• Experience Assessment / Regulatory Assurance Manager• Senior Resident Inspector• Site Nuclear Oversight Manager | _____ | _____ | _____ |
| CUE | When contacted as the SOS, acknowledge this report. | | | | |
| TERMINATING CUE: This completes this JPM. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Determine Reporting Requirements per OP-AA-106-101 (HPCS?)**JPM Number:** A-SRO-51**Revision Number:** 00**Task Number and Title:** 604.010Given a situation and Exelon Reportability Manual determine notification requirements IAW station procedures**K/A Number and Importance:** 2.1.18, SRO 3.8Ability to make accurate, clear and concise Logs, records, status boards and reports**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**

OP-AA-106-101, Significant Event Reporting, Rev. 16

LS-AA-1110, Reportable Event SAF 1.8 Declaration, Rev. 20

LS-AA-1020, Reportability Reference Manual Volume 1 Table SAF, Rev. 21

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 25 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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INITIAL CONDITIONS

- You are the Shift Manager.
- Both Units are operating at rated power.
- On Unit 1, LOS-HP-Q1, "HPCS System Inservice Test", is being performed.
- You have just been informed that, during performance of the HPCS test, 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.

Exelon Nuclear

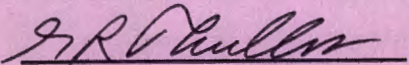
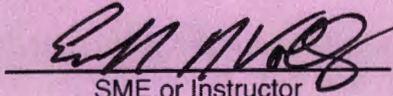
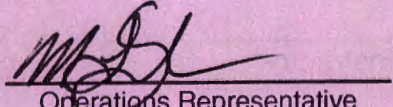
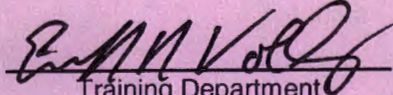
Job Performance Measure

Determine PRA / Online Risk

JPM Number: A-SRO-49

Revision Number: 00

Date: 08/22/2014

| | | |
|---------------|--|------------------------|
| Developed By: | <u></u> Instructor | <u>8/14/14</u> Date |
| Validated By: | <u></u> SME or Instructor | <u>8/28/14</u> Date |
| Reviewed By: | <u></u> Operations Representative | <u>8/28/14</u> Date |
| Approved By: | <u></u> Training Department | <u>8/28/14</u> 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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 Updated to current template and procedures for ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. The Simulator Unit Supervisor computer must be available and available to access the PARAGON program.

INITIAL CONDITIONS

You are the Unit Supervisor in Unit 1, which is operating at rated power

There are no LCOs in effect.

On-Line Risk is GREEN.

You have just been informed by the System Engineer that the latest oil samples on the 1A RHR pump motor indicate serious bearing degradation.

The Shift Manager has agreed to take the 1A RHR Pump out of service.

INITIATING CUE

Determine any change in On-Line Risk.

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|---|---|-----|-------|-------------------|
| 1. | Candidate accesses the PARAGON program | PARAGON program accessed | — | — | — |
| *2. | Data for 1A RHR Pump inoperable entered. Risk determined to be YELLOW | Risk determined to be YELLOW for 1A RHR Pump inoperable | — | — | — |
| CUE | Role Play as the Shift Manager. Inform the candidate that the National Weather Service has issued a Severe Thunderstorm Warning for LaSalle County. Ask the candidate to determine any change in On-Line Risk. | | | | |
| *3. | Data for Severe Thunderstorm Warning (High Risk Evolution, HRE) entered. Risk determined to be ORANGE | Risk determined to be ORANGE | — | — | — |
| TERMINATING CUE: This completes this JPM. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Determine PRA / Online Risk**JPM Number:** A-SRO-49**Revision Number:** 00**Task Number and Title:** 725.020 Given a work order, complete the production risk and reactivity screening IAW station procedures.**K/A Number and Importance:** 2.2.17 SRO 3.8; Knowledge of the process for managing maintenance activities during power operations, such as risk assessments, work prioritization, and coordination with the transmission system operator.**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):****Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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INITIAL CONDITIONS

You are the Unit Supervisor in Unit 1, which is operating at rated power

There are no LCOs in effect.

On-Line Risk is GREEN.

You have just been informed by the System Engineer that the latest oil samples on the 1A RHR pump motor indicate serious bearing degradation.

The Shift Manager has agreed to take the 1A RHR Pump out of service.

INITIATING CUE

Determine any change in On-Line Risk.

Exelon Nuclear

Job Performance Measure

Determine ODCM Compensatory Measures

JPM Number: A-SRO-50

Revision Number: 00

Date: 08/22/2014

Developed By:

J R Thullen
Instructor

8/28/14
Date

Validated By:

Enn N Volz
SME or Instructor

8/28/14
Date

Reviewed By:

[Signature]
Operations Representative

8/28/14
Date

Approved By:

Enn N Volz
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 Developed new for ILT 13-1 NRC Exam. Modeled after a 2012 ILT Exam
SRO JPM at Quad Cities.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. Evaluator, be prepared to fill in a time for "10 minutes ago" on the candidates copy of the Initial Conditions.
3. Be prepared to provide a blank Tech Spec Timeclock sheet.

INITIAL CONDITIONS

You are the Unit 1 Unit Supervisor today.

The following annunciator was received 10 minutes ago, at:_____

- 1H13-P601-B501 LIQUID RAD MONITOR DOWNSCALE

The NSO has since reported the following:

- The Service Water Rad Monitor on 1H13-P604 has no indicating lights
- The Service Water Rad Monitor recorder on 1H13-P604 is reading downscale.
- The PRM Inverter on 1H13-P604 is still energized.
- The breaker to the PRM Inverter on MCC 112Y is closed.

IMD has been called in to assist in troubleshooting and they suspect a fault in the monitor that has blown a power supply fuse.

INITIATING CUE

For this situation:

- Identify the Required Actions.
- Update the Tech Spec Timeclock Sheet.
- Complete the necessary notifications.

.....

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------|---|---|-----|-------|-------------------|
| Note | The necessary compensatory actions are found in the Offsite Dose Calculation Manual (ODCM) Section 12.2.1. | | | | |
| 1. | Recognize that the Initial Conditions render the Service Water Rad Monitor inoperable | Service Water Rad Monitor declared inoperable | — | — | — |
| 2. | Identify the correct CONDITION and REQUIRED ACTION: Condition B: One or more required instrument channels inoperable for reasons other than Condition A. RA B.1 Enter the Condition referenced in Table R12.2.1.-1 for the instrument channel | Condition B and RA B.1 identified | — | — | — |
| 3. | From Table R12.2.1.-1, correctly identifies Condition E | Condition E identified | — | — | — |
| *4. | Correctly identifies Required Action E.1: Analyze affected effluent grab samples for principle gamma emitters and I-131 at an LLD as specified in Table R12.3.1-2 once per 8 hours Chemistry contacted to initiate grab samples | Required Action E.1 identified Chemistry contacted to initiate grab samples once per 8 hours | — | — | — |
| *5. | Correctly identifies Required Action E.2: Restore the Instrument to OPERABLE status within 30 Days | ODCM 30 Day LCO entered | — | — | — |
| CUE | When the need to submit an IR is addressed, inform the candidate that ANSO has submitted one. Provide the following IR Number: <u>IR 3456789</u> | | | | |
| 6. | Update the Tech Spec Timeclock Sheet. | Tech Spec Timeclock Sheet updated | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|---|-------|-------|-------------------|
| CUE | If not already addressed, ask the candidate the following question: “What actions, if any, would be necessary if the Service Water Rad Monitor is not returned to service within 30 days?” | | | | |
| 7. ODCM Condition G | Identify the correct REQUIRED ACTION for CONDITION G: Explain why the inoperability was not corrected in a timely manner in the next Radioactive Effluent Release Report. | Condition G reporting requirement identified. | _____ | _____ | _____ |
| TERMINATING CUE: Inform the candidate that the JPM is complete. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Determine ODCM Compensatory Measures**JPM Number:** A-SRO-50**Revision Number:** 00**Task Number and Title:** 702.001 Given an inoperable component, determine the ODCM applicability and required actions IAW station procedures.**K/A Number and Importance:** 2.3.15 SRO 3.1; Knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**CY-LA-170-301, Rev. 5, Offsite dose Calculation Manual, Part 1 Radiological Effluent Controls
LOR-1H13-P601-B501, Rev. 1, LIQUID RAD MONITOR DOWNSCALE**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

INITIAL CONDITIONS

You are the Unit 1 Unit Supervisor today.

The following annunciator was received 10 minutes ago, at: _____

- 1H13-P601-B501 LIQUID RAD MONITOR DOWNSCALE

The NSO has since reported the following:

- The Service Water Rad Monitor on 1H13-P604 has no indicating lights
- The Service Water Rad Monitor recorder on 1H13-P604 is reading downscale.
- The PRM Inverter on 1H13-P604 is still energized.
- The breaker to the PRM Inverter on MCC 112Y is closed.

IMD has been called in to assist in troubleshooting and they suspect a fault in the monitor that has blown a power supply fuse.

INITIATING CUE

For this situation:

- Identify the Required Actions.
- Update the Tech Spec Timeclock Sheet.
- Complete the necessary notifications.

UNIT: _____ SURVEILLANCE NUMBER: _____ DATE: _____

[illegible]

Exelon Nuclear

Job Performance Measure

Classify an Event / Loss of Annunciators

JPM Number: A-SRO-48

Revision Number: 00

Date: 08/22/2014

Developed By:

J R D Culler
Instructor

8/29/14
Date

Validated By:

CM NVR
SME or Instructor

8/28/14
Date

Reviewed By:

MS
Operations Representative

8/29/14
Date

Approved By:

CM NVR
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 This JPM was developed new for the ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. Be prepared to provide a picture of the SPDS showing the following approximate values
(Values are representative of 5 minutes after a Turbine Trip from full power.)
 - RX LEVEL +30 inches (Stable)
 - RX PRESS 930 psig (Stable)
 - DW PRESS 0.1 psig (Stable)
 - DW TEMP 110 °F (Stable)
 - SUPP LVL 0.1 ft. (Stable)
 - SUPP TEMP 96 °F (Stable)
 - RX POWER 2.5% (lowering slowly)
 - CORE SPRAY OFF
 - SRV CLSD
 - PCIS ?
 - CNMT RAD NORMAL
 - RAD RELEASE NORMAL
3. Materials; the following materials are required to be available to Candidate:
 - EP-AA-1005, Radiological Emergency Plan Annex for LaSalle Station
 - EP-MW-114-100-F-1, NARS Form
 - EP-AA-111, Emergency Classification and Protective Action Recommendations
 - EP-AA-112-100-F1, Shift Emergency Director Checklist

INITIAL CONDITIONS

- You are the Shift Manager *(initials)*
- Unit 2 is in a Refueling Outage.
 - 125 VDC Bus 2A is Deenergized for emergent repairs.
- Unit 1 was operating at rated power when the following events occurred:
 - The Turbine High Vibration alarm is followed shortly by a Turbine Trip.
 - Operators note a loss of hydrogen pressure in Generator.
 - EOs at the Main Generator confirm these indications.
 - DEHC controlling Reactor pressure on BPVs.
 - Condenser Backpressure is 1 in hg.
 - All 4160 VAC Busses transferred normally to SAT.
 - During the initial transient, the Control Room annunciator horns go quiet.
 - The only active annunciators are the VISUAL ANNUNCIATOR TROUBLE alarms at 1PM01J A416 and 1PM02J B103
 - Two EOs were dispatched to the AEER to perform LOA-AN-101, Loss of Annunciators
 - After 5 minutes, the EOs report that they cannot figure out what is wrong but none of the breakers will reset.
 - EMD has been called to assist and the Techs are expected to arrive in 5 more minutes
 - Current plant parameters:
 - At 1H13-P603
 - All rods fully inserted
 - Reactor power steadily lowering through the IRM range
 - RPV level shrunk to -15 inches and is now at +30 inches and stable
 - At 1H13-P602
 - Recirc Pump Speeds are at minimum.
 - At 1H13-P601
 - Containment Parameters are unchanged.
 - Current SPDS indications are provided
 - Computer average wind speed is 10 mph from 200°
 - Stack radiation release levels have been constant for the last several hours.
 - Dose projections are not available.

INITIATING CUE

Determine if the event requires an ERO notification.

If so, classify the event and then fill out the NARS Form and inform the examiner when it is ready for the Unit Supervisor's peer check prior to transmittal.

This JPM is Time Critical

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-----------------------------|--|--|-----|-------|-------------------|
| Note | Time Initiating Cue completed _____ | | | | |
| 1. | Obtain copies of EP-AA-111, EP-MW-114-100, EP-AA-112-100-F-01, and LaSalle EALs. | Examinee demonstrates where copies EP-AA-111, EP-MW-114-100, EP-AA-112-100-F-01, and LaSalle EALs can be obtained. | — | — | — |
| CUE | After examinee demonstrates where corporate procedures can be obtained, provide examinee with copies of EP-AA-111, EP-MW-114-100, EP-AA-112-100-F-01, and LaSalle EALs | | | | |
| 2. | Obtain blank NARS form. | Examinee demonstrates where NARS forms can be obtained. | | | |
| CUE | After examinee demonstrates where NARS forms can be obtained, provide examinee with a NARS form or photocopy of a NARS form. | | | | |
| Note | Unusual Event HU4 is applicable for the Turbine trip with damage to the Generator seals, but is too low a classification for this event. Site Area Emergency MS4 would applicable except for the availability of all safety function monitoring indications and SPDS from the Plant Process Computer. | | | | |
| *3. | Utilize LaSalle EALs to determine EAL MA4 ?? | Examinee classifies the ERO as Unusual Event MA4 within 15 minutes | — | — | — |
| Note | Accident classification must be completed within 15 minutes of JPM start time. Time classified _____ Time Initiating Cue completed - _____ Time to Classify _____ < 15 min | | | | |
| Note | Items 4 through 18 may be performed in any order. The critical portion of the item, if applicable, is that the form is filled out properly, not the order in which the form is filled out. | | | | |
| 4. NARS form | In Utility Message block writes the number 1. | Examinee writes the number 1 in Utility Message block. | — | — | — |
| 5. NARS form | In State Message block writes N/A. | Examinee writes the number N/A in State Message block. | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------------------------------|---|--|-----|-------|-------------------|
| <i>critical?</i> *6. Block #1 | In Item 1, marks B. | Examinee marks Item 1 [B] (For Drill/Exercise). | — | — | — |
| *7. Block #2 | In Item 2, marks E. | Examinee marks Item 2 [E] (For LaSalle). | — | — | — |
| *8. Block #3 | In Item 3, marks B. | Examinee marks Item 3 [B] (For Alert) | — | — | — |
| *9. Block #4 | In Item 4 ACCIDENT CLASSIFIED, writes (time & date) and EAL MA4 | Examinee writes (time & date) and MA4 in Item 4 ACCIDENT CLASSIFIED. | — | — | — |
| 10. | In ACCIDENT TERMINATED section writes N/A in each blank. | Examinee writes N/A in each blank of ACCIDENT TERMINATED section. | — | — | — |
| *11. Block #5 | In Item 5, marks A. | Examinee marks Item 5 [A] (For None) | — | — | — |
| *12. Block #6 | In Item 6, marks A. | Examinee marks Item 6 [A] (For Not Applicable) | — | — | — |
| *13. Block #7 | In Item 7, write 200. | Examinee writes 200 in Item 7. | — | — | — |
| Note | Item 8 A should be marked "N/A" or left blank. Only the wind speed is critical in the next step. | | | | |
| 14. Block #8 | In Item 8A, writes N/A and in Item 8B, writes 10. | Examinee writes N/A in Item 8A and 10 in Item 8B. | — | — | — |
| 15. Block #9 | In Item 9, marks A. | Examinee marks Item 9 [A] (For None) | — | — | — |
| 16. Block #10 | In Item 10, writes "none". | Examinee writes None in Item 10. | — | — | — |
| 17. | Leave Items 11 and 12 blank. | Examinee leaves Items 11 and 12 blank. | — | — | — |
| Note | If the examinee does not authorize the NARS form make the next step "N/A". | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|---|-----|-------|-------------------|
| 18. | Signs NARS Form authorizing transmittal. | Examinee signs NARS form authorizing transmittal. | — | — | — |
| Note | NARs form must be ready for review within 13 minutes of Classification time. | | | | |
| TERMINATING CUE: Acknowledge Report and inform Examinee JPM is complete. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Classify an Event / Loss of Annunciators**JPM Number:** A-SRO-48**Revision Number:** 00**Task Number and Title:** 708.00, Given a postulated E-Plan condition, classify the event IAW EP-AA-1005 IAW station procedures.**K/A Number and Importance:** 2.4.41 IR 4.6; Knowledge of the emergency action thresholds and classifications**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☒ Yes ☐ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**

EP-AA-1005, Rev. 37, Radiological Emergency Plan Annex for LaSalle Station

EP-MW-114-100-F-1, Rev. G, NARS Form

EP-AA-111, Rev. 18, Emergency Classification and Protective Action Recommendations

