# PROPOSED NRC-AUTHORIZED WALKTHROUGH JPMS

# FOR THE LASALLE INITIAL EXAMINATION - APRIL 2002

# LASALLE COUNTY NUCLEAR STATION

# JOB PERFORMANCE MEASURE

Secure RHR Service Water System

Examination Level: RO /SRO /SRO(I)

Date: April 8, 2002

Developed by: Raymond Keith Walton          Date: March 14, 2002

Reviewed by: _____          Date: _____

Approved by: _____          Date: _____

# JOB PERFORMANCE MEASURE

Facility:  LaSalle Nuclear Station                          Task No:   B.1.a

Task Title: Secure RHR Service Water System

K/A Reference:   400000A4.01                    K/A Importance:    3.1/3.0

Examinee: _____

NRC Examiner: _____          Date: _____

Time Started: _____          Time Finished:_____

Estimated Time to Completion:    15 min          Time Critical Task: **NO**

Method of testing:
         Performance: ____ Simulated          Location:          __X__ Simulator
                 __X__ Actual          ____ Plant

Task Standard:


Required Materials:
LOP-RH-05, Operation of the RHR Service Water System

General References:
LOP-RH-05, Operation of the RHR Service Water System, Rev 22, 1/17/2001

READ TO THE EXAMINEE:
I will explain the initial conditions, which steps to simulate or discuss. and provide initiating cues. Tell
me when you have successfully completed the task.

Initial Conditions:
Plant Conditions are as shown.  'B' RHRSW has been running for a pump vibration and flow data test. B
RHR SW Process Radiation Monitor is INOP.  Chemistry has completed the required sample within the
last hour.  1E12-F448 and 1E12-F4541 have been cycled as part of the test.  The test is complete.
There are no Tech Spec time clocks in effect.  An operator is standing by to assist you.

Initiating Cue:
The Unit Supervisor has directed you to secure 'B' RHRSW IAW LOP-RH-05.  Inform the Unit
Supervisor when the task is complete.

# JOB PERFORMANCE MEASURE

Simulator Setup Instructions:

1.      This JPM can be run from any IC.

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

2.      Verify Div 1 and Div 2 Thermal O/L Bypass switches are in NORMAL.

3.      Start 'B' RHR Service Water system
        •       Start 'C RHR Service Water pump (1E12-C300C)
        •       Open 'B' RHR Service Water Heat Exchanger Outlet Valve, 1E12-F068B
        •       Start 'D' RHR service Water pump (1E12-C300D)

4.      This completes the setup for this JPM.

# JOB PERFORMANCE MEASURE

Initial Conditions:

Plant Conditions are as shown.

- 'B' RHRSW has been running for a pump vibration and flow data test.
- B RHR SW Process Radiation Monitor is INOP.
- Chemistry has completed the required sample within the last hour.
- 1E12-F448 and 1E12-F4541 have been cycled as part of the test.
- The test is complete.

There are no Tech Spec time clocks in effect. An operator is standing by to assist you.

Initiating Cue:

The Unit Supervisor has directed you to secure 'B' RHRSW IAW LOP-RH-05. Inform the Unit Supervisor when the task is complete.

(Denote critical steps with an asterisk)

NOTE: All steps of this JPM are to be completed at CR Panel 1H13-P601

| Element | Expected Response | SAT | UNSAT | Comment # |
|---------|-------------------|-----|-------|-----------|
| 1. If RHR Service Water Process radiation Monitor is inoperable, VERIFY that Chemistry has collected the proper samples. | Candidate determines conditions met from 'Initial Conditions.' | ___ | ___ | ___ |
| 2. Locally Backwash the operating strainer per LOP-RH-14. | Local operator directed to backwash B RHRSW strainer. | ___ | ___ | ___ |

**CUE:** As local operator, acknowledge direction. Wait a minute, then report that the B RHRSW strainer has been backflushed IAW LOP-RH-14.

| Element | Expected Response | SAT | UNSAT | Comment # |
|---------|-------------------|-----|-------|-----------|
| 3. PLACE the O/L Bypass for 1E12-F003B, 4B, 4C, 6B, 47B, 68B, 73B, 74B, 93, 94 Thermal Overload bypass switch to test. | O/L Bypass for 1E12-F003B, 4B, 4C, 6B, 47B, 68B, 73B, 74B, 93, 94 Thermal Overload bypass switch placed in TEST. | ___ | ___ | ___ |
| 4. Log positioning of O/L Bypass switch in Unit Log. | Position of O/L Bypass switch<br>o Logged in unit log<br>o Requested to be logged by Unit NSO. | ___ | ___ | ___ |

**CUE:** If requested, as Unit NSO, acknowledge request, report that the O/L Bypass for 1E12-F003B, 4B, 4C, 6B, 47B, 68B, 73B, 74B, 93, 94 Thermal Overload bypass switch to TEST has been logged.

