

# Exelon Nuclear

## Job Performance Measure

### Initiate Standby Liquid Control with Failure to Inject

JPM Number: 2014 ILT NRC JPM a

Revision Number: 00

Date: 02/27/14

Developed By: \_\_\_\_\_  
Instructor Date

Validated By: \_\_\_\_\_  
SME or Instructor Date

Reviewed By: \_\_\_\_\_  
Operations Representative Date

Approved By: \_\_\_\_\_  
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 9 and 13 below.

- \_\_\_\_\_ 1. Task description and number, JPM description and number are identified.
- \_\_\_\_\_ 2. Knowledge and Abilities (K/A) references are included.
- \_\_\_\_\_ 3. Performance location specified. (in-plant, control room, simulator, or other)
- \_\_\_\_\_ 4. Initial setup conditions are identified.
- \_\_\_\_\_ 5. Initiating cue (and terminating cue if required) are properly identified.
- \_\_\_\_\_ 6. Task standards identified and verified by SME review.
- \_\_\_\_\_ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (\*).
- \_\_\_\_\_ 8. If an alternate path is used, the task standard contains criteria for successful completion.
- \_\_\_\_\_ 9. Verify the procedure(s) referenced by this JPM reflects the current revision:  
 Procedure QCOP 1100-02 Rev: 12  
 Procedure \_\_\_\_\_ Rev: \_\_\_\_\_  
 Procedure \_\_\_\_\_ Rev: \_\_\_\_\_
- \_\_\_\_\_ 10. Verify cues both verbal and visual are free of conflict.
- \_\_\_\_\_ 11. Verify performance time is accurate
- \_\_\_\_\_ 12. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- \_\_\_\_\_ 13. When JPM is initially validated, sign and date JPM cover page. Subsequent validations, sign and date below:

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

## **Revision Record (Summary)**

**Revision 00**, Renamed 2014 ILT NRC JPM a. Restarted revision numbering accordingly.

### **Previous changes were:**

**Revision 06**, Reworded to match wording of LS-008-I, the non-faulted version of the same JPM.

**Revision 07**, JPM revised to reflect procedure changes.

**Revision 08**, JPM revised to reflect simulator setup commands and new average performance time.

**Revision 09**, JPM revised to reflect procedure changes.

**Revision 10**, JPM revised to reflect single pump injection, procedure change, and removal of one critical task.

**SIMULATOR SETUP INSTRUCTIONS**

1. Reset the simulator to any IC at power > 20%

2. **Manual Actuation:**

Ensure the SBLC key is in the Control switch.

3. **Malfunctions (contained in caep file “A caep.cae”)**

Setup for a jpm|00:00:00|00

Fail the SBLC pumps to work (2 commands)|00:00:00|01

imf SL01A|00:00:02|02

imf SL01B|00:00:04|03

Set triggers 1 and 2 true when both squib lights are out|00:00:04|04

trgset 1“(NOT. ZLOHS11130301(2)) .AND. (.NOT. ZLOHS11130301(4))” |00:00:06|05

trgset 2“(NOT. ZLOHS11130301(2)) .AND. (.NOT. ZLOHS11130301(4))” |00:00:08|06

When triggers 1 and 2 true, delete the pump trips|00:00:00|07

trg 1 “dmf sl01a” |00:00:10|08

trg 2 “dmf sl01b” |00:00:12|09

4. **Remotes:**

NONE

5. **Overrides:**

NONE

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. This completes the setup for this JPM.



A caep.cae



JPM A QCOP  
1100-02, Rev 012, IN

## INITIAL CONDITIONS

- U-1 has experienced an ATWS. The following conditions exist:
  - o Reactor power > 5%.
  - o Both Recirc pumps were tripped per QGA 101.
- There is no LOCA in progress.
- The SBLC system is in standby lineup.
- The Unit Supervisor has determined that SBLC must be initiated per QGA 101.
- This JPM is not time critical.

## INITIATING CUE

Inject the Standby Liquid Control System per the hard card.

Fill in the JPM Start Time when the student acknowledges the Initiating Cue.  
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### 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. 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.  
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JPM Start Time: \_\_\_\_\_

| <u>STEP</u>  | <u>ELEMENT</u>  | <u>STANDARD</u>  | SAT | UNSAT | Comment Number |
|--|---|--|-----|-------|----------------|
|  | Obtain procedure to be used.  | Obtains procedure QCOP 1100-02 hard card for injecting SBLC.   | —   | —     | —              |
| F.1.   | Select System 1 or 2 with keylock switch A and B SELECT.  | Positions SBLC keylock switch to System 1 or 2.  | —   | —     | —              |
| <b>EVALUATOR NOTE: Initial cue states “no LOCA in progress,” candidate should only inject with one pump at a time.</b>   |   |  |     |       |                |
| *F.2.  | <ul style="list-style-type: none"> <li>Determines SBLC <b>NOT</b> injecting.</li> </ul>                     | Determines SBLC NOT injecting by any one or more of the following indications:<br>SBLC flow light NOT lit.<br>SBLC tank level is NOT decreasing. (LI-1-1140-2)<br>Pump discharge press < Rx press. (PI-1-1140-1)<br>Verify neutron flux NOT decreasing. (APRM recorders) | —   | —     | —              |
| <b>EVALUATOR NOTE: Alternate path starts here.</b>   |   |  |     |       |                |
| *F.3.  | <ul style="list-style-type: none"> <li>Attempt to inject SBLC with the opposite switch position.</li> </ul> | Repositions SBLC keylock switch to the opposite position that was initially selected.  | —   | —     | —              |
| <b>SIMULATOR OPERATOR NOTE: When operator takes switch to the opposite position, verify triggers 1 and 2 go true and malfunctions SL01A and SL01B are deleted.</b> |   |  |     |       |                |
|  | Reports SBLC is injecting.  | Informs US that SBLC is injecting.   | —   | —     | —              |
| <b>EVALUATOR: The candidate should inform you that the task is complete.</b>   |   |  |     |       |                |

JPM Stop Time: \_\_\_\_\_

**JPM SUMMARY**

**Operator's Name:** \_\_\_\_\_ **Job Title:**  EO  RO  SRO  FS  
 STA/IA  SRO Cert

JPM Title: Initiate Standby Liquid Control with Failure to Inject  
JPM Number: 2014 ILT NRC JPM a Revision Number: 00

Task Number and Title:  
**SR-1100-P02** (Freq: LIC=A) (ILT-MP) Given a reactor plant with an ATWS, inject boron prior to exceeding 110 degrees torus water temperature OR if core instability is observed in accordance with QGA 101 and QCOP 1100-02. (Important PRA Operator Action - starting SBLC terminates 1 of the top 100 most probable Core Damage Sequences and has a RAW of 17.3)

K/A Number and Importance: **K/A:** 211000 A4.02 **Rating:** 4.2/4.2

Suggested Testing Environment: Simulator

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

Reference(s): QCOP 1100-02, Rev. 12, INJECTION OF STANDBY LIQUID CONTROL

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

**Testing Method:**  Simulate  Perform

Estimated Time to Complete: 6.0 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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