EP-AA-112-100-F1, Rev. S, Shift Emergency Director Checklist

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

INITIAL CONDITIONS

THIS IS A DRILL

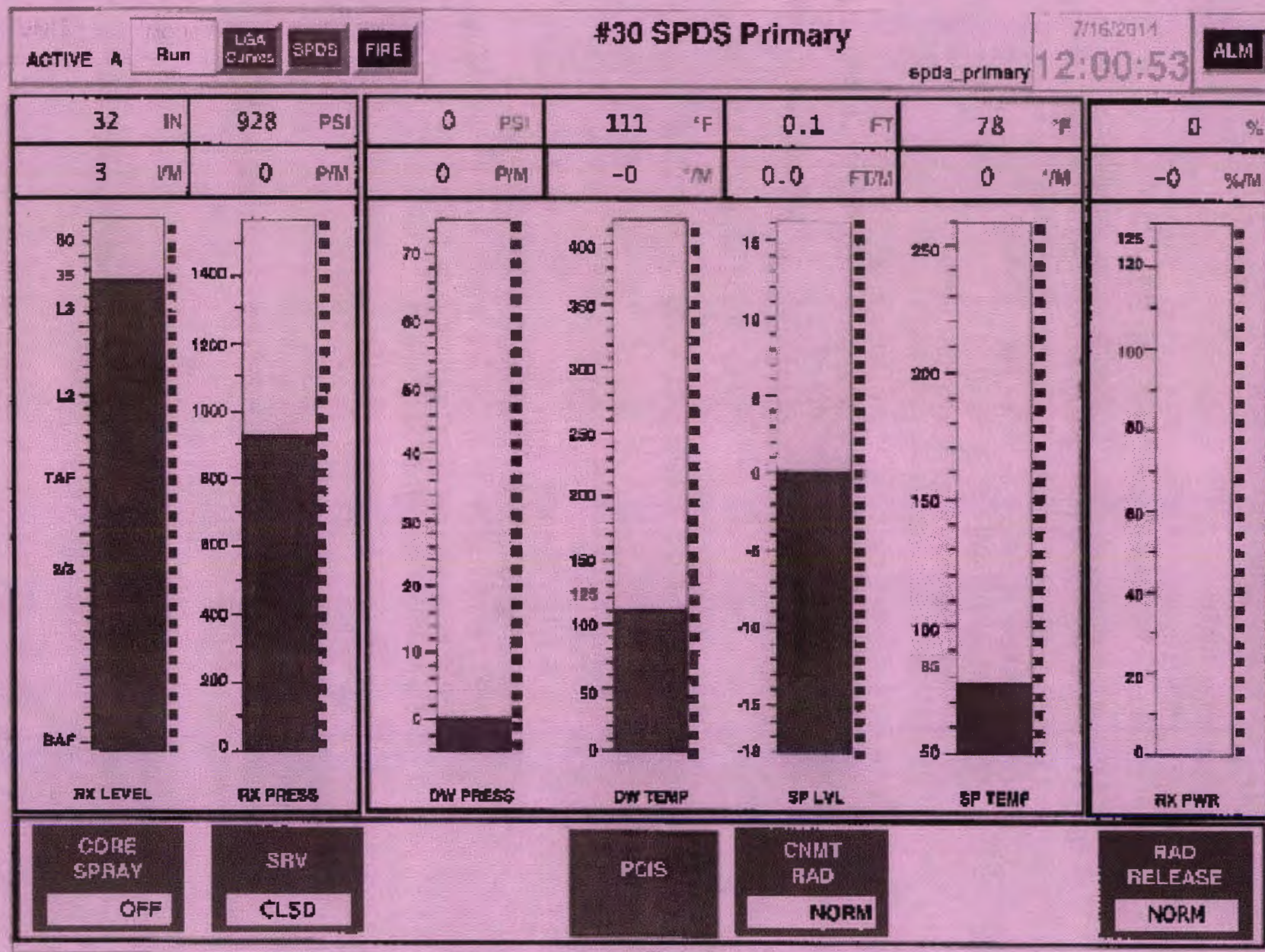
- You are the Shift Manager
- Unit 2 is in a Refueling Outage.
 - 125 VDC Bus 2A is Deenergized for emergent repairs.
- Unit 1 was operating at rated power when the following events occurred:
 - The Turbine High Vibration alarm is followed shortly by a Turbine Trip.
 - Operators note a loss of hydrogen pressure in Generator.
 - EOs at the Main Generator confirm these indications.
 - DEHC controlling Reactor pressure on BPVs.
 - Condenser Backpressure is 1 in hg.
 - All 4160 VAC Busses transferred normally to SAT.
 - During the initial transient, the Control Room annunciator horns go quiet.
 - The only active annunciators are the VISUAL ANNUNCIATOR TROUBLE alarms at 1PM01J A416 and 1PM02J B103
 - Two EOs were dispatched to the AEER to perform LOA-AN-101, Loss of Annunciators
 - After 5 minutes, the EOs report that they cannot figure out what is wrong but none of the breakers will reset.
 - EMD has been called to assist and the Techs are expected to arrive in 5 more minutes
 - Current plant parameters:
 - At 1H13-P603
 - All rods fully inserted
 - Reactor power steadily lowering through the IRM range
 - RPV level shrunk to -15 inches and is now at +30 inches and stable
 - At 1H13-P602
 - Recirc Pump Speeds are at minimum.
 - At 1H13-P601
 - Containment Parameters are unchanged.
 - Current SPDS indications are provided
 - Computer average wind speed is 10 mph from 200°
 - Stack radiation release levels have been constant for the last several hours.
 - Dose projections are not available.

INITIATING CUE

Determine if the event requires an ERO notification.

If so, classify the event and then fill out the NARS Form and inform the examiner when it is ready for the Unit Supervisor's peer check prior to transmittal.

This JPM is Time Critical



Exelon®**KEY**

EP-MW-114-100-F-01

Revision G

Page 1 of 2

Nuclear

NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORMUTILITY MESSAGE NO. 1

OR ELECTRONIC FACSIMILE

STATE MESSAGE NO. NA**1. STATUS**

- [A] ACTUAL
☒ [B] DRILL/EXERCISE

2. STATION

- [A] BRAIDWOOD [C] CLINTON
[B] BYRON [D] DRESDEN

- ☒ [E] LASALLE [G] ZION
[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]): TIME
DATE (3[A-E]): DATE
EAL#: MAY

ACCIDENT TERMINATED

TIME (3[F]): NA
DATE (3[F]): NA

5. RELEASE STATUS

- ☒ [A] NONE \longleftrightarrow ☒ [A] NOT APPLICABLE
[B] OCCURRING \longleftrightarrow [B] GASEOUS
[C] TERMINATED \longleftrightarrow [C] LIQUID

7. WIND DIR

200
(DEGREES FROM)

8. WIND SPEED

[A] METERS/SEC.: NA
☒ [B] MILES/HR.: 10

9. RECOMMENDED ACTIONS**UTILITY RECOMMENDATION**

- ☒ [A] NONE (UE, Alert and SAE Only) _____ (GE Only) _____
[B] SHELTER ILLINOIS SUB-AREAS: _____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS
[C] SHELTER IOWA SUB-AREAS: _____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS
[D] EVACUATE ILLINOIS SUB-AREAS: _____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS
[E] EVACUATE IOWA SUB-AREAS: _____
AND ADVISE REMAINDER OF THE EPZ TO MONITOR LOCAL RADIO STATIONS

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:NAMEPHONE NUMBERTIME/DATE

[A] EXELON: _____

[B] STATE: _____

[C] COUNTY: _____

12. RECEIVED BY:NAMEORGANIZATIONTIME/DATE

NUCLEAR ACCIDENT REPORTING SYSTEM (NARS) FORM

OR ELECTRONIC FACSIMILE

Braidwood
(UE, Alert, SAE, escalated GE(s), Termination and Recovery)
NARS Code 20

| Initial | | Final |
|--------------------------|----------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |

(Only if NARS #1 is a GE)
NARS Code 38

| Initial | | Final |
|--------------------------|------------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | # Grundy Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Kankakee Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Will County Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |
| <input type="checkbox"/> | Grundy Co. EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Kankakee Co. EOC | <input type="checkbox"/> |
| <input type="checkbox"/> | Will Co. EOC | <input type="checkbox"/> |

ROLL CALL
Initial Roll Call Complete:

(time / date)

Clinton
(UE, Alert, SAE, escalated GE(s), Termination and Recovery)
NARS Code 98

| Initial | | Final |
|--------------------------|----------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |

(Only if NARS #1 is a GE)
NARS Code 36

| Initial | | Final |
|--------------------------|----------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | # DeWitt Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |
| <input type="checkbox"/> | DeWitt Co. EOC | <input type="checkbox"/> |

LaSalle
(UE, Alert, SAE, escalated GE(s), Termination and Recovery)
NARS Code 20

| Initial | | Final |
|--------------------------|----------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |

(Only if NARS #1 is a GE)
NARS Code 25

| Initial | | Final |
|--------------------------|-----------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | # Grundy Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # LaSalle Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |
| <input type="checkbox"/> | Grundy Co. EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | LaSalle Co. ESDA | <input type="checkbox"/> |

Byron
(UE, Alert, SAE, escalated GE(s), Termination and Recovery)
NARS Code 20

| Initial | | Final |
|--------------------------|----------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |

(Only if NARS #1 is a GE)
NARS Code 37

| Initial | | Final |
|--------------------------|--------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | **Ogle Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | **Rochelle Police | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |
| <input type="checkbox"/> | Ogle Co. ESDA | <input type="checkbox"/> |
| <input type="checkbox"/> | Ogle Co. EOC | <input type="checkbox"/> |

Commercial numbers:
IEMA 217-782-7860

(QC only)
Iowa HSEMD 515-725-3231

Dresden
(UE, Alert, SAE, escalated GE(s), Termination and Recovery)
NARS Code 20

| Initial | | Final |
|--------------------------|----------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |

(Only if NARS #1 is a GE)
NARS Code 22

| Initial | | Final |
|--------------------------|-----------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | # Grundy Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Kendall Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Will County Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |
| <input type="checkbox"/> | Grundy Co. EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | Kendall Co. EOC | <input type="checkbox"/> |
| <input type="checkbox"/> | Will Co. EOC | <input type="checkbox"/> |

Quad Cities
(UE, Alert, SAE, escalated GE(s), Termination and Recovery)
NARS Code 43

| Initial | | Final |
|--------------------------|-------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | # Iowa EMD | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |
| <input type="checkbox"/> | Scott Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | Clinton Co. EOC | <input type="checkbox"/> |
| <input type="checkbox"/> | Scott Co. EOC | <input type="checkbox"/> |

(Only if NARS #1 is a GE)
NARS Code 23

| Initial | | Final |
|--------------------------|---------------------------|--------------------------|
| <input type="checkbox"/> | # Illinois EMA | <input type="checkbox"/> |
| <input type="checkbox"/> | # Iowa HSEMD | <input type="checkbox"/> |
| <input type="checkbox"/> | # Clinton Co. EOC | <input type="checkbox"/> |
| <input type="checkbox"/> | # Rock Island Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Whiteside Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Scott Co. Sheriff | <input type="checkbox"/> |
| <input type="checkbox"/> | # Scott Co. EOC | <input type="checkbox"/> |
| <input type="checkbox"/> | Whiteside Co. ESDA | <input type="checkbox"/> |
| <input type="checkbox"/> | Rock Island ESDA | <input type="checkbox"/> |
| <input type="checkbox"/> | Illinois REAC | <input type="checkbox"/> |

NOTES: # Indicates that this agency is required to be notified within 15 minutes.

** Only one needs to answer for notification.

Exelon Nuclear

Job Performance Measure

Defeat Isolations per LGA-VP-01

JPM Number: P-VP-01

Revision Number: 12

Date: 08/22/2014

Developed By:

J.R. Sullivan
Instructor

8/12/14
Date

Validated By:

E. J. N. V. R.
SME or Instructor

8/28/14
Date

Reviewed By:

M. J. D.
Operations Representative

8/27/14
Date

Approved By:

E. J. N. V. R.
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

- Revision 08,** 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
Made JPM specific to Unit 2.
- Revision 09,** Revised task numbers to the current Operations Task List and procedure.
- Revision 10,** Revised estimated completion time and updated to current procedure revision.
- Revision 11,** Added Initiating Cue to Examinee's initial conditions
- Revision 12,** Updated to current template and procedures for ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. No SIM setup required.
2. The following material is required to be provided to examinee:
 - a. One copy of LGA-VP-01 (after demonstrating knowledge of location of controlled copy)
 - b. One laser pointer.
3. The following material is to be obtained by the examinee:
 - a. Main LGA Support Locker key
4. The following material may be identified by the examinee but NOT removed from its normal storage location:
 - a. Unit 2 LGA-VP-01 equipment bag containing the following:
 - 4 Red jumpers
 - 4 Blue jumpers
 - 1 Flat blade screwdriver
 - Electrical tape
 - b. Flashlights/lanterns

INITIAL CONDITIONS

- You are an extra NSO.
- Unit 2 is experiencing an ATWS.
- Reactor water level was intentionally lowered to -60 inches for power control.
- There is no evidence of a leak in the primary containment.
- Drywell temperature is 135°F and rising 2°F/min.
- 2A VP loop, fan and chiller and five area coolers were running prior to the isolation.
- 2B VP chill water pump is OOS.
- The SAT is supplying all AC buses.
- All support systems are operating as expected.
- Radiological conditions are at or below normal levels.
- You have a plant radio.

INITIATING CUE

The Unit Supervisor directs you to defeat U-2 VP isolation signals per LGA-VP-01. Notify the Control Room when the isolation signals are defeated.

.....

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------|--|--|-----|-------|-------------------|
| 1. | Obtain copy of LGA-VP-01 | Examinee identifies where copy of LGA-VP-01 can be obtained. | — | — | — |
| CUE: | After examinee identifies where copy of LGA-VP-01 can be obtained, provide examinee with copy of LGA-VP-01. | | | | |
| 2. | Obtain Main LGA Support Locker key. | Examinee obtains Main LGA Support Locker key. | | | |
| 3. | Obtain Unit 2 LGA-VP-01 equipment bag from Main LGA Support Locker. | Examinee identifies Unit 2 LGA-VP-01 equipment bag within the Main LGA Support Locker. | — | — | — |
| Note | Sequence is not required for Numbers 4 through 19 inclusive. | | | | |
| CUE: | You have the equipment that you have identified. | | | | |
| *4. | Install blue jumper in AEER panel 2PA13J Terminal Board CC Point 51 to Point 52 | Examinee locates AEER panel 2PA13J and installs blue jumper from Terminal Board CC Point 51 to Point 52. | — | — | — |
| CUE: | The jumper you indicated is installed as you described. | | | | |
| 5. | Sign and enter date and time jumper was installed on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| *6. | LIFT lead in AEER panel 2PA13J from Terminal Board CC Point 53 | Examinee locates and lifts lead in AEER panel 2PA13J from Terminal Board CC Point 53 | — | — | — |
| CUE: | The lead you indicated is in the condition you described. | | | | |
| 7. | Sign and enter date and time lead was lifted on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------|---|--|-----|-------|-------------------|
| *8. | Install blue jumper in AEER panel 2PA13J Terminal Board CC Point 43 to Point 44 | Examinee locates AEER panel 2PA13J and installs blue jumper from Terminal Board CC Point 43 to Point 44. | — | — | — |
| CUE: | The jumper you indicated is installed as you described. | | | | |
| 9. | Sign and enter date and time jumper was installed on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| *10. | LIFT lead in AEER panel 2PA13J from Terminal Board CC Point 45 | Examinee locates and lifts lead in AEER panel 2PA13J from Terminal Board CC Point 45 | — | — | — |
| CUE: | The lead you indicated is in the condition you described. | | | | |
| 11. | Sign and enter date and time lead was lifted on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| *12. | Install blue jumper in AEER panel 2PA14J Terminal Board CC Point 51 to Point 52 | Examinee locates AEER panel 2PA14J and installs blue jumper from Terminal Board CC Point 51 to Point 52. | — | — | — |
| CUE: | The jumper you indicated is installed as you described. | | | | |
| 13. | Sign and enter date and time jumper was installed on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| *14. | LIFT lead in AEER panel 2PA14J from Terminal Board CC Point 53 | Examinee locates and lifts lead in AEER panel 2PA14J from Terminal Board CC Point 53 | — | — | — |
| CUE: | The lead you indicated is in the condition you described. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|---|--|-----|-------|-------------------|
| 15. | Sign and enter date and time lead was lifted on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| *16. | Install blue jumper in AEER panel 2PA14J Terminal Board CC Point 43 to Point 44 | Examinee locates AEER panel 2PA14J and installs blue jumper from Terminal Board CC Point 43 to Point 44. | — | — | — |
| CUE: | The jumper you indicated is installed as you described. | | | | |
| 17. | Sign and enter date and time jumper was installed on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| *18. | LIFT lead in AEER panel 2PA14J from Terminal Board CC Point 45 | Examinee locates and lifts lead in AEER panel 2PA14J from Terminal Board CC Point 45 | — | — | — |
| CUE: | The lead you indicated is in the condition you described. | | | | |
| 19. | Sign and enter date and time lead was lifted on LGA-VP-01 Attachment 2A. | The Examinee signs and enters date and time jumper was installed on LGA-VP-01 Attachment 2A. | — | — | — |
| 20. | Inform control room. | Examinee informs control room of completion of LGA-VP-01 Attachment 2A. | — | — | — |
| CUE: | Acknowledge report. | | | | |
| TERMINATING CUE: This completes this JPM. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Defeat Isolation per LGA-VP-01**JPM Number:** P-VP-01**Revision Number:** 12**Task Number and Title:** 401.000, Given a LGA in progress, evaluate plant conditions, locate and perform the following procedures including installation/removal of a jumper/lead/relay boot, IAW the listed procedures: LGA-VP-01**K/A Number and Importance:** 295012, High Drywell Temperature, AA1.02, 3.8/3.8, Ability to operate and/or monitor the following as they apply to High Drywell Temperature: Drywell cooling system**Suggested Testing Environment:** In-Plant**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**LGA-VP-01, Rev. 08, Primary Containment Temperature Reduction**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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INITIAL CONDITIONS

- You are an extra NSO.
- Unit 2 is experiencing an ATWS.
- Reactor water level was intentionally lowered to -60 inches for power control.
- There is no evidence of a leak in the primary containment.
- Drywell temperature is 135°F and rising 2°F/min.
- 2A VP loop, fan and chiller and five area coolers were running prior to the isolation.
- 2B VP chill water pump is OOS.
- The SAT is supplying all AC buses.
- All support systems are operating as expected.
- Radiological conditions are at or below normal levels.
- You have a plant radio.

INITIATING CUE

The Unit Supervisor directs you to defeat U-2 VP isolation signals per LGA-VP-01.
Notify the Control Room when the isolation signals are defeated.