()

| Element | Expected Response | SAT | UNSAT | Comment # |
|---------|-------------------|-----|-------|-----------|
| 5. If required, START 8 hour clock | Candidate determines that an 8 hour timeclock must be started. | ___ | ___ | ___ |

**CUE:** If requested, as Unit Supervisor, acknowledge Tech Spec Time clock information, state that the Unit NSO will perform the necessary actions for the Tech Spec Time clock.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 6. | If only on RHRSW pump is in operation ... (Step E.5.4). | Candidate determines step is not applicable and continues with step E.5.5. | ___ | ___ | ___ |
| *7. | Place control switch for 1E12-F068B, 'B' RHR Hx water outlet vlv to CLOSE. | Control switch for 1E12-F068B, 'B' RHR Hx water outlet vlv placed in close position. | ___ | ___ | ___ |
| *8. | When flow indicated on 1E12-R602B decreased below 4000 gpm, STOP one RHRSW pump 1E12-300C/D. | C or D RHRSW pump control switch taken to STOP when flow decreases to <4000 gpm. | ___ | ___ | ___ |
| *9. | When 1E-F068B, 'B' RHR water outlet valve is closed, STOP the running RHRSW pump 1E12-300D/C. | D or C RHRSW pump control switch taken to STOP when 1E-F068B, 'B' RHR water outlet valve is closed. | ___ | ___ | ___ |
| 10. | VERIFY flow decreases to 0 gpm on flow indicator 1E12-R602B | Flow decrease to 0 gpm on flow indicator 1E12-R602B. | ___ | ___ | ___ |
| 11. | Place the O/L Bypass for 1E12-F003B, 4B, 4C, 6B, 47B, 68B, 73B, 74B, 93, 94 Thermal Overload bypass switch to NORMAL. | O/L Bypass for 1E12-F003B, 4B, 4C, 6B, 47B, 68B, 73B, 74B, 93, 94 Thermal Overload bypass switch to NORMAL. | ___ | ___ | ___ |
| 12. | Log position O/L Bypass switch in unit log. | Position of O/L Bypass switch<br>o Logged in unit log<br>. Requested to be logg . . Unit NSO. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| Element | Expected Response | SAT | UNSAT | Comment # |
|---------|-------------------|-----|-------|-----------|

**CUE:** **If requested, as Unit NSO, acknowledge request, report that the O/L Bypass for 1E12-F003B, 4B, 4C, 6B, 47B, 68B, 73B, 74B, 93, 94 Thermal Overload bypass switch to NORMAL has been logged.**

13. If required, STOP 8 hour clock
Candidate determines that an 8 hour timeclock must be stopped. ___ ___ ___

**CUE:** **If requested, as Unit Supervisor, acknowledge Tech Spec Time clock information, state that the Unit NSO will perform the necessary actions for the Tech Spec Time clock.**

14. Shutdown the RHR SW process radiation monitor per LOP-PR-06.
Candidate determines that step to by not applicable. ___ ___ ___

15. Locally in the DG bulding penthouse, VERIFY the Div 2 Unit 1 1VY06C RHRSW Ventilation fan stops.
Step determined to be Not applicable. ___ ___ ___

**CUE:** As local operator, acknowledge direction and then report that Div 2 Unit 1 1VY06C RHRSW Ventilation fan has stopped.

16. Verify the appropriate ESF Status Panel Annunciator RHR B Cont Heat Rem Inop (#36) is CLEARED.
ESF Status Panel Annunciator window #36 is cleared. ___ ___ ___

17. Inform US that LOP-RH-05 is complete.
Unit Supervisor informed that LOP-RH-05 is complete. ___ ___ ___

**CUE: THIS JPM IS COMPLETE.**
**Enter JPM Stop Time:** _____

## VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____

_____

_____

Response:_____

_____

_____

_____

Result:  SAT or UNSAT

Examiner's signature and date: _____    _____

# LASALLE COUNTY NUCLEAR STATION


# JOB PERFORMANCE MEASURE


Transfer a Turbine Driven Reactor Feed Pump from Manual
Backup Station to 3-Element Control


Examination Level: RO /SRO /SRO(I)