Exelon Nuclear

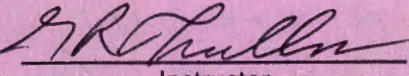
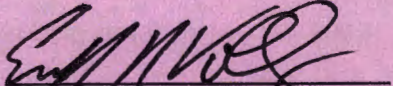

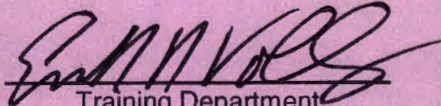
Job Performance Measure

Lineup a Fire Hose To 2A TDRFP for Injection Into The RPV

JPM Number: P-FP-04

Revision Number: 02

Date: 08/22/2014

| | | |
|---------------|---|------------------------|
| Developed By: |  Instructor | <u>8/12/14</u> Date |
| Validated By: |  SME or Instructor | <u>8/28/14</u> Date |
| Reviewed By: |  Operations Representative | <u>8/27/14</u> Date |
| Approved By: |  Training Department | <u>8/28/14</u> 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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

1. **Revision 00,** New JPM based on bank JPM P-FP-03, Rev. 0. Connects FP to the 2A TDRFP rather than the 1A TDRFP. Updated to current template and procedures for ILT 11-1 NRC Exam
2. **Revision 01,** Added checklist, revised the cue, and added sign off lines.
3. **Revision 02,** Updated to current template and procedures for ILT 13-1 NRC Exam.

SETUP INSTRUCTIONS

1. Be prepared to provide a copy of pages 1-7 and 34-43 of LGA-FP-01, Alternate Vessel Injection Using the Fire Protection System.

INITIAL CONDITIONS

1. A reactor scram has occurred on Unit 2 and all rods are full in.
2. There is no injection into the vessel; Diesel Fire Pumps are the only injection source.
3. The Unit 2 NSO is coordinating LGA-FP-01, "Diesel Fire Pump Makeup to the Reactor".
4. An Operator has just been assigned to perform the in-plant actions to line up Fire Protection to the MDRFP.
5. The 2B TDRFP is OOS with the pump casing removed.
6. The Unit 2 NSO has verified that all Feedwater System valves are aligned per LGA-FP-01 at control room panels 2PM03J and 2H13-P601.
7. Fire protection header pressure is normal.
8. There is NO fire.
9. The Chemical Feed system is out of service.
10. You have a plant radio.

INITIATING CUE

The Unit 2 NSO directs you to connect the Fire Protection System to the 2A TDRFP IAW LGA-FP-01 Attachment 2A.

Inform the Unit 2 NSO when Fire Protection is lined up to 2A TDRFP per LGA-FP-01, Attachment 2A.

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 step.

Tell examinee he may assume all second verifications and associated paperwork is simulated complete as necessary.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section at the bottom of page. The comment section should be used to document the reason that a step is marked as unsatisfactory and to document unsatisfactory performance relating to management expectations.

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

| STEP (LGA-FP-01 Attachment 2A) | ELEMENT | STANDARD | SAT | UNSAT | Comment Number |
|--|---|--|------------|--------------|---------------------------|
| 1. | Obtain a copy of LGA-FP-01 and an LGA Support Locker Key | Examinee simulates obtaining procedure and LGA Support Locker Key | _____ | _____ | _____ |
| CUE: | Provide examinee with the prepared copy of LGA-FP-01 when he/she describes/demonstrates where to get procedure and Support Locker Key. | | | | |
| NOTE: | The Evaluator will act as Safety Person as required. | | | | |
| 2. | Obtain equipment from the Main LGA Support Locker | Examinee simulates obtaining equipment from LGA Support Locker (Unit 2 LGA-FP-01 Equipment Bag) | _____ | _____ | _____ |
| CUE: | You have obtained the equipment you identified. | | | | |
| 3. | OBTAIN equipment from <u>Local</u> LGA Support Locker | Examinee simulates obtaining equipment from Local LGA Support Locker | _____ | _____ | _____ |
| CUE: | You have obtained the equipment you identified. | | | | |
| *4. (1 st Line) | Remove fire hose from Hose Station FB451 and install a wye connector | Examinee simulates removing fire hose from Hose Station FB451 and installing a wye connector | _____ | _____ | _____ |
| CUE: | The fire hose and wye connector are positioned as you describe. | | | | |
| *5. (2 nd Line) | Connect fire station fire hose to one end of wye and run it into 2A TDRFP Room | Examinee simulates connecting fire station fire hose to one end of wye and running it into 2A TDRFP Room | _____ | _____ | _____ |
| CUE: | The fire hose and wye connector are positioned as you describe. | | | | |
| NOTE: | The next step of LGA-FP-01 Attachment 2A is N/A because it performs the same action on the 2B TDRFP, which is out of service per initiating cue. | | | | |
| *6. (4 th Line) | (In 2A TDRFP Room) Install wye connector at end of fire hose | Examinee simulates installing wye connector at end of fire hose | _____ | _____ | _____ |

| <u>STEP</u> (LGA-FP-01 Attachment 2A) | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|---|-------|-------|-------------------|
| *7. (5th Line) | Connect fire hoses to the two ends of this wye connector. | Examinee simulates connecting fire hoses to the two ends of this wye connector | _____ | _____ | _____ |
| CUE: | The Fire hose is connected as you describe | | | | |
| *8. (6th Line) | Install FP to 1" converter on 2FW041A/42A, 2A TDRFP Dsch Line Upstrm/Dwnstr Lo Point Drain | Examinee simulates installing FP to 1" converter on 2FW041A/42A | _____ | _____ | _____ |
| CUE: | The converter is installed as you described. | | | | |
| *9. (7th Line) | Connect one fire hose to 1" converter | Examinee simulates connecting one fire hose to 1" converter | _____ | _____ | _____ |
| CUE: | The Fire hose is connected as you describe | | | | |
| *10. (8th Line) | Install FP to 3/4" converter on 2CB022C, A TDRFP Suct Lo Point Drain Valve | Examinee simulates installing FP to 3/4" converter on 2CB022C | _____ | _____ | _____ |
| CUE: | The converter is installed as you described. | | | | |
| *11. (9th Line) | Connect other fire hose to 3/4" converter | Examinee simulates connecting other fire hose to 3/4" converter | _____ | _____ | _____ |
| CUE: | The Fire hose is connected as you describe | | | | |
| 12. | Notify Unit 2 NSO that alignment of FP to 2A TDRFP is complete | The Examinee simulates notifying the Unit 2 NSO that alignment of FP to 2A TDRFP is complete | _____ | _____ | _____ |
| CUE: | As the Unit 2 NSO, acknowledge the report that FP is aligned to the 2A TDRFP. | | | | |
| 13. | Complete all required signatures, dates, and times on Attachment 2A | The Examinee completes or simulates completing all required signatures, dates, and times on Attachment 2A | _____ | _____ | _____ |
| TERMINATING CUE | | | | | |
| The JPM is complete when the Unit 2 NSO is notified. | | | | | |

JPM Stop Time: _____

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

JPM SUMMARY

Operator's Name: _____

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

JPM Title: Lineup a Fire Hose to 2A TDRFP for Injection into the RPV

JPM Number: P-FP-04

Revision Number: 02

Task Number and Title: 414.020

Given entry into LGA-01, RPV Control, evaluate plant conditions and control RPV water level using FPIAW station procedures

K/A Number and Importance: 295031 (Reactor Low Water Level) EA1.08 3.8/3.9

Ability to operate and/or monitor the following as they apply to REACTOR LOW WATER LEVEL: Alternate Injection Systems

Suggested Testing Environment: In-Plant

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

Reference(s): LGA-FP-01 Alternate Vessel Injection Using the Fire Protection System, Rev 15

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

Comments: _____

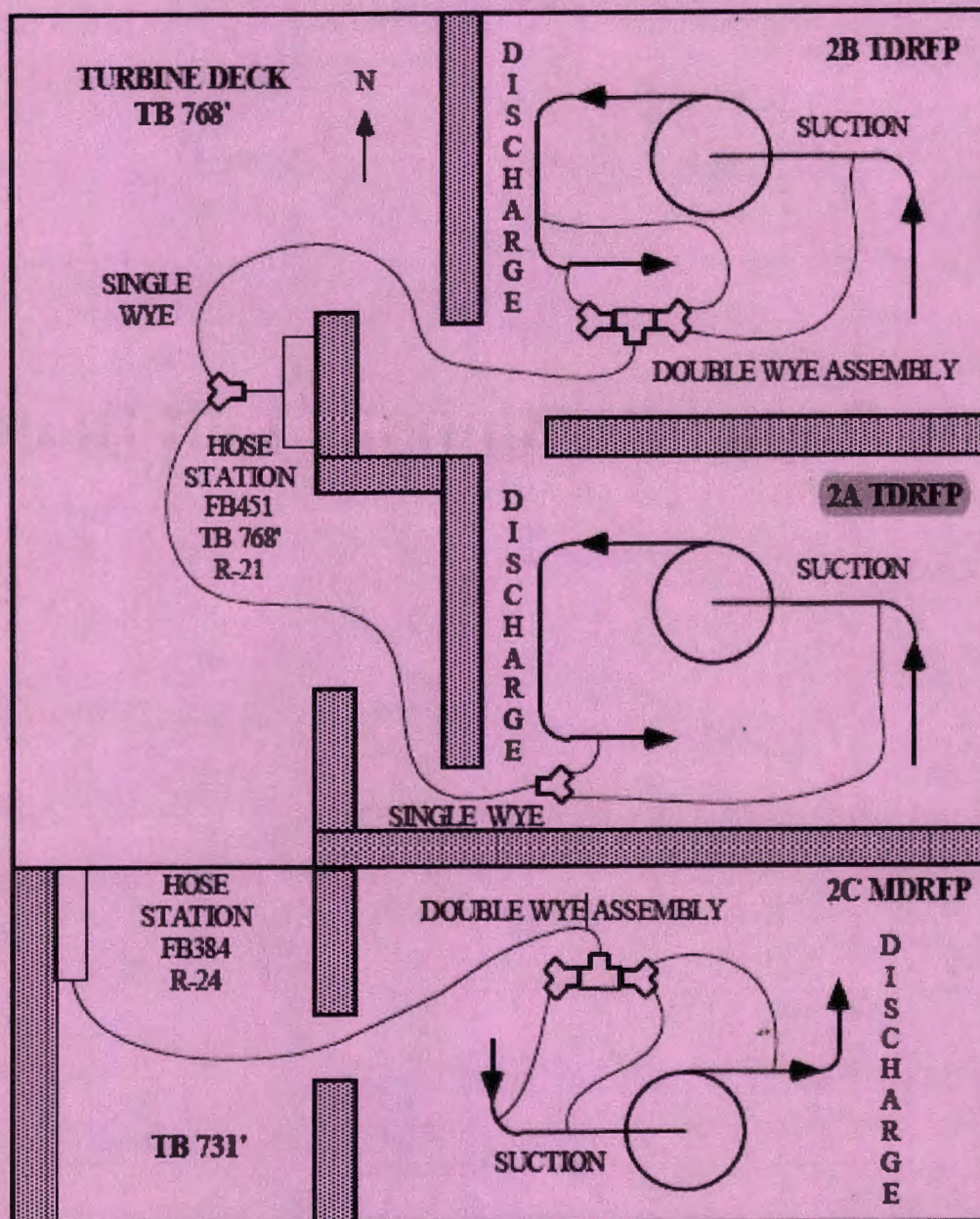
Evaluator's Name: _____ (Print)

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

KEY

ATTACHMENT 2B

UNIT 2 FIRE HOSE CONNECTION DIAGRAM



Level of Use
Continuous

40 of 43

LGA-FP-01
Revision 15
February 10, 2012

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INITIAL CONDITIONS

1. A reactor scram has occurred on Unit 2 and all rods are full in.
2. There is no injection into the vessel; Diesel Fire Pumps are the only injection source.
3. The Unit 2 NSO is coordinating LGA-FP-01, "Diesel Fire Pump Makeup to the Reactor".
4. An Operator has just been assigned to perform the in-plant actions to line up Fire Protection to the MDRFP.
5. The 2B TDRFP is OOS with the pump casing removed.
6. The Unit 2 NSO has verified that all Feedwater System valves are aligned per LGA-FP-01 at control room panels 2PM03J and 2H13-P601.
7. Fire protection header pressure is normal.
8. There is NO fire.
9. The Chemical Feed system is out of service.
10. You have a plant radio.

INITIATING CUE

The Unit 2 NSO directs you to connect the Fire Protection System to the 2A TDRFP IAW LGA-FP-01 Attachment 2A.

Inform the Unit 2 NSO when Fire Protection is lined up to 2A TDRFP per LGA-FP-01, Attachment 2A.

Exelon Nuclear

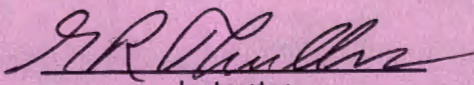
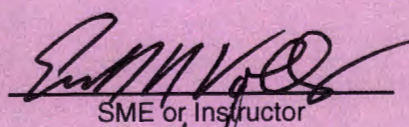
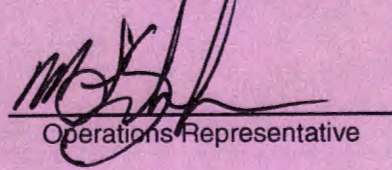

Job Performance Measure

LOSS OF RCMS CONTROLLER AND INTERFACE POWER (2H13-P659 ELECTRONICS)

JPM Number: P-RM-04

Revision Number: 04

Date: 8/22/2014

| | | |
|---------------|---|------------------------|
| Developed By: |  Instructor | <u>8/12/14</u> Date |
| Validated By: |  SME or Instructor | <u>8/28/14</u> Date |
| Reviewed By: |  Operations Representative | <u>8/27/14</u> Date |
| Approved By: |  Training Department | <u>8/28/14</u> 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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

- | | |
|---------------------|---|
| Revision 00, | New JPM for 2009 Annual Exam. |
| Revision 01, | Starting Cue was changed to swap to alternate power supply. Changed starting point of the JPM to be AEER instead of Control Room. |
| Revision 02, | Added new checklist. Changed initial condition so the examinee could sign off the first two steps of section B.1. |
| Revision 03, | Made task statement full. Updated procedure references. |
| Revision 04, | Updated to current template and procedures for ILT 13-1 NRC Exam. |

SIMULATOR SETUP INSTRUCTIONS

1. No Simulator Setup –Plant JPM.

INITIAL CONDITIONS

You are the Extra NSO.

CORE Map, ROD SELECT Display and STATUS Display all indicate no data available.

- Data Source A-NO DATA AVAILABLE
- Data Source B-NO DATA AVAILABLE

CHECK Control Rods-AT SEQUENCE POSITION-NONE HAVE MOVED.

The Unit 2 NSO and an EO are available to assist you as necessary.

INITIATING CUE

You have been directed to enter LOA-RM-201, Unit 2 RCMS Abnormal Situations, Section B.1 starting at Step 3.

You are to inform the Unit 2 Supervisor when the RCMS Electronics power supply has been transferred from Primary to Alternate.

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

.....