Date: March 5, 2002


Developed by: Raymond Keith Walton    Date: _____


Reviewed by: _____    Date: _____


Approved by: _____    Date: _____

# JOB PERFORMANCE MEASURE

Facility: <u>LaSalle Nuclear Station</u>          Task No: <u>B.1.b</u>

Task Title: <u>Transfer a TDRFP from Manual Backup Station to 3-Element Control</u>

Job Performance Measure No:

K/A Reference: <u>259002A4.02</u>          K/A Importance: <u>3.9/3.7</u>

Examinee: _____

NRC Examiner: _____          Date: _____

Time Started: _____          Time Finished: _____

Time Critical Task: **NO**

<u>Method of testing:</u>
          Performance: ____ Simulated          Location:          **X** Simulator
                              **X** Actual                              ____ Plant

Task Standard:


Required Materials:
LOP-FW-04, Startup of a Turbine Driven Reactor Feed Pump, Rev 33, May 15, 2001
LOP-RL-01, Operation of the Reactor Level Control System, Reve 14, 8/24/1999

General References:
LOP-FW-17, TDRFP Manual Backup Station Operation
LOP-RL-01, Operation of the Reactor Level Control System

<u>READ TO THE EXAMINEE:</u>
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Tell me when you have successfully complete the task.


Initial Conditions:
•          Unit 1 experienced slight oscillations in the AUTO control signal for the 'B' TDRFP.
•          The pump was transferred to the demand substitution mode on the manual backup station IAW LOP-FW-17, Step E.1.

Initiating Cue:
The Unit Supervisor has directed you to restore control of the B TDRFP to the M/A station IAW LOP-FW-17, Step E.2 and then place the 'B' TDRFP into automatic (three element control) on its M/A station IAW LOP-RL-01.

# JOB PERFORMANCE MEASURE

Simulator Setup Instructions:

1.  Reset the simulator to IC 22 (rst22).

    It is OK 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.  Conditions as follows:
    *   Place the simulator in RUN
    *   Place the B TDRFP in Manual on its M/A station
    *   Shift it to the manual backup station in demand substitution mode
    *   Lower the M/A station signal to minimum

3.  Freeze the simulator until cued by examiner.

4.  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 2.

5.  This completes the setup for this JPM.

# JOB PERFORMANCE MEASURE

## INITIAL CONDITIONS

(To be read by examinee)

Initial Conditions:
- Unit 1 experienced slight oscillations in the AUTO control signal for the 'B' TDRFP.
- The pump was transferred to the demand substitution mode on the manual backup station IAW LOP-FW-17, Step E.1.

Initiating Cue:
The Unit Supervisor has directed you to restore control of the B TDRFP to the M/A station IAW LOP-FW-17, Step E.2 and then place the 'B' TDRFP into automatic (three element control) on its M/A station IAW LOP-RL-01.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

All steps of the JPM are to be completed at control room panel H13-P603 unless otherwise noted.

| Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|
| 1. VERIFY Manual Backup Station MODE SELECTOR switch in AUTO. | Manual Backup Station MODE SELECTOR switch in AUTO. | ___ | ___ | ___ |
| *2. RAISE/LOWER demand at the M/A Xfer Station to extinguish AUTO HI or AUTO LO LEDs and illuminate RESET Permissive LED. | Candidate RAISES/LOWERS demand at the M/A Xfer Station to extinguish AUTO HI or AUTO LO LEDs and illuminate RESET Permissive LED. | ___ | ___ | ___ |
| *3. RESTORE control of the 'B' TDRFP to the M/A station by Depressing RESET TO AUTO pushbutton. | Candidate depresses RESET TO AUTO pushbutton. | ___ | ___ | ___ |
| 4. Observing the CHECK DEMAND SUBSTITUTION and DIRECT VALVE POSITIONING LEDs extinguish. | The candidate verifies the CHECK DEMAND SUBSTITUTION and DIRECT VALVE POSITIONING LEDs are extinguished. | ___ | ___ | ___ |
| *5. Match the output of the 'B' TDRFP to the 'A' TDRFP | Candidate RAISES/LOWERS demand at the M/A Xfer Station for the 'B' TDRFP as needed until it matches the output of the 'A' TDRFP M/A station. | ___ | ___ | ___ |

**CUE: If feed pump flows are not balanced when M/A station outputs are equal, the candidate may request guidance from the Unit Supervisor. If so, inform the candidate to get M/A station outputs approximately equal and balance feed pump flows.**

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 6. | VERIFY Reactor Water Level is stable and deviation meter on Single Element Controller is within Green Band. | Candidate verifies Reactor Water Level is stable and deviation meter on Single Element Controller is within Green Band. | —— | —— | —— |
| 7. | Check M/A station manual and automatic signals equal. | Candidate request IMD to check signal output voltages are approximately equal.<br>**CUE: as IMD, report that signal output voltages have been checked for TDRFP 1B and the signals are approximately equal.** | —— | —— | —— |
| *8. | Place the 'B' TDRFP in AUTO and VERIFY level control stable. | Candidate depresses the AUTO pushbutton on the 'B' TDRFP M/A station and observes RWL stable. | —— | —— | —— |
| 9. | Inform Unit Supervisor that B TDRFP is now in 3-element control. | Candidate states that TDRFP is now in 3-element control. | —— | —— | —— |

**(CUE) THIS COMPLETES THIS JPM**
**Record Stop Time:** _____

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____

_____

_____

Response:_____

_____

_____

_____

Result:  SAT or UNSAT

Examiner's signature and date:  _____     _____

# LASALLE COUNTY NUCLEAR STATION


# JOB PERFORMANCE MEASURE


Main Turbine Weekly Surveillance Test


Examination Level: RO /SRO /SRO(I)


Date: March 5, 2002


Developed by: Raymond Keith Walton      Date: 3/14/2002


Reviewed by: _____      Date: _____


Approved by: _____      Date: _____

# JOB PERFORMANCE MEASURE

Facility: __LaSalle Nuclear Station__          Task No: __B.1.c__

Task Title: __Main Turbine Weekly Surveillance Test__

K/A Reference: __241000A4.06__          K/A Importance: __3.9/3.9__

Examinee: _____

NRC Examiner: _____          Date: _____

Time Started: _____          Time Finished: _____

Estimated Time to Completion: __20 min.__          Time Critical Task: **NO**

Method of testing:

Performance: ____ Simulated          Location:          __X__ Simulator
              __X__ Actual                               ____ Plant

Task Standard:


Required Materials:
LOS-TG-W1, Turbine Weekly Surveillances, Rev 34, 11/2/2001

General References:
LOS-TG-W1, Turbine Weekly Surveillances


READ TO THE EXAMINEE:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Tell me when you have successfully complete the task.


Initial Conditions:
Unit 1 is at <50% of full power.

Initiating Cue:
Unit supervisor has directed you to perform Turbine Weekly Surveillance testing per LOS-TG-W1, Attachment 1A, Section A.2 (BPV). All Prerequisites and Precautions have been met. The Load Dispatcher has given permission to perform this surveillance.

Simulator Setup Instructions:

1.      Setup for <50% power operations and main turbine generator on line.

# JOB PERFORMANCE MEASURE

Initial Conditions:
Unit 1 is at <50% of full power.

Initiating Cue:
Unit supervisor has directed you to perform Turbine Weekly Surveillance testing per
LOS-TG-W1, Attachment 1A, Section A.2 (BPV).  All Prerequisites and Precautions have been
met.  The Load Dispatcher has given permission to perform this surveillance.

Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|

*1. TEST OPEN Turbine Bypass
Valve 1B21-MSBPV-1:
   a. CHECK BPV Ready to Select     BPV Ready to Select light is energized
       light is energized.
   b. Place the BYPASS VALVE     Bypass Valve Test selector switch in    ___ ___ ___
       TEST selector SW in Postion 1    Postion 1.
   c. DEPRESS the TEST BYPASS     Depresses the TEST BYPASS VALVE    ___ ___ ___
       VALVE button.    button
       1B21-MS-BPV-1 goes to Full open
       exhibiting fast open characteristics the
       final 10% of travel.

   d. Release the TEST BYPASS     Test Bypass Valve button released    ___ ___ ___
       VALVE button.    1B21MS-BPV-1 goes to Full closed.


*2. TEST OPEN Turbine Bypass
Valve 1B21-MSBPV-2:
   a. CHECK BPV Ready to Select     BPV Ready to Select light is energized    ___ ___ ___
       light is energized.
   b. Place the BYPASS VALVE
       TEST selector SW in Position    Bypass Valve Test selector switch in
       2.    Position 2.    ___ ___ ___
   c. DEPRESS the TEST BYPASS     Depresses the TEST BYPASS VALVE
       VALVE button.    button.
       1B21-MSBPV-2 goes to Full open
       exhibiting fast open characteristics
       final 10% of travel.

   d. Release the TEST BYPASS     Test Bypass Valve button released    ___ ___ ___
       VALVE button.    1B21MSBPV-2 goes to Full closed.