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- * Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|--|-----|-------|-------------------|
| NOTE: These actions take place at the 2H13-P659 in Unit 2 AEER. | | | | | |
| 1. LOA-RM-201 Step 3.1 | CHECK AEER panel 2H13-P659 – at least one RCMS Controller Channel Voltage indicator LEDs ON. <ul style="list-style-type: none"> RCMS Controller Channel A. RCMS Controller Channel B. | Examinee CHECKS Controller Channel Voltage Indicators LEDs are ON. | — | — | — |
| CUE: The Channel Voltage Indicator LEDs on both controllers are NOT LIT. | | | | | |
| NOTE: The TSW-1 switch is inside the back of the 2H13-P659 panel. | | | | | |
| 2. LOA-RM-201 Step 3.1 | RESTORE Power: <ul style="list-style-type: none"> If TSW-1 is currently in Primary Position, TRANSFER power to Alternate position per LOP-RM-04. | Examinee identifies that TSW-1 is in Primary – and needs to be TRANSFERRED to Alternate per LOP-RM-04. | — | — | — |
| CUE: The switch you have identified is in the PRIMARY POSITION. | | | | | |
| NOTE: The examinee determines that he/she needs a copy of LOP-RM-04 and either calls the Control Room, Field Supervisor or describes where they would get a copy. Once done – provide a copy of this procedure. | | | | | |
| 3. LOP-RM-04 Step 9.1 | REFER to Attachment B for RCMS Primary and Alternate power sources. | Examinee makes REFERENCE to Attachment B. | — | — | — |
| 4. LOP-RM-04 Step 9.2 | The following steps transfer power for: <ul style="list-style-type: none"> RCMS Interface A RCMS Interface B RCMS Controller Channels A and B Maintenance Display | Examinee placekeeps procedure steps and identifies that the steps below are the steps needed to transfer power for the RCMS Controller Channels. | — | — | — |
| NOTE: This step is just placekept for transfer of power. | | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---------------------------------|--|---|------------|--------------|---------------------------|
| 5. LOP-RM-04 Step 9.3 | VERIFY MCC 232Y-2 is Energized. | Examinee VERIFIES MCC 232Y-2 is ENERGIZED. | — | — | — |
| NOTE: | MCC 232Y-2 is located at Aux Bldg. 710' N-19, Outside Div. I SWGR The Examinee can have the EO/MCR verify this OR verify it himself/herself. | | | | |
| CUE: | If an EO/MCR is requested to verify: REPORT is that "The MCC 232Y-2 is ENERGIZED". | | | | |
| 6. LOP-RM-04 Step 9.3.1 | VERIFY MCC 232Y-2 Compartment F1, Circuit 2 is CLOSED. | Examinee VERIFIES MCC 232Y-2 Compartment F1, Circuit 2 is CLOSED. | — | — | — |
| NOTE: | From the report that the MCC is energized – the assumption can be made that the breaker circuit is closed. The next cue may not be used if not asked. | | | | |
| CUE: | Report that the MCC 232Y-2 is Compartment F1, Circuit 2 is CLOSED. | | | | |
| 7. LOP-RM-04 Step 9.4 | If entering from LOA-RM-201, go to Step E.9.9. | Examinee goes to Step E.9.9. | — | — | — |
| 8. LOP-RM-04 Step 9.9.1 | At panel 2H13-P659, PERFORM the following: • Place the VIDEO SELECT Switch to A SYS. | Examinee places the VIDEO SELECT Switch to A SYS. | — | — | — |
| NOTE: | This may be conditions met. | | | | |
| CUE: | The Switch you have identified is in the position you described. | | | | |
| *9. LOP-RM-04 Step 9.9.2 | At panel 2H13-P659, PERFORM the following: • Place the ON/OFF switch for RCMS Controller channel A to OFF. | Examinee places the ON/OFF switch for RCMS Controller channel A to OFF. | — | — | — |
| CUE: | The Switch you have identified is in the position you described. | | | | |
| *10. LOP-RM-04 Step 9.9.3 | At panel 2H13-P659, PERFORM the following: • Place the ON/OFF switch for RCMS Controller channel B to OFF. | Examinee places the ON/OFF switch for RCMS Controller channel B to OFF. | — | — | — |
| CUE: | The Switch you have identified is in the position you described. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------------|---|---|-----|-------|-------------------|
| 11. LOP-RM-04 Step 9.10 | At panel 2H13-P603, ACKNOWLEDGE any LOST CONTROL and LOST COMMUNICATION screen messages. | Examinee notifies the Control Room NSO to ACKNOWLEDGE any LOST CONTROL and LOST COMMUNICATION screen messages. | — | — | — |
| CUE: | The Control Room NSO has acknowledged all alarms. | | | | |
| *12. LOP-RM-04 Step 9.11 | At panel 2H13-P659, TRANSFER switch 2H13-P659 TSW-1 "2H13-P659 RCMS ELECTRONICS POWER TRANSFER SW" from Primary to Alternate position. | Examinee TRANSFERS switch 2H13-P659 TSW-1 "2H13-P659 RCMS ELECTRONICS POWER TRANSFER SW" from Primary to Alternate position. | — | — | — |
| NOTE: | The transfer switch must be turned 180° to the ALTERNATE position. The OFF position is at 90°. | | | | |
| CUE: | The Switch you indicated is in the position you described. | | | | |
| *13. LOP-RM-04 Step 9.12 | At panel 2H13-P659, Perform the following: <ul style="list-style-type: none"> Place the ON/OFF switch for RCMS Controller A to ON. | Examinee PLACES the ON/OFF switch for RCMS Controller A to ON. | — | — | — |
| CUE: | The Switch you indicated is in the position you described. | | | | |
| 14. LOP-RM-04 Step 9.13 | At panel 2H13-P603, Perform the following: <ul style="list-style-type: none"> ACKNOWLEDGE the screen message stating RCMS Controller A is on-line. | Examinee has Control Room NSO ACKNOWLEDGE the screen message stating RCMS Controller A is on-line. | — | — | — |
| CUE: | The Control Room NSO reports that the screen message has been acknowledged. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | <u>SAT</u> | <u>UNSAT</u> | <u>Comment Number</u> |
|--|---|--|------------|--------------|---------------------------|
| *15. LOP-RM-04 Step 9.14.1 | At panel 2H13-P659, Perform the following: <ul style="list-style-type: none"> Place the VIDEO SELECT switch to B SYS. | Examinee PLACES the VIDEO SELECT switch to B SYS. | — | — | — |
| CUE: | The Switch you indicated is in the position you described. | | | | |
| *16. LOP-RM-04 Step 9.14.2 | At panel 2H13-P659, Perform the following: <ul style="list-style-type: none"> PLACE the ON/OFF switch for RCMS Controller B to ON. | Examinee PLACES the ON/OFF switch for RCMS Controller B to ON. | — | — | — |
| CUE: | The Switch you indicated is in the position you described. RCMS Controller Channel B has performed a DOS Boot, Watchdog Test, and loaded the application. All Self-Tests are complete and Both Controllers indicate OK in the Header region. | | | | |
| 17. | Inform the Unit Supervisor that RCMS has been repowered from the ALTERNATE Power supply. | Examinee INFORMS the Unit Supervisor that RCMS has been repowered from the ALTERNATE Power supply. | — | — | — |
| TERMINATING CUE: Acknowledge Report and inform the Examinee that the JPM is Complete. | | | | | |

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____

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

JPM Title: Loss of RCMS Controller and Interface Power (2H13-P659 Electronics)

JPM Number: P-RM-04

Revision Number: 04

Task Number and Title: 47.013 Provided initial conditions, perform the actions associated with Rod Control Management System alarms, IAW station procedures.

K/A Number and Importance: 201002 Reactor Manual Control System 2.1.30 Ability to locate and operate components, including local controls. (4.4/4.0)

Suggested Testing Environment: Plant

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

Reference(s): LOA-RM-201 Rev. 19, Unit 2 RCMS Abnormal Situations
LOP-RM-04 Rev. 07, RCMS Power Supplies and Transfers

Actual Testing Environment: ☐ Simulator ☐ Control Room ☒ In-Plant ☐ Other

Testing Method: ☒ Simulate ☐ Perform

Estimated Time to Complete: 35 minutes

Actual Time Used: _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

INITIAL CONDITIONS

You are the Extra NSO.

CORE Map, ROD SELECT Display and STATUS Display all indicate no data available.

- Data Source A-NO DATA AVAILABLE
- Data Source B-NO DATA AVAILABLE

CHECK Control Rods-AT SEQUENCE POSITION-NONE HAVE MOVED.

The Unit 2 NSO and an EO are available to assist you as necessary.

INITIATING CUE

You have been directed to enter LOA-RM-201, Unit 2 RCMS Abnormal Situations, Section B.1 starting at Step 3.

You are to inform the Unit 2 Supervisor when the RCMS Electronics power supply has been transferred from Primary to Alternate.

Exelon Nuclear

Job Performance Measure

Startup of the Mechanical Vacuum Pump

JPM Number: S-OG-02

Revision Number: 01

Date: 08/22/2014

Developed By:

J R Thullen
Instructor

8/13/14
Date

Validated By:

E M N Volz
SME or Instructor

8/28/14
Date

Reviewed By:

M J
Operations Representative

8/27/14
Date

Approved By:

E M N Volz
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

- Revision 00** This is a new JPM written for the 07-01 ILT NRC
- Revision 01** Updated to current template and procedures for ILT 13-1 NRC Exam.
Deleted the Alternate Path classification of this JPM.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to a low power IC with Reactor Pressure at approximately 50 psig.
(Use IC195 for the ILT 13-1 NRC Exam.)

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

2. Place Gland Seal System into operation per LOP-GS-01.
3. Verify 1IN62-F003A and 1IN62-F003B are closed.
4. Run the cae for this JPM: **SOG02r01.cae**
 - **trgset 2 "k7c19jbz"** (When the Mechanical Vacuum Pump is taken to START)
 - **imf r0481 (2 40) on** (1H13P601 F402 MSL A/B RAD MON DOWNSCALE/INOP/HI 40 second delay)
 - **imf r1283 (2 45) on** (1H13P601 E402 MSL C/D RAD MON DOWNSCALE/INOP/HI 45 second delay)
 - **imf r1282 (2 100) on** (1H13P601 F403 MSL A/B RAD MON HI-HI – 100 second delay)
 - **imf r0301 (2 95) on** (1H13P601 E403 MSL C/D RAD MON HI-HI – 95 second delay)
5. Silence, Acknowledge and Reset the annunciators, then Acknowledge the Process Computer Alarms.
6. Clear BOTH Sequence of Events Recorder (SER) monitor screens.
7. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
8. This completes the setup for this JPM.

MATERIALS

The following materials will be provided to the examinee:

- A marked copy of LOP-OG-01, completed through Step E.1.7.

INITIAL CONDITIONS

- Unit 1 is starting up following a refueling outage, with reactor pressure currently at approximately 50 psig with conditions met for establishing condenser vacuum.
- LGP 1-1, Step E.3.14 is directing the start-up of the Mechanical Vacuum Pump per LOP-OG-01.
- LOP-OG-01 has been completed up to and including step E.1.7 in preparation for the start-up of the Mechanical Vacuum Pump.

INITIATING CUE

The Unit Supervisor has directed you to start-up the Unit 1 Mechanical Vacuum Pump per LOP-OG-01, beginning at step E.1.8.

You are to INFORM the Unit Supervisor when the Mechanical Vacuum Pump has been started and main condenser back pressure is DECREASING.

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------|---|---|-------|-------|-------------------|
| Note | Provide the examinee with the marked up copy of LOP-OG-01. | | | | |
| *1. Step E.1.8 | At 1N62-P601, PERFORM the following: <ul style="list-style-type: none"> PLACE the 1N62-F300A control switch to OPEN and VERIFY the valve opens PLACE the 1N62-F300B control switch to OPEN and VERIFY the valve opens | The control switch for ONE (or both) of the TWO listed valves is taken to the OPEN position, and light indication is checked to VERIFY the valve has opened. | _____ | _____ | _____ |
| *2. Step E.1.9 | At 1N62-P601, PLACE 1OG02P, Mech Vac Pmp control switch to START <u>and</u> RELEASE. | 1OG02P, Mech Vac Pmp control switch is taken to START by rotating clockwise | _____ | _____ | _____ |
| 3. Step E.1.10 | At 1PM03J CHECK the following for main condenser back pressure DECREASING (vacuum increasing). <ul style="list-style-type: none"> 1PR-ES062, 1C Cond Line Back Press 1PR-ES058, 1A/1B Cond Line Back Press | At 1PM03J BOTH of the following indications are checked to determine if main condenser back pressure is DECREASING (vacuum increasing). <ul style="list-style-type: none"> 1PR-ES062, 1C Cond Line Back Press 1PR-ES058, 1A/1B Cond Line Back Press | _____ | _____ | _____ |
| SIMOP | Verify <u>Event Trigger 2</u> goes active when the Mechanical Vacuum Pump switch is taken to START and verify the following commands go active: <ul style="list-style-type: none"> imf r0481 (2 40) on (1H13P601 F402 MSL A/B RAD MON DOWNSCALE/INOP/HI, 40 second delay) imf r1283 (2 45) on (1H13P601 E402 MSL C/D RAD MON DOWNSCALE/INOP/HI, 45 second delay) imf r1282 (2 100) on (1H13P601 F403 MSL A/B RAD MON HI-HI, 100 second delay) imf r0301 (2 95) on (1H13P601 E403 MSL C/D RAD MON HI-HI, 95 second delay) | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|--|---|-------|-------|-------------------|
| Note | Record the time the MSL Rad Mon HI-HI alarm is received in order to track the securing of the mechanical vacuum pump within 15 minutes of the alarm. Time MSL Hi-HI Rad Alarm received: _____ | | | | |
| 4. | MSL Rad Mon Hi-Hi alarm annunciator alarms due to a valid MSL Hi-Hi Rad condition. | Responds to MSL Rad Mon Hi-Hi alarm by referring to LOR and checking MSL Rad recorders in backpanel. | _____ | _____ | _____ |
| CUE | MSL Rad Recorders indicate 2200 mr/HR and rising steadily. | | | | |
| *5. | Per CAUTION statement in LOP-OG-01, If a valid MSL A/B/C/D Rad Mon Hi-Hi alarm is received, TRIP Mechanical Vacuum Pump within 15 minutes to prevent exceeding the radioactivity release dose limit. | TRIPS the Mechanical Vacuum Pump by taking the 1OG02P, Mech Vac Pmp control switch to STOP by rotating counterclockwise, within 15 minutes of receiving the MSL Rad Mon Hi-Hi alarm | _____ | _____ | _____ |
| Note | Time the Mechanical Vacuum Pump was tripped _____ | | | | |
| 6. | INFORMS that Unit Supervisor that the Mechanical Vacuum Pump has been TRIPPED due to a valid MSL Rad Mon Hi-Hi alarm. | INFORMS the Unit Supervisor that the Mechanical Vacuum Pump has been TRIPPED due to a valid MSL Rad Mon Hi-Hi alarm. | _____ | _____ | _____ |
| <p align="center">TERMINATING CUE:</p> <p>ACKNOWLEDGE report as Unit Supervisor and INFORM the examinee the JPM is complete.</p> | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Startup of the Mechanical Vacuum Pump**JPM Number:** S-OG-02**Revision Number:** 02**Task Number and Title:** 80.001 Given Unit Supervisor authorization, perform the Main Control Room actions to startup the Off Gas Mechanical Vacuum Pump IAW station procedures

K/A Number and Importance: 271000 Offgas System A2.03 3.5/3.8; Ability to (a) predict the impacts of the following on the Offgas; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations:
Main steamline high radiation

Suggested Testing Environment: Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☒ Yes ☐ No**Reference(s):**

LOP-OG-01 Rev. 16, Startup of the Main Condenser Mechanical Vacuum Pump

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 ☐ No

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

Comments: _____

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

INITIAL CONDITIONS

- Unit 1 is starting up following a refueling outage, with reactor pressure currently at approximately 50 psig with conditions met for establishing condenser vacuum.
- LGP 1-1, Step E.3.14 is directing the start-up of the Mechanical Vacuum Pump per LOP-OG-01.
- LOP-OG-01 has been completed up to and including step E.6 in preparation for the start-up of the Mechanical Vacuum Pump.

INITIATING CUE

The Unit Supervisor has directed you to start-up the Unit 1 Mechanical Vacuum Pump per LOP-OG-01, beginning at step E.7.

You are to INFORM the Unit Supervisor when the Mechanical Vacuum Pump has been started and main condenser back pressure is DECREASING.

Exelon Nuclear

Job Performance Measure

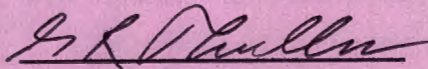
Starting Service Water Pumps to Maintain Fire Header Pressure

JPM Number: S-FP-01

Revision Number: 01

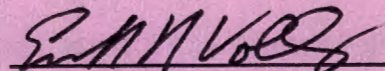
Date: 08/22/2014

Developed By:


Instructor

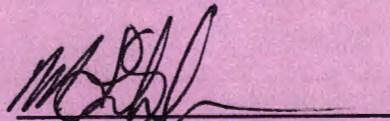
7/30/14
Date

Validated By:


SME or Instructor

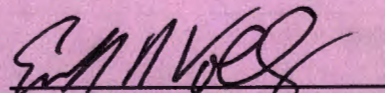
8/28/14
Date

Reviewed By:


Operations Representative

8/27/14
Date

Approved By:


Training Department

8/28/14
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 8 and 12 below.

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

| | |
|------------------------|------------|
| _____ SME / Instructor | _____ Date |
| _____ SME / Instructor | _____ Date |
| _____ SME / Instructor | _____ Date |

Revision Record (Summary)

Revision 00 This is a new JPM written for the 07-01 ILT NRC

Revision 01 Updated to current template and procedures for ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC196.

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

2. Line up Service Water as follows:

- The following pumps running:
 - 1A Service Water pump
 - Common Service Water pump
 - 0A Service Water Jockey pump

3. Run the CAEP for this JPM: **SFP01r01.cae**

- **ior k7b08ib9 false** (Disables the A Diesel Fire Pump START switch)
- **ior k7b09ib9 false** (Disables the B Diesel Fire Pump START switch)
- **ior k7b22jp9 stop** (Trips the 0A Jockey Fire Pump)
- **ior k7b23jp9 stop** (Trips the 0B Jockey Fire Pump)
- **imf r1014** (1PMJ10 B101 0A DIESEL FIRE PUMP TROUBLE overridden ON)
- **imf r1019** (1PMJ10 B102 0B DIESEL FIRE PUMP TROUBLE overridden ON)
- **imf r1062** (1PMJ10 B302 0A FIRE JOCKEY PUMP AUTO TRIP overridden ON)
- **imf r1061** (1PMJ10 B303 FIRE DET CONT PANEL TROUBLE overridden ON)
- **imf r1020** (1PMJ10 B401 FIRE PROT HEADER PRESS LO overridden ON)
- **imf r1251** (1PMJ10 B407 FP INTER JOCKEY PUMP RUNNING overridden ON)
- **ior q7b08rr9 off** (A Diesel Fire Pump ON light OFF)
- **ior q7b09rr9 off** (B Diesel Fire Pump ON light OFF)
- **ior q7b08ma9 on** (A Diesel Fire Pump TRIP light ON)
- **ior q7b09ma9 on** (B Diesel Fire Pump TRIP light ON)
- **ior q7b08lg9 on** (A Diesel Fire Pump OFF light ON)
- **ior q7b09lg9 on** (B Diesel Fire Pump OFF light ON)
- **ior g8c99g19 100** (Overrides Fire Header Indication to 100 psig)

4. Silence, Acknowledge and Reset the annunciators, then acknowledge the Process Computer Alarms.
5. Clear BOTH Sequence of Events Recorder (SER) monitor screens.
6. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
7. The following materials will be provided to the examinee:
 - LOA-FP-101, Unit 1 Fire Protection System Abnormal, Attachment A
8. The following materials will be available to the examinee:
 - LOP-WS-03, Service Water Pump Shutdown
9. This completes the setup for this JPM.

INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1.

A large fire is in progress inside the lake screen house. The fire is on the west side of the ground floor.

Both Diesel Fire Pumps and the Jockey Fire Pumps have tripped due to the fire. The Intermediate Jockey Fire Pump remains running

Normal AC power remains available to the Lake Screen House.

All Service Water Pumps are available.

INITIATING CUE

The Unit Supervisor has directed you to start additional Service Water pumps to maintain fire header pressure greater than or equal to 125 psig in accordance with LOA-FP-101, "Unit 1 Fire Protection System Abnormal", Attachment A.

You are to INFORM the Unit Supervisor when LOA-FP-101 Attachment A is completed up to and including Step 5.

.....