*3. Candidate REPORTS failure of    **CUE: Unit Supervisor**
    MSBPV-2 to ___ ___ final    **acknowl__ ___ ___ failure. US will**    ___
    10% of travel.    **activate TADS.**

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|
| *4. TEST OPEN Turbine Bypass Valve 1B21-MSBPV-3: | | | | |
| a. CHECK BPV Ready to Select light is energized. | BPV Ready to Select light is energized | | | |
| b. Place the BYPASS VALVE TEST selector SW in Position 3. | Bypass Valve Test selector switch in Position 3. | ___ | ___ | ___ |
| c. DEPRESS the TEST BYPASS VALVE button. | Depresses the TEST BYPASS VALVE button 1B21-MSBPV-3 goes to Full open exhibiting fast open the final 10% of travel. | ___ | ___ | ___ |
| d. Release the TEST BYPASS VALVE button. | Test Bypass Valve button released 1B21MSBPV-3 goes to Full closed. | ___ | ___ | ___ |
| | | | | |
| *5. TEST OPEN Turbine Bypass Valve 1B21-MSBPV-4: | | | | |
| a. CHECK BPV Ready to Select light is energized. | BPV Ready to Select light is energized | | | |
| b. Place the BYPASS VALVE TEST selector SW in Position 4 | Bypass Valve Test selector switch in Position 4. | ___ | ___ | ___ |
| c. DEPRESS the TEST BYPASS VALVE button. | Depresses the TEST BYPASS VALVE button. 1B21-MSBPV-4 goes to Full open exhibiting fast open the final 10% of travel. | ___ | ___ | ___ |
| d. Release the TEST BYPASS VALVE button. | Test Bypass Valve button released 1B21MSBPV-4 goes to Full closed. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|
| *6. TEST OPEN Turbine Bypass Valve 1B21-MSBPV-5: | | | | |
| a. CHECK BPV Ready to Select light is energized. | BPV Ready to Select light is energized | | | |
| b. Place the BYPASS VALVE TEST selector SW in Position 5. | Bypass Valve Test selector switch in Position 5. | ___ | ___ | ___ |
| c. DEPRESS the TEST BYPASS VALVE button. | Depresses the TEST BYPASS VALVE button 1B21-MSBPV-5 goes to Full open exhibiting fast open the final 10% of travel. | ___ | ___ | ___ |
| d. Release the TEST BYPASS VALVE button. | Test Bypass Valve button released 1B21MSBPV-5 goes to Full closed. | ___ | ___ | ___ |
| 7. CHECK that the Bypass Valve READY TO SELECT Light is energized. | Ready To Select Light is energized | ___ | ___ | ___ |
| *8. PLACE the BYPASS VALVE TEST selector Sw to OFF. | Bypass Valve Test Selector Switch to OFF | ___ | ___ | ___ |

**(CUE) THIS COMPLETES THIS JPM**
**Record Stop Time:** _____

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: SAT or UNSAT

Examiner's signature and date: _____ _____

# LASALLE COUNTY NUCLEAR STATION


# JOB PERFORMANCE MEASURE


Stuck Control Rod Drive


Examination Level: RO /SRO /SRO(I)


Date: April 8, 2002


Developed by: Raymond Keith Walton          Date: _____


Reviewed by: _____          Date: _____


Approved by: _____          ____: _____

# JOB PERFORMANCE MEASURE

Facility: _LaSalle Nuclear Station_          Task No: __B.1.d__

Task Title: __Stuck Control Rod Drive__

K/A Reference: __201001A4.04__          K/A Importance: __3.1/3.0__

Examinee: _____

NRC Examiner: _____          Date: _____

Time Started: _____          Time Finished: _____

Estimated Time to Completion: _____          Time Critical Task: **NO**

Method of testing:

Performance: ____ Simulated          Location:     __X__ Simulator
__X__ Actual                                    ____ Plant

Task Standard:

Required Materials:
Copy of LAP 100-13, Attachment C, for rod moves.

General References:
LOA-RD-101, Control Rod Drive Abnormal, Rev 4, 3/27/2001
LAP 100-13, Control Rod Sequence Package Preparation, Review and Implementation.

READ TO THE EXAMINEE:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Tell me when you have successfully complete the task.

Initial Conditions:
Unit 1 at full power operation.

Initiating Cue:
Unit Supervisor has instructed you to adjust control rods IAW LAP 100-13, Attachment C and qualified nuclear engineer instructions.