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------------------|--|---|-----|-------|-------------------|
| SIMOP | Call up the Analog Output Override From Screen 1PM10J-01 for Fire Pump Header Pressure (g8c99g19) | | | | |
| Note | Provide a copy of LOA-FP-101 Attachment A after the examinee has acknowledged the initiating cue. | | | | |
| 1. Attachment A Step 1 | If a fire is in progress, GO TO Step 3. | Determines that a fire is in progress and GOES TO Step 3. | — | — | — |
| *2. Attachment A Step 3 | START desired Service Water Pump at 1PM09J: <ul style="list-style-type: none"> ○ 1WS01PA ○ 1WS01PB ○ 2WS01PA ○ 2WS01PB ○ 0WS01P | <ul style="list-style-type: none"> • Determines that an additional Service Water Pump must be started and STARTS the pump by taking the appropriate control switch to START. | | | |
| SIMOP | When the 1WS01PB pump is started, insert a <u>FINAL VALUE of 127</u> for the Fire Header Pressure Indication and Delete <u>r1020</u> from the Summary Page to clear the Low Pressure Alarm. | | | | |
| 3. Attachment A Step 4 | VERIFY Service Water PMP Amps are normal at 1PM10J: <ul style="list-style-type: none"> • ≤ 160 amps | <ul style="list-style-type: none"> • VERIFIES that running Service Water Pump amps are ≤ 160 amps. | — | — | — |
| Note | The CAUTION before Step 5 warns about operating the Service Water Jockey Pump with a header pressure > 115 psig. | | | | |
| 4. Attachment A Step 5 | If a Service Water Jockey Pump is running, SHUT it down per LOP-WS-03 while continuing with subsequent actions. | Determines that 0A Service Water Jockey Pump 0WS02PA is running and is required to be shutdown. | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------------------|--|---|------------|--------------|---------------------------|
| CUE | Provide the examinee with a copy of LOP-WS-03 when it is identified that the procedure is needed and the examinee has located the procedure in the simulator. | | | | |
| *5. LOP-WS-03 Step E.1 | On panel 1PM09J, STOP desired pump. | Examinee takes control switch 0WS-02PA to Stop. | — | — | — |
| 6. LOP-WS-03 Step E.2 | VERIFY stopped Service Water Pump or Service Water Jockey Pump discharge check valve is closed by observing the pump shaft stops rotating and does not begin to rotate in reverse. | Directs an NLO to check that 0WS02PA shaft stopped rotating when the pump was stopped | — | — | — |
| CUE | Inform the examinee that the shaft has been checked for Service Water Jockey pump 0WS02PA and the shaft is stopped. | | | | |
| 7. LOP-WS-03 Step E.2.1 | If the pump discharge check does not close | Identifies that this step does not apply, marks the step N/A and continues on to step E.3 of LOP-WS-03. | — | — | — |
| CUE | (LOP-WS-03 Step E.3) Role Play EO as necessary to acknowledge the directive to place the control switch for the 0A Service Water Jockey Pump in the AFTER STOP position at the Remote Shutdown Panel. (No further action is necessary.) | | | | |
| 8. LOP-WS-03 Step E.4 | Notify chemistry to adjust Chemical Feed System | NOTIFIES chemistry to adjust Chemical Feed System | — | — | — |
| CUE | As Chemistry personnel, inform the examinee the Chemical Feed System will be adjusted as required. | | | | |
| Note | LOP-WS-03 Step E.5 and E.6 are Not Applicable | | | | |
| 9. LOP-WS-03 Step E.7 | Notify the Unit Supervisor to verify PARAGON is updated based on the number of main Service Water Pumps in operation | Unit Supervisor notified to update PARAGON | — | — | — |
| CUE | Role Play as Unit Supervisor to acknowledge this report. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------|--|---|-----|-------|-------------------|
| 11. | INFORM the Unit Supervisor when LOA-FP-101 Attachment A is completed up to and including step 5. | INFORMS the Unit Supervisor that LOA-FP-101 Attachment A is completed up to and including step 5. | — | — | — |

TERMINATING CUE:

ACKNOWLEDGE report as Unit Supervisor and **INFORM** the examinee that the JPM is complete.

Record completion time in the block below.

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Starting Service Water Pumps to Maintain Fire Header Pressure**JPM Number:** S-FP-01**Revision Number:** 01**Task Number and Title:** 125.021 Provide an alternate supply to the Fire Protection system when required.

K/A Number and Importance: 286000 Fire Protection Systems, A2.08 RO 3.2/SRO 3.3; Ability to (a) predict the impacts of the following on the Fire Protection; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Failure to actuate when required

Suggested Testing Environment: Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**LOA-FP-101, Rev. 25; Unit 1 Fire protection System AbnormalLOP-WS-03, Rev. 8, Service Water Pump Shutdown**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No

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

Comments: _____

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

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INITIAL CONDITIONS

You are an Extra NSO assigned to Unit 1.

A large fire is in progress inside the lake screen house. The fire is on the west side of the ground floor.

Both Diesel Fire Pumps and the Jockey Fire Pumps have tripped due to the fire. The Intermediate Jockey Fire Pump remains running

Normal AC power remains available to the Lake Screen House.

All Service Water Pumps are available.

INITIATING CUE

The Unit Supervisor has directed you to start additional Service Water pumps to maintain fire header pressure greater than or equal to 125 psig in accordance with LOA-FP-101, "Unit 1 Fire Protection System Abnormal", Attachment A.

You are to INFORM the Unit Supervisor when LOA-FP-101 Attachment A is completed up to and including Step 5.

Exelon Nuclear

Job Performance Measure

BYPASS INOP OPRM

JPM Number: S-NR-10

Revision Number: 01

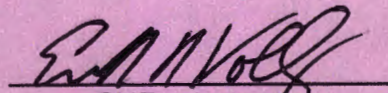
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Developed By:


Instructor

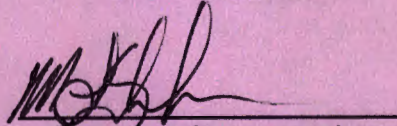
8/13/14
Date

Validated By:


SME or Instructor

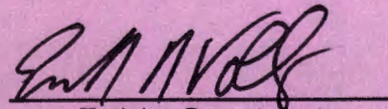
8/28/14
Date

Reviewed By:


Operations Representative

8/27/14
Date

Approved By:


Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00, New JPM for 2009 Annual Exam.

Revision 01, Updated to current JPM template for the ILT 1301 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to any full power IC. (Use IC193 for the ILT 13-1 NRC Exam.)

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

2. Insert OPRM INOP Malfunction for G OPRM.
 - MOP007
3. Insert the following malfunctions – then DELETE them.
 - MRP033
 - MRP027
4. Turn the OPRM A TRIP Annunciator ON (1H13-P603-B309)
 - ANN-R1203
5. Verify on the SER Typer that:
 - G OPRM is INOP.
 - G OPRM is TRIPPED.
6. Verify Backpanel OPRM indication shows G OPRM INOP.
7. Verify A RPS ½ SCRAM has occurred.
8. Acknowledge all alarms and place Simulator in FREEZE.
9. 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.
10. This completes the setup for this JPM.

INITIAL CONDITIONS

You are the Assist NSO on Unit 1.
A half scram has just occurred on Unit 1.
The half scram appears to be due to the 'G' OPRM.

INITIATING CUE

The Unit Supervisor has directed you to follow-up with the actions of LOR-1H13-P603-B309.
You are to report your actions to the Unit Supervisor when you are complete with the LOR.

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

.....

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes critical steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

.....

JPM Start Time: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------|--|---|-----|-------|-------------------|
| 1. | Retrieves LOR-1H13-P603-B309 for use. | Examinee retrieves LOR-1H13-P603-B309 for use. | — | — | — |
| 2. | Verifies Auto Actions of A RPS Channel A Trip. | Examinee verifies A RPS ½ Scram occurs | — | — | — |
| 3. | OBSERVES APRM recorders and LPRM meters for flux oscillations greater than two times normal peak to peak. | Examinee OBSERVES that APRM recorders and LPRM meters for flux oscillations and see that they are NOT greater than two times normal peak to peak. | — | — | — |
| 4. | If Channel A OPRM TRIP was spurious: DETERMINE if one OPRM module has failed or is INOP (G). | Examinee DETERMINES one OPRM module has failed and is INOP (G). | — | — | — |
| Note | SER typer shows G OPRM INOP and TRIPPED. Back panel (1H13-P608) OPRM indication should also show the OPRM INOP. | | | | |
| SIMOP | AFTER the OPRM Keyswitch is taken to BYPASS, DELETE the OPRM TRIP Annunciator ALARM (ANN-R1203) Ensure the OPRM TRIP Annunciator has been deleted before the candidate returns to the front panel area. | | | | |
| *5. | BYPASS inoperable OPRM (G). | Examinee Bypasses the inoperable OPRM (G) with the keyswitch at the 1H13-P608 panel. | — | — | — |
| Note | This action is taken at 1H13-P608 | | | | |
| *6. | RESET RPS Channel A. | Examinee RESETS RPS Channel A by taking the SCRAM RESET SWITCH to the GP 1/4 and GP 2/3 positions. | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|---|--|-----|-------|-------------------|
| *6. | RESET RPS Channel A. | Examinee RESETS RPS Channel A by taking the SCRAM RESET SWITCH to the GP 1/4 and GP 2/3 positions. | — | — | — |
| Note | This action is taken at 1H13-P603 | | | | |
| 7. | INITIATE appropriate corrective actions for inoperative OPRM (G). | Examinee notifies the Unit Supervisor that the (G) OPRM has been bypassed due to it being INOP, half scram is reset and corrective actions need to be taken. | — | — | — |
| CUE | Acknowledge Report. | | | | |
| 8. | Refer to Tech Spec. 3.3.1.3. | Examinee notifies Unit Supervisor that Tech Spec. 3.3.1.3 needs to be referred to. | — | — | — |
| CUE | Acknowledge Report. | | | | |
| TERMINATING CUE: Inform the Examinee that the JPM is Complete. | | | | | |

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____

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

JPM Title: Bypass INOP OPRM

JPM Number: S-NR-10 **Revision Number:** 01

Task Number and Title: 55.001, Provided initial conditions, perform Control Room Actions in Response to OPRM Trouble IAW station procedures

K/A Number and Importance: 212000 A4.14 Ability to manually operate and/or monitor in the control room: Reset system following system activation 3.8 / 3.8

Suggested Testing Environment: Simulator

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

Reference(s): LOR-1H13-P603-B309, Rev. 3 CHAN A OPRM TRIP

Actual Testing Environment: ☒ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 13 minutes

Actual Time Used: _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

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

Comments: _____

Evaluator's Name: _____ (Print)

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

INITIAL CONDITIONS

You are the Assist NSO on Unit 1.

A half scram has just occurred on Unit 1.

The half scram appears to be due to the 'G' OPRM.

INITIATING CUE

The Unit Supervisor has directed you to follow-up with the actions of LOR-1H13-P603-B309.

You are to report your actions to the Unit Supervisor when you are complete with the LOR.

Exelon Nuclear

Job Performance Measure

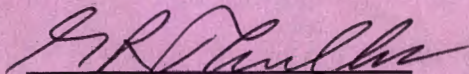
Perform Loss of Bus 141Y Hard Card

JPM Number: S-AP-05

Revision Number: 06

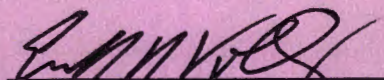
Date: 08/22/2014

Developed By:


Instructor

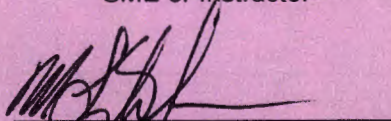
8/13/14
Date

Validated By:


SME or Instructor

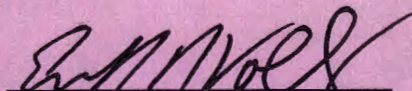
8/28/14
Date

Reviewed By:


Operations Representative

8/27/14
Date

Approved By:


Training Department

8/28/14
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 8 and 12 below.

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

| | |
|------------------|-------|
| _____ | _____ |
| SME / Instructor | Date |
| _____ | _____ |
| SME / Instructor | Date |
| _____ | _____ |
| SME / Instructor | Date |

Revision Record (Summary)

| | |
|--------------------|---|
| Revision 00 | 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. |

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to a full power IC. (Use IC193 for the ILT 13-1 NRC Exam.)
2. Go to RUN
3. Verify the following:
 - 1B CRD Pump is off
 - 1B WR is off
 - 0 WR pump is aligned to Unit 2
4. Run the CAEP for this JPM: **SAP05r06.cae**
 - **imf mdg016** (O 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.

1. Unit 1 has had a Loss of 141Y due to Breaker 1412 opening.
2. 0 DG did not start and LOA-DG-101 is in progress.
3. Unit 2 is at 100% Power with a normal electric plant lineup.
4. 0 WR Pump is lined up to Unit 2.
5. Operators are standing by to assist you.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform Loss of 141Y Hard Card.

You are to inform the Unit 1 Supervisor when Bus 141Y is energized.

Another NSO will perform 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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------|---|--|-----|-------|-------------------|
| *1. | Verify one WR Pump is running. | Examinee starts 1B WR Pump. | — | — | — |
| CUE | Another NSO will follow up with LOP-WR-02. | | | | |
| 2. | Verify one CRD Pump running. Verify CRD Charging Header Pressure is >500 psig. | Examinee identifies no CRD Pump running and verifies CRD Charging Header Pressure is >500 psig. | — | — | — |
| *3. | START standby CRD Pump by HOLDING Control Switch to START position for at least 5 seconds, and then release. | Examinee starts 1B CRD Pump by HOLDING Control Switch to START position for at least 5 seconds, and then releases the switch. | — | — | — |
| CUE | Another NSO will follow up with LOP-RD-01. | | | | |
| Note | STEP #4 may be N/A as it is on the RPS Hard Card. If requested, the examinee MAY complete the IA to IN Cross-Tie. | | | | |
| 4. | Check IN Supplying drywell loads. OPEN 1IN059 and 1IN060, Instrument Air to Drywell Pneumatics Crosstie Valves. OPEN 1IN017, Drywell Pneumatics 100 lb. Header Isolation Valve. | Examinee verifies that IN is <u>NOT</u> supplying drywell loads. Examinee opens 1IN059 and 1IN060, Instrument Air to Drywell Pneumatics Crosstie Valves. Examinee verifies, opens 1IN017, Drywell Pneumatics 100 lb. Header Isolation Valve. | — | — | — |
| 5. | VERIFY annunciator 1PM01J-A214, 141X/Y Overcurrent alarm is CLEAR. | Examinee checks Panel 1PM01J A214 CLEAR. | — | — | — |
| 6. | Verify all three phase voltages are approximately equal using the 141X/Y Voltmeter switch. | Examinee verifies all three phases of voltages equal, using the 141X/Y Voltmeter switch. | — | — | — |
| Note | Alternate Path begins here. Successful completion of the JPM is re-energizing 141Y from Unit 2. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|--|---|-----|-------|-------------------|
| 7. | If 141X is energized, synchronize and close ACB 1415. | Examinee verifies all three phases of voltages equal, using the 141X/Y Voltmeter switch. Examinee places Synchroscope Select Switch to ON for breaker 1415 Examinee attempts to close ACB 1415 and determines it will not close | — | — | — |
| CUE | Role Play as Unit Supervisor if notified the ACB 1415 did not close. If necessary the initiating cue may be repeated: "Inform me when Bus 141Y is energized." | | | | |
| 8. | CHECK BUS 241Y powered from Unit-2 SAT. | The Examinee checks that Bus 241Y is powered from the Unit 2 SAT | — | — | — |
| CUE | Bus 241Y is powered from the Unit 2 SAT as provided in initial conditions. | | | | |
| 9. | CHECK ACB 2415 is OPEN | The Examinee checks that ACB 2415 is open. | — | — | — |
| CUE | Unit 2 NSO reports that ACB 2415 is open. | | | | |
| *10. | SYNCHRONIZE and CLOSE ACB 2414, | The Examinee requests that Unit 2 close ACB 2414. | — | — | — |
| CUE | Unit 2 NSO reports ACB 2414 is closed. | | | | |
| *11. | SYNCHRONIZE and CLOSE ACB 1414. | Examinee places Synchroscope Select Switch to ON for breaker 1414. Examinee closes ACB 1414. | — | — | — |
| Note | Power is restored to Bus 141Y | | | | |
| 12. | INFORM the Unit Supervisor. | The Examinee informs the Unit 1 Supervisor that Bus 141Y is energized. | — | — | — |
| TERMINATING CUE: The JPM is complete Bus 141Y is energized and the Unit 1 Supervisor is notified. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Perform Loss of Bus 141Y Hard Card**JPM Number:** S-AP-05**Revision Number:** 06**Task Number and Title:** 5.008, Provided initial conditions respond to a loss of 4KV ESS bus IAW station procedures.**K/A Number and Importance:** 295003, AA1.01, 3.7/3.8. Ability to operate and/or monitor the following as they apply to Partial or Complete Loss of AC: A.C. electrical distribution system**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**LOPA-AP-101, Rev 46, Attachment U, Loss of 141Y Hard Card**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 15 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

INITIAL CONDITIONS

You are an assist NSO.

1. Unit 1 has had a Loss of 141Y due to Breaker 1412 opening.
2. 0 DG did not start and LOA-DG-101 is in progress.
3. Unit 2 is at 100% Power with a normal electric plant lineup.
4. 0 WR Pump is lined up to Unit 2.
5. Operators are standing by to assist you.

INITIATING CUE

The Unit 1 Supervisor has directed you to perform Loss of 141Y Hard Card.

You are to inform the Unit 1 Supervisor when Bus 141Y is energized.

Another NSO will perform RPS Quick Swap Hardcard and the IN Cross-Tie Hardcard.

Exelon Nuclear

Job Performance Measure

Secure the Drywell Inerting Lineup

JPM Number: S-VQ-13

Revision Number: 00

Date: 08/22/2014

Developed By:

J R Duller
Instructor

8/13/14
Date

Validated By:

E M N Volz
SME or Instructor

8/28/14
Date

Reviewed By:

M J H
Operations Representative

8/27/14
Date

Approved By:

E M N Volz
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 This JPM was developed new for ILT 13-1 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset to a Startup IC. (Use IC 194 for the ILT 13-1 NRC Exam)
 - Use an IC with Drywell inerting in progress.
 - Use an IC with the Drywell inerted with normal makeup in service and then shift into a Drywell inerting lineup.
2. Verify the following:
 - Primary Containment Ventilation System is in service
 - AI-CM063, Sup Chbr/DW Oxygen Monitor is in service
 - PC Press CV Selector switch is in the SUPPLY position
 - 1PC-VQ019, PC Press Controller, is in MANUAL
 - 1VQ053, Inerting Pressure Control Valve is closed
 - The following valves on 1PM06J are CLOSED:
 - 1VQ047
 - 1VQ048
 - 1VQ050
 - 1VQ051
 - MCR Recirc Charcoal Filter unit is in service
 - AEER Recirc Charcoal Filter unit is in service
 - The following valves on 1PM06J are OPEN
 - 1VQ042
 - 1VQ030
 - 1VQ034
 - 1VQ036
 - 1VQ057
 - 1VQ058
 - 1PC-VQ019 PC Press Controller is open
 - Drywell O₂ concentration <1% on 1AI-CM063
 - Drywell pressure at 1PI-VQ019 (on 1PM06J) is $\leq +.5$ psig

SIMULATOR SETUP INSTRUCTIONS (Continued)

3. Provide a working copy of LOP-VQ-04 (Pages 1-31, 51, & 63) marked up as follows:

- Sections A, B, C & D; all steps circled and slashed except the following which are N/A:
 - B.1.3, B.1.7, & B.1.8
- Section E.1; all steps circled and slashed except the following which are N/A:
 - E.1.1 2nd and 3rd bullets
- Section E.2; all steps circled and slashed except the following which are N/A:
 - E.2.2 5th bullet
 - E.2.3, E.2.6 and E.2.8 through E.2.8.2.3
- Section E.3 unmarked
- Section E.4; Steps E.4.2 and E.4.2.5, only the 1st bullet circled and slashed. All other steps up to E.4.3 circled and slashed
- Section E.5;
 - The following steps marked N/A
 - The second bullets of Steps E.5.6 and E.5.6.1
 - Step E.5.6.2
 - Steps E.5.9 through E.5.9.3
 - Step E.5.15.2
 - Step E.5.17, 2nd and 3rd open bullets
 - All E.5.18 steps
 - Steps E.5.21 to E.5.28
 - All other steps circled and slashed up to Step E.5.21
- Section E.6;
 - The following steps marked N/A
 - The second bullets of Steps E.6.6 and E.6.6.1
 - Step E.6.6.2
 - Steps E.6.9 through E.6.9.3
 - Step E.6.15.2
 - Step E.6.17, 2nd and 3rd open bullets
 - All other steps circled and slashed up to Step E.6.18
- Section E.14 unmarked
- Attachment A
 - Use "Today"/"12Hours ago" for 0A VC and VE Charcoal Filter Startup Date/Times
 - Leave 0A VC and VE Charcoal Filter Shutdown Date/Times blank
 - Mark 0B Startup and Shutdown Date/Times N/A

INITIAL CONDITIONS

- You are an extra NSO on Unit 1.
- A Startup is in progress.
- The Suppression Chamber has been inerted and Drywell inerting is in progress.
- Drywell O2 concentration has lowered to less than 1%.

INITIATING CUE

Secure the Drywell inerting lineup and establish normal Nitrogen makeup to the Drywell per LOP-VQ-04.

(Provide the candidate with the marked up copy of LOP-VQ-04)

.....

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|----------------------|---|--|-----|-------|-------------------|
| Note | All steps are from LOP-VQ-04 unless otherwise specified. | | | | |
| *1. E.6.18 | When Drywell oxygen concentration is stable at less than 1% by volume and is no longer decreasing, CLOSE the following valves at Control Room Panel 1PM06J: <ul style="list-style-type: none"> • 1VQ042, DW N2 Inerting Isol Vlv. • 1VQ030, DW Vent/Purge Inlt Dwnst Isol Vlv. • 1VQ034, DW Vent/Purge Otlt Upstrm Isol Vlv. • 1VQ036, DW Vent/Purge Otlt Dwnst Isol Vlv. | The following valve are CLOSED: <ul style="list-style-type: none"> • 1VQ042 • 1VQ030 • 1VQ034 • 1VQ036 | — | — | — |
| CUE | Role Play Unit Supervisor for Step E.6.19: It is NOT desired to monitor the Suppression Chamber O2 concentrations | | | | |
| Note | Step E.6.20 is Not Applicable because the Suppression Chamber has already been inerted. | | | | |
| Note | In Step E.6.21, it takes >40 seconds for 1PC-VQ019 to stroke closed. | | | | |
| *2. E.6.21 | If 1PC-VQ019, PC Press Controller, is operable, CLOSE 1VQ053 using 1PC-VQ019. | 1VQ053 closed using 1PC-VQ019 | — | — | — |
| Note | Step E.6.22 is Not Applicable because 1PC-VQ019 is operable | | | | |
| 3. E.6.23 | SECURE the VQ Storage Tank Line-up per Step E.17.4. | EO directed to secure the VQ Storage Tank Line-up | — | — | — |
| CUE | Role Play EO as necessary when directed to secure the VQ Storage Tank Line-up. (No further action will be necessary.) | | | | |
| 4. E.6.24 | Locally, VERIFY the following valves CLOSED: <ul style="list-style-type: none"> • 1VQ057, Pri Cnmt N2 Inerting Press Cont Vlv Upstrm Valve. • 1VQ058, Pri Cnmt N2 Inerting Press Cont Vlv Dwnst Valve. | EO directed to verify that 1VQ057 and 1VQ058 are closed | — | — | — |
| CUE | Role Play EO as necessary when directed to close 1VQ057 and 1VQ058. Report that both valves are closed. (No further action will be necessary.) | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|----------------|--|--|-----|-------|-------------------|
| 5. E.6.25 | SHUTDOWN Primary Containment Vent and Purge System per Section E.3. | Section E.3 referenced | — | — | — |
| *6. E.3.2 | STOP 1VQ01C, PC Purge Sys Exhaust Fan. | Control Switch for 1VQ01C taken to STOP | — | — | — |
| 7. E.3.3 | CHECK CLOSED 1VQ02Y, PC Purge Filt Trn Otlt Isol Vlv. | 1VQ02Y checked closed | — | — | — |
| 8. E.3.4 | CHECK CLOSED 1VQ01Y, PC Purge Filt Trn Inlt Isol Vlv. | 1VQ01Y checked closed | — | — | — |
| 9. E.3.5 | VERIFY CLOSED the following dampers: <ul style="list-style-type: none"> • 1VQ03Y, RWCU Areas Exhaust Isol Damper. • 2VQ03Y, RWCU Areas Exhaust Isol Damper. • 1VQ037, VQ Train Inlet Upstrm Isol Vlv. • 1VQ038, VQ Train Inlet Dwnst Isol Vlv. • 1VQ041, RB Exhaust Dsch Valve. | The following valve are CLOSED: <ul style="list-style-type: none"> • 1VQ03Y • 2VQ03Y • 1VQ037 • 1VQ038 • 1VQ041 | — | — | — |
| CUE | Role Play Unit 2 NSO if asked about 2VQ03Y. Report that 2VQ03Y is closed. | | | | |
| CUE | Role Play as Unit Supervisor if asked about EST cards. Report that no ESTs were placed | | | | |
| 10. E.3.6 | NOTIFY Chemistry Department that purging operations are complete. | Chemistry Department notified that purging operations are complete. | — | — | — |
| CUE | Role Play as Chemistry Dept personnel as necessary to acknowledge this report. | | | | |
| 11. E.6.26 | If NO longer required, SHUTDOWN MCR Recirc Charcoal Filter Unit per Section E.4. | Section E.4.3 referenced | — | — | — |
| 12. E.4.3.1 | CHECK 0A(B) Recirc Charcoal Filter operation is no longer required. | MCR Recirc Charcoal Filter operation verified to be no longer required. | — | — | — |
| CUE | Role Play Unit Supervisor: Verify that MCR Recirc Charcoal Filter operation is no longer needed. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|------------------------|---|---|-----|-------|----------------|
| *13. E.4.3.2 | PLACE 0A(B) CR HVAC Charcoal Filter Damper Control switch to BYPASS position. | 0A(B) CR HVAC Charcoal Filter Damper Control switch placed in BYPASS | — | — | — |
| 14. E.4.3.4 | CHECK following Damper positions: <ul style="list-style-type: none"> • Inlet 0VC11YA(B) is CLOSED. • Outlet 0VC12YA(B) is CLOSED. • Bypass 0VC13YA(B) is OPEN. | Damper positions checked: <ul style="list-style-type: none"> • 0VC11YA/B CLOSED • 0VC12YA/B CLOSED • 0VC13YA/B OPEN | — | — | — |
| 15. E.4.3.5 | RECORD Date/Time of 0A(B) VC Recirc Charcoal Filter shutdown on Attachment A. | Date/Time of 0A(B) VC Recirc Charcoal Filter shutdown recorded on Attachment A | — | — | — |
| 16. E.4.3.6 | FORWARD Attachment A to Trend Analyst for tracking 0A(B) VC Recirc Charcoal Filter operation. | Attachment A forwarded to Trend Analyst | — | — | — |
| CUE | Role Play Unit Supervisor as necessary and take Attachment A from the candidate for forwarding. (This may be done after VE has been stopped.) | | | | |
| 17. E.6.27 | If NO longer required, SHUTDOWN AEER Recirc Charcoal Filter Unit per Section E.4. | Section E.4.4 referenced | — | — | — |
| CUE | Role Play Unit Supervisor: Verify that the AEER Recirc Charcoal Filter operation is no longer needed. | | | | |
| 18. E.4.4.1 | Directs an EO to SHUTDOWN AEER Recirc Charcoal Filter Unit per Section E.4. | EO directed to shutdown AEER Recirc Charcoal Filter Unit per Section E.4. | — | — | — |
| CUE | Role Play EO as necessary when directed to shutdown the AEER Recirc Charcoal Filter operation. (No further action will be necessary.) | | | | |
| 19. E.6.28 | Align the VQ System for Normal Make-Up per Sections E.14 | Section E.14 referenced | — | — | — |
| *20. E.14.1 | OPEN the following valves locally: <ul style="list-style-type: none"> • 1VQ054, Pri Cnmt N2 Makeup Press Cont Vlv Dwnst Valve. • 1VQ055, Pri Cnmt N2 Makeup Press Cont Vlv Upstrm Valve. | EO directed to open the following valves: <ul style="list-style-type: none"> • 1VQ054 • 1VQ055 | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | <u>SAT</u> | <u>UNSAT</u> | <u>Comment Number</u> |
|--|--|---|------------|--------------|---------------------------|
| CUE | Role Play as EO when directed to open 1VQ054 and 1VQ055. Report that both valves are open. (No further action is necessary.) | | | | |
| *21. E.14.2.1 | PLACE PC Press CV Selector switch to MAKEUP position to establish control of pressure control valve 1VQ052. | PC Press CV Selector switch selected to MAKEUP | — | — | — |
| *22. E.14.2.2 | PLACE 1PC-VQ019, PC Press Contlr in MANUAL and CLOSE 1VQ052. | 1PC-VQ019, placed in MANUAL and CLOSED | — | — | — |
| Note | Step E.14.2.2 may have been completed previously. | | | | |
| *23. E.14.2.3 | VERIFY OPEN the following valves: <ul style="list-style-type: none"> • 1VQ047, DW N2 Makeup Dwnst Isol Vlv. • 1VQ048, DW N2 Makeup Upstrm Isol Vlv. • 1VQ050, SP N2 Makeup Dwnst Isol Vlv. • 1VQ051, SP N2 Makeup Upstrm Isol Vlv. | The following valves are OPEN: <ul style="list-style-type: none"> • 1VQ047 • 1VQ048 • 1VQ050 • 1VQ051 | — | — | — |
| *24. E.14.2.4 | PLACE 1PC-VQ019, PC Press Contlr, in AUTO. | 1PC-VQ019 Controller placed in AUTO | — | — | — |
| *25. E.14.2.5 | DEPRESS 1PC-VQ019, PC Press Contlr, SETPOINT INCREASE until the setpoint is +0.2 psig. | 1PC-VQ019 setpoint is reading approximately +0.2 psig. | — | — | — |
| TERMINATING CUE: This completes this JPM. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Secure the Drywell Inerting Lineup**JPM Number:** S-VQ-13**Revision Number:** 00**Task Number and Title:** 93.003 Given Unit Supervisor authorization, perform the Main Control Room actions to Inert/De-inert the Suppression Chamber or the Drywell IAW station procedures**K/A Number and Importance:** 223001 Primary Containment System and Auxiliaries A4.10 IR 3.2; Ability to manually operate and/or monitor in the control room: Drywell nitrogen makeup: Mark-I,II**Suggested Testing Environment:** Simulator**Alternate Path:** ☐ Yes ☒ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** LOP-VQ-04, Rev. 36, Startup, Shutdown, and Operations of the Primary Containment Vent and Purge System**Actual Testing Environment:** ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 20 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

INITIAL CONDITIONS

- You are an extra NSO on Unit 1.
- A Startup is in progress.
- The Suppression Chamber has been inerted and Drywell inerting is in progress.
- Drywell O2 concentration has lowered to less than 1%.

INITIATING CUE

Secure the Drywell inerting lineup and establish normal Nitrogen makeup to the Drywell per LOP-VQ-04.

Exelon Nuclear

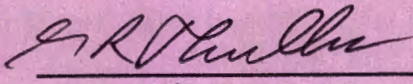
Job Performance Measure

RCIC Inadvertent Initiation

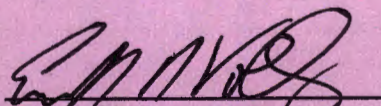
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Revision Number: 03

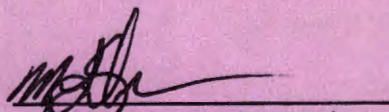
Date: 08/22/2014

Developed By: 
Instructor

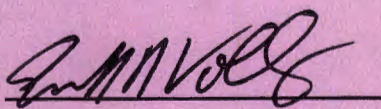
8/13/14
Date

Validated By: 
SME or Instructor

8/28/14
Date

Reviewed By: 
Operations Representative

8/27/14
Date

Approved By: 
Training Department

8/28/14
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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

1. **Revision 00,** New JPM written for the 2005 NRC Annual Exam by Gordon W. Beale.
2. **Revision 01,** Revised for formatting and current procedure revision.
3. **Revision 00** Rev. 0, based on Rev. 1, for ILT NRC 09-1 exam.
(Should have been Rev 2)
4. **Revision 03** Updated to current template and procedures for ILT 13-1 NRC Exam. Renumbered JPM to the current numbering convention. Deleted "Time Critical" aspects of this JPM. Developed a Computer Aided Exercise (cae) and revised the Setup Instructions accordingly.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to a full power IC. (Use IC193 for the ILT 13-1 NRC Exam.)

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. Go to RUN
3. Run the following cae to initiate RCIC: **SRI12r03.cae**

- Activate Manual trigger 12:
 - **trg 12 "imf mnb080 55"** (Increases the auto initiation setpoint)

As soon as 1E51-F045, F013, and F065 are full open (in approximately 20 seconds):

- Activate Manual trigger 22:
 - **trg 22 "set vmrj013r=1e6"** (Sets the stroke time of 1E51-F013, Injection Valve)

Then immediately place the simulator in FREEZE.

4. Place the simulator in RUN only after the examinee has acknowledged the initiating cue.
5. Ensure the performance of this JPM does not interfere with the performance of any other JPMs.
6. 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.
7. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the Unit Assist NSO.
- Unit 1 is at full power.
- The 'RCIC RUNNING' alarm has just been received.
- The initiation has been determined to be inadvertent.

INITIATING CUE

The Unit Supervisor has directed you to shutdown the RCIC system.

Do not reset the RCIC turbine.

Inform the Unit Supervisor when all required action to shutdown the RCIC System 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 examinee had while performing the JPM. Comments relating to procedural or equipment issues should be entered and tracked using the site's appropriate tracking system.