# JOB PERFORMANCE MEASURE

<u>Simulator Setup Instructions</u>:

1.    Setup for full power operations

2.    Have "in-step" CRD  stick at present position.  CRD will not respond to manual rod
      motion controls.

# JOB PERFORMANCE MEASURE

## INITIAL CONDITIONS

Initial Conditions:
Unit 1 at full power operation.

Initiating Cue:
Unit Supervisor has instructed you to adjust control rods IAW LAP 100-13, Attachment C and qualified nuclear engineer instructions.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 1. | Operator reviews LAP 100-13, Attachment C for CRD moves. | Candidate reviews LAP 100-13, Attachment C. Notes that rods are to be moved in 4 steps. | ___ | ___ | ___ |
| 2. | ATTEMPTS to INSERT CRD (?) by DEPRESSING notch in Pushbutton. | CRD (?) selected. Candidate depresses CRD INSERT pushbutton. | ___ | ___ | ___ |
| *3. | NOTIFIES Unit Supervisor that CRD will not move. | NOTE: Candidate should refer to LOA-RD-101, CRD Abnormal Procedure, Section B.5. | | | |

**CUE: Unit Supervisor acknowledges problems with CRD moving. Need to move rods!**

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 4. | VERIFIES CRD Hydraulic System NORMAL. | CRD Hydraulic System is Normal. | ___ | ___ | ___ |
| 5. | CHECK Control Rod Position Indication is NORMAL. | Control Rod Position indication system normal. | ___ | ___ | ___ |
| 6. | Attempts to INSERT CRD (?). OBSERVE Directional Control Valve Sequencing. | Attempts to insert control rod but control rod does not move. | ___ | ___ | ___ |
| 7. | CHECK Directional Control Valve Sequencing NORMAL. | Directional Control Valve Sequencing normal. | ___ | ___ | ___ |
| 8. | CHECK CRD (?) Failed to move with drive wat.... p.... ..re <450 psid. | CRD (?) Failed to move with drive water pro.... .. <450 psid. | | | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

**NOTE TO EXAMINER:** INITIATE ALTERNATE PATH PORTION OF JPM. Goal is to insert CRD by increasing CRD pressure by throttling on CRD PCV.

| Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|
| *9. RAISE Drive Water pressure to 500 psid. | Candidate adjusts drive water pressure to 500 psid by throttling PCV 1C11-F003. | ___ | ___ | ___ |
| 10. Attempt to INSERT CRD (?). Depresses CRM INSERT pushbutton | Depresses CRM INSERT pushbutton. Control Rod has not moved. | ___ | ___ | ___ |
| *11. RAISE Drive Water Pressure to 550 psid. | Candidate adjusts drive water pressure to 550 psid by throttling PCV 1C11-F003. | ___ | ___ | ___ |
| *12. Depresses CRM INSERT pushbutton | Control Rod moves. Candidate moves CRD (?) In 1 notch | ___ | ___ | ___ |
| *13 RETURN Drive Water pressure to NORMAL | Candidate adjusts drive water pressure to <450 psid by throttling PCV 1C11-F003 | ___ | ___ | ___ |
| *14. Attempts to more CRD (?) In 1 notch. | Candidate depresses CRM pushbutton. CRD (?) Moves in one notch. | ___ | ___ | ___ |

**(CUE) THIS COMPLETES THIS JPM**
**Record Stop Time:** _____

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result:  SAT or UNSAT

Examiner's signature and date: _____|_____    _____

# LaSalle Station

## UNIT 1, 2 AND COMMON

## OPERATING DEPARTMENT SURVEILLANCE

| TECHNICAL SPECIFICATIONS WEEKLY SURVEILLANCES |
| :---: |
| **LOS-AA-W1**<br>**Revision 47**<br>**March 13, 2002** |



S TOP    T HINK    A CT    R EVIEW

| Procedure Responsibility/Review/Approval Requirements | |
| :---: | :---: |
| Responsible Department Head: | SOS |
| Minimum Review Type: | TR |
| Required Cross-Discipline Review(s): | QNE & ISTC |
| Approval Position Required: | SOS |
| Specific Requirements:<br>1. Review/Approval requirements apply to non-editorial procedure revisions. | |

# TECHNICAL SPECIFICATIONS WEEKLY SURVEILLANCES

## TABLE OF CONTENTS

## ATTACHMENTS

Level of Use
Reference

2 of 72

LOS-AA-W1
Revision 47
March 13, 2002

## A. PURPOSE

### A.1 Objective

To satisfy the following Technical Specification weekly surveillance requirements:

Control Rods:

- Tech Spec SR 3.1.3.2, SR 3.1.3.3, SR 3.1.3.5 and SR 3.9.5.1, Demonstrate withdrawn control rods are operable.