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|------------------------------------|--|---|-----|-------|-------------------|
| SIMOP | Wait until the Initial Conditions have been presented to the candidate, then place the Simulator in RUN. | | | | |
| Note | <p>The JPM steps are written as though the candidate will shut down RCIC per LOP-RI-03. There are no steps in this LOP for taking the U1 Main & FW Turb Trip Logic Bypass switches to BYPASS.</p> <p>The candidate must recognize the failure of Inject Valve 1E51-F013 to close and refer to LOR-1H13-P601-D406 for the Alternate Path actions.</p> | | | | |
| Note | If candidate goes directly to LOR-1H13-P601-D406, this next step is not applicable. | | | | |
| 01 LOP E.3.1 | VERIFY 1E51-R600, RCIC Pump Discharge Flow Controller, in AUTO. | Pump Discharge Flow Controller verified in AUTO. | | | |
| *02 LOP E.3.2 LOR 2.a | TRIP RCIC Turbine. | RCIC Turbine Trip pushbutton depressed | | | |
| 03 LOP E.3.3 | VERIFY RCIC Turbine trips and pump flow decreases to zero | RCIC Pump Discharge Flow (as indicated on 1E51-R606) verified a 0 gpm | | | |
| Note | The candidate may reference LOR-1H13-P601-D406 when the annunciator is identified as NOT CLEAR in the next step. | | | | |
| 04 LOP E.3.4 | VERIFY the following alarms on panel 1H13-P601: <ul style="list-style-type: none"> • D103, RCIC TURB OIL PRESS LO, ALARMS • D104, RCIC TURBINE TRIP, ALARMS • D205, RCIC PMP DSCH FLOW LO, ALARMS • D406, RCIC RUNNING, CLEARS | Annunciators D103, D104, and D205 verified alarming on 1H13-P601: On 1H13-P601, Annunciator D406 recognized as NOT cleared | | | |
| Note | ALTERNATE PATH BEGINS HERE. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|------------------------|--|---|-----|-------|-------------------|
| 05 LOP E.3.5 | VERIFY all of the following valves close: <ul style="list-style-type: none"> • 1E51-F045, RCIC Turb Steam Inlet Isol Vlv • 1E51-F019, RCIC Pmp Min Flow Vlv • 1E51-F046, RCIC Lube Oil Clg Water Vlv • 1E51-F013, RCIC Pmp Inj Vlv • 1E51-F022, RCIC Pmp Test to CY Upstream Vlv • 1E51-F059, RCIC Pmp Test to CY Downstream Vlv • 1E51-F360, RCIC Turb Trip & Throttle Valve | 1E51-F013 identified (stuck) open. The following valves verified closed: 1E51-F045 1E51-F019 1E51-F046 1E51-F022 1E51-F059 1E51-F360 | | | |
| 06 LOR 2.b | Verify Inject Valve 1E51-F065 is full closed | Verifies that 1E51-F065 has closed | — | — | — |
| 07 LOR 2.b | Verify Inject Valve 1E51-F013 is full closed; identifies that it remains open | 1E51-F013 identified (stuck) open. | — | — | — |
| CUE | Role play as an EO as necessary if dispatched to investigate why 1E51-F013 did not close. | | | | |
| Note | JPM Step 8 must be completed within 4 minutes of the start of the JPM. | | | | |
| *08 LOR 2.b | IF 1E51-F013 and/or 1E51-F065 is NOT full closed (following the RCIC Turbine trip) PLACE Feedwater Turbine Trip NORMAL-BYPASS keylock <u>SWITCHES</u> to BYPASS until problem is corrected. | <u>BOTH</u> 1E51-F013 Open U1 Main & FW Turb Trip Logic Bypass AND 1E51-F065 Open U1 Main & FW Turb Trip Logic Bypass place in BYPASS Before the TDRFPs trip. | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|--|--|-----|-------|-------------------|
| 09 LOP E.3.6 | ALLOW 1E51-C005, Barometric Condenser Vacuum Pump, to run for one hour after the RCIC System is shutdown | Barometric Condenser Vacuum Pump allowed to run for 1 hour | — | — | — |
| CUE | When the candidate enters the 1 hour waiting period, Inform the candidate that 1 hour has elapsed. | | | | |
| 10 LOP E.3.6 | STOP Barometric Condenser Vacuum Pump. | Barometric Condenser Vacuum Pump switch momentarily placed in STOP | — | — | — |
| Note | JPM Step 11 may be discussed because the Condensate Pump may still be running due to the previous time compression. | | | | |
| 11 LOP E.3.7 | VERIFY 1E51-C004, Barometric Condenser Condensate Pump stops | Barometric Condenser Condensate Pump verified stopped | — | — | — |
| Note | Per the Initiating Cue, RCIC will not be reset, so remaining steps of the LOP are Not Applicable. | | | | |
| 11 | Report that RCIC has been secured | Actions reported to Unit Supervisor | — | — | — |
| TERMINATING CUE: Acknowledge Report and Inform the Examinee that the JPM is complete. | | | | | |

JPM Stop Time: _____

JPM SUMMARY

Operator's Name: _____

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

JPM Title:

RCIC Inadvertent Initiation

JPM Number: S-RI-12

Revision Number: 03

Task Number and Title: 32.004 Given Unit Supervisor Authorization, perform Control Room actions to shutdown the RCIC System following operation, IAW Station Procedures.

K/A Number and Importance: 217000 RCIC A2.01, 3.8/3.7, Ability to (a) predict the impacts of the following on the RCIC; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: System initiation signal

Suggested Testing Environment: Simulator

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

Reference(s): LOR-1H13-P601-D406, RCIC RUNNING, Rev. 4
LOP-RI-03, Rev 16, RCIC System Isolation and System Shutdown

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other

Testing Method: ☐ Simulate ☒ Perform

Estimated Time to Complete: 04 minutes

Actual Time Used: _____ minutes

EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

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

Comments: _____

Evaluator's Name: _____ (Print)

Evaluator's Signature: _____ Date: _____

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INITIAL CONDITIONS

- You are the Unit Assist NSO.
- Unit 1 is at full power.
- The 'RCIC RUNNING' alarm has just been received.
- The initiation has been determined to be inadvertent.

INITIATING CUE

The Unit Supervisor has directed you to shutdown the RCIC system.

Do not reset the RCIC turbine.

Inform the Unit Supervisor when all required action to shutdown the RCIC System are complete.

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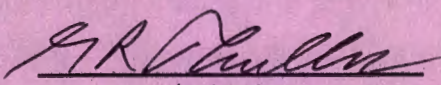
Job Performance Measure

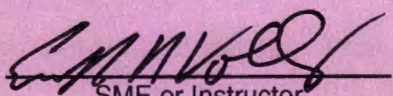
Load the Main Generator / Respond to a Generator Lockout


JPM Number: S-TG-02

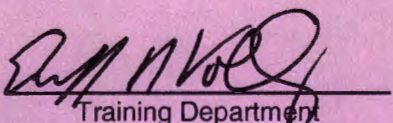
Revision Number: 00

Date: 08/22/2014

Developed By:  8/13/14
Instructor Date

Validated By:  8/28/14
SME or Instructor Date

Reviewed By:  8/27/14
Operations Representative Date

Approved By:  8/28/14
Training Department 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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00, This JPM was written NEW for the ILT 13-01 NRC Exam.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to an IC with the Turbine at 1800 rpm and ready to synchronize to the grid.
(Use IC194 for the ILT 13-1 NRC Exam.)
2. Prior to loading the cae, verify the following panel lineups:

CAUTION

The Generator Field Breaker Switch does NOT have SWITCH-CHECK capability when resetting the simulator.

However, it is critical that this switch is OPEN with a GREEN FLAG before running the cae.

- Verify the Generator Field Breaker Switch shows a GREEN FLAG.
 - GENERATOR FIELD VOLTS ADJUST at minimum position as indicated by LOWER LIMIT light on.
 - U1 GENERATOR REGULATOR MODE TRANSFER in MANUAL.
 - The Digital EHC monitor is on the SPEED/LOAD screen.
 - Verify that the LOAD LIMIT setpoint is at 2%.
 - Verify LOP-TG-02 Steps E.1 through E.23 have been completed.
3. Run STG02r00.cae to set up for the Generator Lockout (Alternate Path).
 - **trgset 21 "q6k003b8.eq.1 .or. q6k023b8.eq.1"** (Bus Tie 9-10 or 10-11 OCB Closed light on)
 - **trgset 22 "q6m00lr8.eq.0"** (When Gen Field Breaker OPEN light goes off)
 - **trgset 23 "q6m00rg8.eq.1"** (When Gen Field Breaker CLOSED light comes on)
 - **trgset 24 "q6m00rg8.eq.1"** (When Gen Field Breaker CLOSED light comes on)
 - **ior q6m00lr8 (22) off** (Gen Field Breaker OPEN light overridden OFF)
 - **ior q6m00rg8 (23) on** (Gen Field Breaker CLOSED light overridden ON)
 - **ior q6m00ma8 (24) off** (Gen Field Breaker AUTO TRIP light overridden OFF)
 - **imf mee049 (21 30)** (On trigger 21 after a 30 second delay, Generator electrical fault)
 - **trgset 25 "k6m00jt8.eq.1"** (Gen Field Breaker taken to TRIP)
 - **trgset 26 "k6m00jt8.eq.1"** (Gen Field Breaker taken to TRIP)
 - **trgset 27 "k6m00jt8.eq.1"** (Gen Field Breaker taken to TRIP)
 - **trg 25 "dor q6m00lr8"** (Gen Field Breaker OPEN light override deleted)
 - **trg 26 "dor q6m00rg8"** (Gen Field Breaker CLOSED light override deleted)
 - **trg 27 "dor q6m00ma8"** (Gen Field Breaker AUTO TRIP light override deleted)
 4. Prepare a copy of LOP-TG-02 with Steps E.1 through E.23 signed off.
 5. This completes the setup for this JPM.

INITIAL CONDITIONS

- You are the assist NSO
- A startup is in progress per LGP 1-1
- The Main Turbine is at 1800 rpm and LOP-TG-02 has been completed through Step E.23.

INITIATING CUE

- Synchronize and load the Main Generator in accordance with LOP-TG-02 steps E.24 through E.39

(Evaluator: Provide the prepared working copy of LOP-TG-02)

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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-------------------------------------|---|--|-------|-------|-------------------|
| 1. E.24 | VERIFY the following: • GENERATOR FIELD VOLTS ADJUST at minimum position as indicated by LOWER LIMIT light on. | Voltage Adjust LOWER LIMIT light verified ON. | _____ | _____ | _____ |
| 2. E.24 | VERIFY the following: • U1 GENERATOR REGULATOR MODE TRANSFER in MANUAL. | Generator Regulator Mode verified in MANUAL | _____ | _____ | _____ |
| 3. E.24 | VERIFY the following: • U1 GENERATOR VOLTMETER SELECTOR is NOT OFF. | Generator Voltmeter Selector switch verified to be NOT OFF | _____ | _____ | _____ |
| *4. E.25 | CLOSE U1 GENERATOR FIELD BREAKER and OBSERVE the following: • 1EI-MP002, U1 GENERATOR FIELD VOLTS indication rises • 1EI-MP021, U1 GENERATOR KILOVOLTS indication rises | <ul style="list-style-type: none"> • Field Breaker switch taken to closed • Field Breaker switch shows a RED FLAG • Green/Close light is ON • Red/Open light is OFF • Field Volts indication rising • Generator KV indication rising | _____ | _____ | _____ |
| 5. E.25.1 through E.25.1.2 | Verify that GENERATOR KILOVOLTS indication does not rise to greater than 26 KV. | Generator KV indication verified to be less than 26 KV | _____ | _____ | _____ |
| 6. E.25.2 through E.25.2.2 | Verify that GENERATOR KILOVOLTS indication begins to rise within 10 seconds. | Generator KV indication verified to start rising within 10 seconds | _____ | _____ | _____ |
| 7. E.26 | Verify that GENERATOR KILOVOLTS indicates 18KV to 22 KV | Generator KV indication verified to be between 18KV and 22 KV | _____ | _____ | _____ |
| *8. E.27 | Using GENERATOR FIELD VOLTS ADJUST, RAISE 1EI-MP021, U1 GENERATOR KILOVOLTS to 23.5 KV to 24.0 KV. | Generator KV indication adjusted to be between 23.5KV and 24 KV | _____ | _____ | _____ |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------------|--|---|------------|--------------|---------------------------|
| 9. E.28 | CHECK all three phases of generator voltage approximately 23.7 KV using U1 GENERATOR VOLTMETER SELECTOR. | All three phases verified at approximately 23.7 KV | — | — | — |
| 10. E.29 | VERIFY Main Power Transformer Trouble alarms are clear at Panel 1PM01J windows A203 and A204. | Main Power Transformer trouble alarms verified clear: 1PM01J-A203 and A204 | — | — | — |
| 11. E.30 & E.30.1 | PLACE Generator control in automatic as follows: <ul style="list-style-type: none"> ADJUST U1 GENERATOR TERMINAL VOLTS ADJUST until 1EI-MP003, U1 GEN REGULATOR TRANSFER VOLTS indicates zero. | Terminal Volts adjusted 1EI-MP003, U1GEN REGULATOR TRANSFER VOLTS indicating zero. | — | — | — |
| *12. E.30.2 | <ul style="list-style-type: none"> PLACE U1 GENERATOR REGULATOR MODE TRANSFER in AUTO. | Generator Regulator placed in AUTO | — | — | — |
| 13. E.30.3 | <ul style="list-style-type: none"> VERIFY proper operation of the Main Generator Voltage Regulator in Auto by lowering and raising the voltage using the GENERATOR TERMINAL VOLTS ADJUST by 1 KV. | Terminal Volts adjusted up and down by 1KV | — | — | — |
| 14. E.31 | NOTIFY Electric Operations Power Operations that U1 Main Generator is ready to synchronize to grid. | Electric Operations Power Operations notified | — | — | — |
| CUE | Role Play Electric Operations Power Operations as necessary to acknowledge this report. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---------------------|--|--|------------|--------------|---------------------------|
| 15. E.32 | At Panel 0PM11J and Relay House: <ul style="list-style-type: none"> • VERIFY OCB 9-10 Recloser Cutout in OFF. • VERIFY OCB 10-11 Recloser Cutout in OFF. ○ VERIFY 345 KV BUS TIE 9-10 OCB is NOT in PULL-TO-LOCK. ○ VERIFY 345 KV BUS TIE 10-11 OCB is NOT PULL-TO-LOCK. | OCB 9-10 and OCB 10-11 Recloser Cutouts verified in OFF OCB 9-10 and OCB 10-11 control switches verified NOT in PTL | — | — | — |
| CUE: | Role Play an operator in the Relay house as necessary. Report that OCB 9-10 and OCB 10-11 Recloser Cutouts are in OFF | | | | |
| 16. E.33 | VERIFY the following control switches are NOT in PULL-TO-LOCK. <ul style="list-style-type: none"> • BUS TIE 9-10 OCB • BUS TIE 10-11 OCB | At Panel 1PM01J, BUS TIE 9-10 OCB and BUS TIE 10-11 OCB control switches verified NOT in PTL | — | — | — |
| *17. E.34 | Place one of the following in ON: <ul style="list-style-type: none"> • BUS TIE 9-10 OCB SYNCHROSCOPE. • BUS TIE 10-11 OCB SYNCHROSCOPE. | Either OCB 9-10 and OCB 10-11 Synchroscope switch placed in ON | — | — | — |
| *18. E.35 | Manually ADJUST Generator speed using Load Raise/Lower pushbuttons so generator output frequency is slightly higher than grid frequency, U1 GENERATOR SYNCHROSCOPE, meter on 1PM01J rotates slowly in the FAST direction. | Load Raise/Lower pushbuttons adjusted to achieve synchroscope meter rotation slowly in the FAST (clockwise) direction | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | <u>SAT</u> | <u>UNSAT</u> | <u>Comment Number</u> |
|--------------------------|---|--|------------|--------------|---------------------------|
| *19. E.36 | Adjust Main Generator output voltage <ul style="list-style-type: none"> If the Voltage Regulator is in Auto, then using GENERATOR TERMINAL VOLTS ADJUST, ADJUST Generator output voltage so U1 GENERATOR INCOMING VOLTS, is reading slightly higher than U1 GENERATOR RUNNING VOLTS. | Generator Terminal voltage adjusted to achieve Incoming Volts slightly higher than Running Volts | — | — | — |
| 20. E.37 | VERIFY the following: <ul style="list-style-type: none"> U1 GENERATOR SYNCHROSCOPE, meter rotates slowly in the FAST direction. U1 GENERATOR INCOMING VOLTS, is reading slightly higher than U1 GENERATOR RUNNING VOLTS. | Synchroscope meter rotation verified to be slowly in the FAST (clockwise) direction Generator Incoming Volts verified to be slightly higher than Running Volts | — | — | — |
| *21. E.38 & E.38.1 | Just prior to U1 GENERATOR SYNCHROSCOPE, meter reaching 12 o'clock position: <ul style="list-style-type: none"> CLOSE the selected OCB and CHECK the breaker closes: <ul style="list-style-type: none"> BUS TIE 9-10 OCB. BUS TIE 10-11 OCB. | OCB 9-10 or OCB 10-11 (selected in JPM Step 17) closed just prior to synchroscope meter reaching 12 o'clock position Selected OCB Blue/Closed lights are ON Selected OCB Red/Open light is OFF | — | — | — |
| Note | <p align="center">ALTERNATE PATH BEGINS HERE</p> <p>A Generator Lockout will occur 30 seconds after the first Main Generator Output breaker is closed. The next step becomes not applicable (N/A) if the generator trips prior to its implementation.</p> | | | | |
| 22. E.38.2 | At 1PM02J EHC Workstation, RAISE Load Set Stpt to 105.0 % using either the Load Set Manual Adj. Raise pushbutton or by entering a target Load Set Setpoint and Ramp Rate. | Load Set Setpoint adjustment initiated | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|----------------------------------|---|---|-----|-------|-------------------|
| Note | <p>The following Operator Actions for the Turbine Trip and Generator Lockout may be performed in any order.</p> <p>The Operator Actions are virtually identical for the three Generator Lockout annunciators on 1PM01J: A102, U1GEN PROT RELAY TRIP; A202, U1 GEN SYS 1 LKO TRIP; and A302, U1 GEN SYS 2 LKO TRIP</p> | | | | |
| 23 LORs | Verify Turbine Trip | <p>Turbine verified to be tripped by one or more of the following methods:</p> <ul style="list-style-type: none"> • DEHC Screen Red TRIPPED bar • Annunciator 1PM02J-B308 in alarm • Audible alarm | — | — | — |
| Note | If LOA-TG-101 is entered, go to JPM step 27. | | | | |
| 24 LORs | Verify 345 OCBs 9-10 and 10-11 are open | OCBs 9-10 and 10-11 verified OPEN | — | — | — |
| *25 LORs | Identifies that the Main Generator Exciter Field Breaker is NOT open and takes the control switch momentarily to TRIP. | <p>Main Generator Exciter Field Breaker switch momentarily placed in TRIP and</p> <p>Switch indicates a GREEN FLAG</p> | — | — | — |
| 26 LORs | Determine the cause of Generator 1 Trip System 1 and/or 2 Lockout | Investigation into cause of the Lockout initiated | — | — | — |
| CUE | If directed to investigate, role play plant personnel as necessary. | | | | |
| 27 LORs | Refer to LOA-TG-101 | LOA-TG-101, Unit 1 Turbine Generator referenced | — | — | — |
| 28 LORs | Notify Generation Dispatch | Generation Dispatch notified | — | — | — |
| CUE | Role Play Load Dispatcher as necessary to acknowledge this report. | | | | |
| 29 LOA-TG-101 B.1.1 | <p>CHECK Reactor Power – below 25% and stable.</p> <p>Alarms at 1H13-P603 – in ALARM: A211 and A212</p> | <p>The following alarms at 1H13-P603 verified to be alarming</p> <ul style="list-style-type: none"> • A211, CHANNEL A1/B1 TCV & TSV TRIP BYPASS • A212, CHANNEL A2/B2 TCV & TSV TRIP BYPASS | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | <u>SAT</u> | <u>UNSAT</u> | <u>Comment Number</u> |
|-----------------------------------|--|---|------------|--------------|---------------------------|
| 30 LOA-TG-101 B.1.2 | CHECK Turbine Bypass Valves - controlling Reactor pressure | Turbine Bypass Valve(s) verified open Reactor Pressure verified to be stable | — | — | — |
| 31 LOA-TG-101 B.1.3 | CHECK Turbine - TRIPPED. | Turbine verified to be tripped DEHC Screen Red TRIPPED bar displayed | — | — | — |
| 32 LOA-TG-101 B.1.4 | At either EHC Workstation on "Speed-Load" screen, from control menu, CHECK Speed Cmd - CLOSE VALVES | Speed Command (CMD) verified to be "CLOSE VALVES" at either EHC Workstation | — | — | — |
| 33 LOA-TG-101 B.1.5 | CHECK at least one of the following - CLOSED: <ul style="list-style-type: none"> • All MSVs. • All CVs | All Turbine Stop Valves or all Control Valves verified closed | — | — | — |
| 34 LOA-TG-101 B.1.6 | VERIFY Load Limit Setpoint at 2.0%. | Load Limit Setpoint at verified to be at 2.0%. | — | — | — |
| 35 LOA-TG-101 B.1.7 | CHECK Generator OCBs 9-10 and 10-11 - OPEN. | OCBs 9-10 and 10-11 verified to be OPEN | — | — | — |
| Note | Verifying that the Generator Field Breaker is open is a critical step either as JPM Step 25 or JPM Step 36. | | | | |
| *36 LOA-TG-101 B.1.8 | CHECK Generator field breaker - OPEN. | Main Generator Exciter Field Breaker switch momentarily placed in TRIP and Switch indicates a GREEN FLAG | — | — | — |
| 37 LOA-TG-101 B.1.9 | CHECK Generator Voltage Regulator in - MANUAL. | Generator Voltage Regulator verified to be in MANUAL | — | — | — |
| Note | Step B.1.10, checking that house loads have transferred to the SAT, is N/A. | | | | |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---|--|---|-----|-------|-------------------|
| 38 LOA-TG-101 B.1.11 | CHECK 1ES002, HI Press Htrs 16A/B Extrn Check Valve (Non-Return Valves) - CLOSED. | 16A/B Extraction Steam Check Valve (Non-Return Valves) verified to be CLOSED. | — | — | — |
| 39 LOA-TG-101 B.1.12 | CHECK 1ES005, Lo Press Htrs 15A/B/C Extrn Check Valve (Non- Return Valves) – CLOSED. | Lo Press Htrs 15A/B/C Extraction Steam Check Valve (Non-Return Valves) verified to be CLOSED. | — | — | — |
| CUE | Inform the candidate that another operator will check Extraction Steam lineups and monitor Turbine coastdown. | | | | |
| TERMINATING CUE: This completes this JPM. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Load the Main Generator / Respond to a Generator Lockout**JPM Number:** S-TG-02**Revision Number:** 00**Task Number and Title:** 71.028, Provided initial conditions, perform control Room actions for a Main Turbine Generator Trip (with Load <25%) IAW station procedures.**K/A Number and Importance:** Turbine Trip, 295005 AA1.04 2.7/2.8**Ability to operate and/or monitor the following as they apply to Main Turbine Generator Trip:**
Main Generator controls.**Suggested Testing Environment:** Simulator**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):** LGP-1-1 Normal Unit Startup, Rev 108