- Tech Spec SR 3.1.5.1 and SR 3.9.5.2, Determine each control rod scram accumulator operable.

Automatic Depressurization System

- Tech Spec SR 3.5.1.3  Verify ADS accumulator supply header pressure is $\geq 150$ psig. (Tech Spec requirement is every 31 days)

- Tech Spec SR 3.5.1.4  Verify ADS accumulator backup compressed gas system bottle pressure is $\geq 500$ psig. (Tech Spec requirement is every 31 days)

Containment:

- Tech Spec SR 3.6.1.6.1,  Verify suppression chamber-drywell vacuum breakers operable.

- TRM 3.6.b,  Verify suppression chamber-drywell vacuum breaker closed, if vacuum breaker indication is inoperable.

- Tech Spec SR 3.6.3.2.1,  Determine drywell and suppression chamber oxygen concentration within specification.

$CO_2$ System:

- Technical Requirements Manual TSR 3.7.1.1 and TSR 3.7.1.2. Verify low pressure $CO_2$ system operable.

Level of Use
Reference

3 of 72

LOS-AA-W1
Revision 47
March 13, 2002

CR / AEER Air Conditioning (AC) Breaker Alignment

- Tech Spec SR 3.7.5.2, Determine correct breaker alignment and indicated power available to control room area / AEER ventilation AC subsystems.

Electrical Distribution:

- Tech Spec SR 3.8.1.1, Determine required A.C. Sources-Operating between the offsite transmission network and onsite Class 1E distribution system operable.

- Tech Spec SR 3.8.2.1, Determine required A.C. Sources-Shutdown between the offsite transmission network and onsite Class 1E distribution system operable.

- Tech Spec SR 3.8.7.1, Determine required A.C. Distribution-Operating system electrical divisions operable.

- Tech Spec SR 3.8.8.1, Determine required A.C. Distribution-Shutdown system electrical divisions operable.

Spent Fuel Storage Pool

- Tech Spec SR 3.7.8.1, Determine spent Fuel Storage Pool water level above low level limit.

A.2    Discussion

Control Rods:

Operability of the control rods is verified by actual insertion of the control rods. On a weekly frequency, all control rods that are fully withdrawn when the surveillance is performed, are exercised. On a monthly frequency, all control rods that are at an intermediate position when the surveillance is performed, are exercised. An additional subsection provides methods for clearing high temperature conditions for any control rod that has a loss of cooling due to the operability check.

Operability of control rod accumulators is verified by checking the HCU accumulator pressures. If the HCU accumulator pressure is out of the specified limits, corrective actions are provided.

Verification of no overtravel is accomplished during the weekly control rod exercising.

| Level of Use |
| :---: |
| **Reference** |

4 of 72

LOS-AA-WI
Revision 47
March 13, 2002

E.3.2          If reactor power is <u>NOT</u> above the Low Power Setpoint of Tech Spec 3.3.2.1, ENTER a note on Attachment 1A(2A) sign off sheet under "Comments" that Attachment 1B(2B)/1B-Int(2B-Int) is <u>NOT</u> applicable because power is at or below the Low Power Setpoint. Also, Tech Spec 3.9.5 is applicable for each CRD that is continuously withdrawn for 7 days in Mode 5.

E.3.3          If reactor power is above the Low Power Setpoint:

E.3.3.1          If core thermal power is at or above 25%, DETERMINE current MFLPD and FDLRX (if applicable) value as follows:

         o      DEMAND OD-20 Option 1.

         o      If reactor power level has <u>NOT</u> changed since last CMSS Core Performance Log, CHECK that print out.

E.3.3.2          If core thermal power is at or above 25%, CHECK MFLPD and FDLRX (if applicable) are less than or equal to 0.950.

         o      If either is greater than 0.950, a Control Rod Maneuver Request (CRMR) is required and must be obtained from a QNE.

         o      If both are less than or equal to 0.950, no power reduction is necessary and a CRMR <u>is</u> not required.

E.3.3.3          VERIFY the APRM Gains are within 2% of RTP. If any of the Gains are out, NOTIFY IMD to perform LIS-NR-109 (209).

E.3.3.4          OBTAIN and ATTACH an OD-7 Option 2 computer edit of the Control Rod Positions. If the Process Computer is unavailable, use of the Four-Rod Display is allowed.