LOP-TG-02, Turbine Generator Startup, Rev 75

LOR-1PM01J-A102, U1 Prot Relay Trip, Rev. 1

LOA-TG-101, Unit 1 Turbine Generator, Rev. 14

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 30 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:****Were all the Critical Elements performed satisfactorily?** ☐ Yes ☐ No**The operator's performance was evaluated against standards contained within this JPM and has been determined to be:** ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

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INITIAL CONDITIONS

- You are the assist NSO
- A startup is in progress per LGP 1-1
- The Main Turbine is at 1800 rpm and LOP-TG-02 has been completed through Step E.23.

INITIATING CUE

- Synchronize and load the Main Generator in accordance with LOP-TG-02 steps E.24 through E.39.

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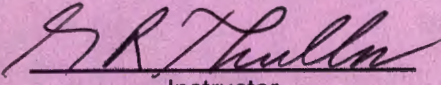
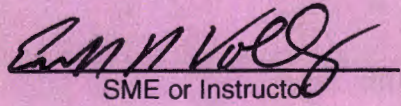
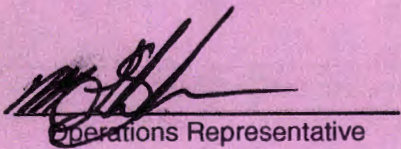
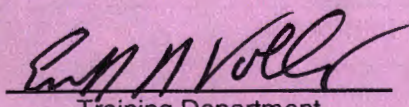
Job Performance Measure

Startup of the Second TDRFP

JPM Number: S-FW-17

Revision Number: 00

Date: 08/22/2014

| | | |
|---------------|--|------------------------|
| Developed By: | <u></u> Instructor | <u>7/28/14</u> Date |
| Validated By: | <u></u> SME or Instructor | <u>8/28/14</u> Date |
| Reviewed By: | <u></u> Operations Representative | <u>8/27/14</u> Date |
| Approved By: | <u></u> Training Department | <u>8/28/14</u> 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 8 and 12 below.

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

| | | | |
|-------|------------------|-------|------|
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |
| _____ | SME / Instructor | _____ | Date |

Revision Record (Summary)

Revision 00 This Alternate Path JPM was developed for ILT 13-1 NRC Exam. Converted JPM S-FW-01 to Alternate Path by adding a Seal Injection Pump trip.

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to an IC with all three Feed pumps operating. (IC196 for the ILT 13-1 NRC Exam)
2. Verify the following:
 - a. Reactor Water Level Control is operating in 3-Element
 - b. The MDRFP is operating in AUTO
 - c. Verify the 1A TDRFP is on the Turning Gear.
 - d. Verify the 1A TDRFP Drain Valves are open
3. Run the CAEP for this JPM: **SFW17r00.cae**
 - **ior k4l06wpy stop** (Override on 1B Seal Injection Pump / prevents auto start)
 - **trg 16 "ior k4h05wpy stop"** (Disengages the Turning Gear when directed)
 - **trgset 17 "k4h05wly.eq.1"** (When 1A TDRFP Turning Gear Switch is taken to PTL)
 - **ior k4l03wpy (17 15) stop** (On Trigger 17 after 15 seconds, trips 1A Seal Inj Pump)
 - **ior k4l03wby (17 15) false** (On Trigger 17 after 15 seconds, trips 1A Seal Inj Pump)
 - **ior q4l03may (17 15) on** (On Trigger 17 after 15 seconds, 1A Seal Inj Pump Auto Trip light on)
 - **trgset 27 "k4l06wby .GE. 0.9"** (When 1B Seal Injection Pump is taken to START)
 - **trg 27 "dor k4l06wpy"** (Deletes override on 1B Seal Injection Pump / allows it to start)
4. Prepare LOP-FW-04, marked up as completed up to Step E.2.11.
5. When the above steps are completed for this and other JPMs to be run concurrently, validate the concurrently run JPMs using the noted steps on the Job Performance Measure Validation Checklist located on page
6. This completes the setup for this JPM.

INITIAL CONDITIONS

Unit 1 is at 55% power with "B" TDRFP in 3E and the MDRFP in AUTO.

The Startup Of Turbine Driven Reactor Feed Pump (TDRFP) Procedure, LOP-FW-04 is in progress for the 1A TDRFP and is complete up to Step E.2.11.

INITIATING CUE

The Shift Supervisor has directed you to complete the start up of the 1A TDRFP IAW the Startup Of Turbine Driven Reactor Feed Pump (TDRFP) Procedure, LOP-FW-04, starting at Step E.2.11.

Inform the Unit Supervisor when you are ready to initiate the RWLC transfer sequence per LOP-RL-01.

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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: _____

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|---------------------------|---|---|-----|-------|-------------------|
| Note | All steps of this JPM are to be completed at control room panel 1H13-P603 and 1PM03J unless otherwise noted. | | | | |
| 1. E.2.11.1 | Momentarily DEPRESS TDRFP Manual Backup Station Alarm Reset. | TDRFP Manual Backup Station Alarm Reset pushbutton momentarily depressed | — | — | — |
| *2. E.2.11.2 | DEPRESS A TDRFP TURB RESET pushbutton | *A TDRFP TURB RESET pushbutton depressed | | | |
| 3. E.2.11.2 | OBSERVE the following: <ul style="list-style-type: none"> TURB A RESET light ILLUMINATES. TDRFP Hi Press and Lo Press Stop Valves OPEN. | <ul style="list-style-type: none"> TURB A RESET light verified ON TDRFP Hi Press and Lo Press Stop Valves verified OPEN | | | |
| Note | The TDRFP Turning Gear was being used | | | | |
| 4. E.2.11.3.1.2 | LOCALLY VERIFY A TDRFP Turning Gear is DISENGAGED. | EO dispatched to verify that A TDRFP Turning Gear is disengaged | — | — | — |
| CUE | Tell the candidate to contact the EO at extension 2207. | | | | |
| SIMOP | Role Play as the EO at the TDRFP and when directed to disengage the A TDRFP Turning Gear, activate Manual Trigger 16, then verify the following Override becomes true: <u>ior k4h05wpy stop</u> Then inform examinee that the 1A TDRFP Turning Gear is disengaged. | | | | |
| 5. E.2.11.3.1.3 | PLACE A TDRFP Turning Gear C/S in PTL. | A TDRFP Turning Gear C/S placed in PTL. | — | — | — |
| Note | ALTERNATE PATH BEGINS HERE. The Alternate Path steps come from LOR-1PM03J-A307, 1A TDRFP SEAL LEAKOFF DRAIN LINE TEMP HI | | | | |
| 6. | Respond to Annunciator(s) 1PM03J-A307/8, 1A/1B TDRFP SEAL LEAKOFF DRAIN LINE TEMP HI and notify the Unit Supervisor | LOR 1PM03J-A307/8 referenced | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--------------------------|---|--|-----|-------|-------------------|
| CUE | Role Play Unit Supervisor as necessary to acknowledge this report. | | | | |
| Note | The candidate may take immediate action to start the B Seal injection Pump because it should have auto-started when Seal Injection Pressure dropped to 40 psig. | | | | |
| *7. LOR Step 1 | VERIFY a Seal Injection Pump is operating. Recognizes that B Seal Injection Pump has not Auto started and starts it | B Seal Injection Pump Control Switch taken to START | — | — | — |
| Note | JPM Steps 8, 9, & 10 may not be performed because annunciators will clear shortly after the B Seal Injection Pump is started. | | | | |
| 8. LOR Step 2 | At Panel 1FW01JA, verify pressure at 1PS-FW187/188/189 is greater than 50 psid | 1PS-FW187/188/189 reading verified to be greater than 50 psid | — | — | — |
| CUE | Role Play as the EO dispatched to the TDRFP. Seal injection DP is 55 psid. | | | | |
| 9. LOR Step 3 | CHECK indication for A TDRFP Turning Gear on panel 1PM03J. | A TDRFP Turning Gear indications verified to be available | — | — | — |
| 10. LOR Step 4 | At panel 1PL03JA, CHECK TDRFP Seal Injection Temperature Control System for proper operation. | EO dispatched to Local panel Proper operation of Seal injection Temperature control verified | — | — | — |
| CUE | Role Play as the EO dispatched to the TDRFP. All Seal Injection parameters are normal with Seal Injection temperature lowering. | | | | |
| Note | Since the system has returned to normal operation, the remaining steps of the LOR are not applicable. The candidate can return to the LOP for starting 1A TDRFP. | | | | |
| CUE | If necessary, Role Play as Unit Supervisor and prompt the candidate to continue the assigned task. | | | | |
| 11. E.2.11.3.2 | VERIFY 1FW011A, A TDRFP Min Flow Valve M/A Station in AUTO. | A TDRFP Min Flow Valve M/A Station verified in AUTO. | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|-----------------------------|--|---|-----|-------|-------------------|
| *12. E.2.11.3.3 | Momentarily DEPRESS TDRFP Manual Backup Station Start P/B | *A TDRFP Manual Backup Station Start Pushbutton momentarily depressed | — | — | — |
| 13. E.2.11.3.3 | OBSERVE: <ul style="list-style-type: none"> At 1PM03J, Turbine speed increases evenly to approximately 138 RPM, as observed on 1SIC-FW202/203 Manual Backup Station Digital Display. A TDRFP Min Flow Valve opens 60% | <ul style="list-style-type: none"> Turbine speed verified increasing evenly to approximately 138 RPM A TDRFP Min Flow Valve verified open to 60% | — | — | — |
| *14. E.2.11.3.3.1 | Place the TDRFP Manual Backup Station Mode Selector Switch in Manual. <ul style="list-style-type: none"> RAISE TDRFP Speed to approximately, but at least, 1000 rpm by Depressing the Manual Backup Station Raise pushbutton(s). | *TDRFP Manual Backup Station Mode Selector Switch in placed in Manual <ul style="list-style-type: none"> TDRFP speed raised to at least 1000 RPM using RAISE Pushbutton | — | — | — |
| 15. E.2.11.3.3.1 | <ul style="list-style-type: none"> VERIFY Turbine vibration remains less than 2 mils. | <ul style="list-style-type: none"> Turbine vibration verified to be less than 2 mils | — | — | — |
| CUE | There were no previous unsuccessful attempts to start A TDRFP, so Step E.2.11.3.3.2 is Not Applicable. | | | | |
| *16. E.2.11.3.3.3 | PLACE the TDRFP Manual Backup Station Mode Selector Switch in Auto. | *TDRFP Manual Backup Station Mode Selector Switch placed in AUTO. | — | — | — |
| 17. E.2.11.3.3.4 | CHECK the A TDRFP manual backup station "Auto Enabled" light is illuminated. | A TDRFP manual backup station "Auto Enabled" light is verified to be ON | — | — | — |

| <u>STEP</u> | <u>ELEMENT</u> | <u>STANDARD</u> | SAT | UNSAT | Comment Number |
|--|--|---|-----|-------|-------------------|
| *18. E.2.11.4 | If TDRFP Turb Turning Gear was being used to rotate the TDRFP (per step E.2.5.2.1), DEPRESS A TDRFP TURB TURNING GEAR ENGAGE RESET pushbutton. | A TDRFP TURB TURNING GEAR ENGAGE RESET pushbutton momentarily depressed | — | — | — |
| Note | There are no indications of an oil leak, so Step E.2.11.5 is Not Applicable. | | | | |
| Note | The A TDRFP is operating on Low Pressure Steam, so Step E.2.11.6 is Not Applicable. | | | | |
| 19. E.2.11.7 | If operating on Low Pressure Steam, CLOSE the following drains: • 1B21-F430A, A TDRFP Turb Lo Press Steam Drn Vlv. • 1B21-F426A and F428A, A TDRFP Stop Vlvs Hi and Lo Press Above Seat Drn Vlv. • 1B21-F425A and F427A, A TDRFP Cont Vlvs Hi and Lo Press Below Seat Drn Vlv. • 1B21-F432A, A TDRFP Turb 1st Stage Drn Vlv. | The following drain verified closed: <ul style="list-style-type: none">• 1B21-F430A• 1B21-F426A and F428A• 1B21-F425A and F427A• 1B21-F432A | — | — | — |
| 20. E.2.11.8 | CHECK turbine vibration, eccentricity, and oil systems indicate alarms CLEAR. | Turbine vibration, eccentricity, and oil system alarms verified clear | — | — | — |
| 21. | Inform the Unit Supervisor that A TDRFP is ready to be placed on line (per LOP-RL-01) | Unit Supervisor notified that A TDRFP is ready to be placed on line | — | — | — |
| CUE | Role Play Unit Supervisor as necessary to receive the report that A TDRFP is ready to be placed on line per LOP-RL-01 | | | | |
| TERMINATING CUE: Inform the candidate that the JPM is complete. | | | | | |

JPM Stop Time: _____

JPM SUMMARY**Operator's Name:** _____**Job Title:** ☐ EO ☐ RO ☐ SRO ☐ FS ☐ STA/IA ☐ SRO Cert**JPM Title:** Startup of the Second TDRFP**JPM Number:** S-FW-17**Revision Number:** 00**Task Number and Title:** 77.010 Given Unit Supervisor authorization, perform the Control Room actions to complete the startup of the TDRFP IAW station procedures.**K/A Number and Importance:** 259001, A4.02, 3.9/3.7; Ability to manually operate and/or monitor in the control room: Manually start/control a RFP/TDRFP**Suggested Testing Environment:** Simulator or Classroom**Alternate Path:** ☒ Yes ☐ No **SRO Only:** ☐ Yes ☒ No **Time Critical:** ☐ Yes ☒ No**Reference(s):**

LOP-FW-04, Rev. 62, Startup of Turbine Driven Reactor Feed Pump (TDRFP)

LOR-1PM03J-A307, Rev. 3, 1A TDRFP SEAL LEAKOFF DRAIN LINE TEMP HI

Actual Testing Environment: ☐ Simulator ☐ Control Room ☐ In-Plant ☐ Other**Testing Method:** ☐ Simulate ☐ Perform**Estimated Time to Complete:** 20 minutes**Actual Time Used:** _____ minutes**EVALUATION SUMMARY:**Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against standards contained within this JPM and has been determined to be: ☐ Satisfactory ☐ Unsatisfactory**Comments:** _____

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

INITIAL CONDITIONS

Unit 1 is at 55% power with "B" TDRFP in 3E and the MDRFP in AUTO.

The Startup of Turbine Driven Reactor Feed Pump (TDRFP) Procedure, LOP-FW-04 is in progress for the 1A TDRFP and is complete up to Step E.2.11.

INITIATING CUE

The Shift Supervisor has directed you to complete the start up of the 1A TDRFP IAW the Startup Of Turbine Driven Reactor Feed Pump (TDRFP) Procedure, LOP-FW-04, starting at Step E.2.11.

Inform the Unit Supervisor when you are ready to initiate the RWLC transfer sequence per LOP-RL-01.