E.3.3.5      For each control rod <u>NOT</u> at position 00, on Attachment 1B(2B):

- For Intermediate rods, RECORD the rod position in the column marked "Rod Position".

- <u>If</u> Intermediate rods will NOT be exercised per Attachment 1B-Int(2B-Int), ENTER N/A for each Intermediate control rod in the column marked "Initials".

- <u>If</u> Intermediate rods will be exercised per Attachment 1B-Int(2B-Int), ENTER each Intermediate control rod number and position on that Attachment and INITIAL the column marked "Initials" for each Intermediate control rod.

- For rods full out (position 48), INDICATE rod position by leaving the "Rod Position" column blank.

E.3.3.6      <u>Prior</u> to exercising Control Rods, SELECT the "Rod Exercise" mode via the RWM Touch Screen.

---

## NOTE

<u>If</u> required, Rod Drift Test should be performed concurrently with exercising one control rod.

---

Level of Use
**Reference**

14 of 77

LOS-AA-W1
Revision 47
March 13, 2002

E.3.3.7    While exercising Control Rods, if rods are out in Mode 1 or 2, at 1(2)H13-P603, TEST Rod Drift Alarm as follows:

---

**NOTES**

If any control rod multiple notches while exercising, the Shift Manager or his designee should be notified to determine if CRD Flushing should be performed. Control Rod Drive Problem Identification sheet of Attachment 1(2)B and a Condition Report shall be completed for any control rod that multiple notches.

CRD Flushing should **NOT** be performed on a drive if there is an associated work request written identifying the control rod as a multiple notching rod.

---

E.3.3.7.1    DEPRESS the Rod Drift Test push-button.

E.3.3.7.2    NOTCH a control rod as follows:

    o    If above the LPSP, per rod exercising steps (an edge rod is preferred)

    o    If below the LPSP, per QNE direction.

E.3.3.7.3    VERIFY 1(2)H13-P603 A504 CRD Drift alarm and red light on full core display is illuminated.

E.3.3.7.4    DEPRESS Rod Drift Reset push-button and NOTE CRD Drift alarm and red light on full core display clears.

E.3.3.7.5    RECORD testing of Rod Drift Alarm on Attachment 1B(2B).

---

**CAUTION**

Elevated drive water pressures may result in multiple rod notch moves during rod exercising.

---

1.    INSERT each Full Control Rod one (1) notch individually while monitoring the Rod position and OBSERVE that the Rod has moved.

Level of Use
Reference

15 of 72

LOS-AA-W1
Revision 47
March 13, 2002

E.3.3.9    RETURN the Rod to its original position and PERFORM a coupling check, verifying the rod does not go to the overtravel position.
(Tech Spec SR 3.1.3.5)

E.3.3.10    RECORD satisfactory Control Rod operation on Attachment 1B(2B) by initialing the "Initials" column for each rod.

E.3.3.11    For those rods full-out (position 48) identified as multiple notching rods which do **NOT** have an associated work request, if conditions permit PERFORM the following to flush the Control Rod Drive.

- Elevate drive pressure to between 350-400 psid.

- Apply a continuous withdrawal signal and hold for 60-90 seconds.

- Repeat application of continuous withdrawal signal at least 10 times.

E.3.3.12    For those rods which were flushed, REPEAT Rod Exercising Steps.

- If the control rod multiple notches a second time, NOTE all pertinent information on Control Rod Drive Problem Identification sheet of Attachment 1(2)B and ROUTE to System Engineer to evaluate for further corrective action.

Level of Use
Reference

39 of 72

LOS-AA-W1
Revision 47
March 13, 2002

```
┌─────────────────────────────────────────────────────────────────┐
│                             NOTE                                  │
│                                                                   │
│   For each control rod NOT at position 48 or 00, a second         │
│   licensed operator or qualified member of the System             │
│   Engineering Department shall verify the CRD movement and        │
│   both the NSO performing the CRD movement and the Second         │
│   Verifier shall initial on the appropriate check line.           │
└─────────────────────────────────────────────────────────────────┘
```

E.3.3.13       If Intermediate control rods are to be exercised, INSERT each Control
               Rod NOT at position 48 or 00, one (1) notch individually while monitoring
               the Rod position.

               •       OBSERVE that the Rod has moved.

E.3.3.13.1     RETURN the Rod to its original position.

E.3.3.13.2     RECORD satisfactory Control Rod operation on Attachment 1B-
               Int(2B-Int) by initialing the "Performed" column for each rod.

E.3.3.13.3     Independently VERIFY satisfactory Control Rod operation on
               Attachment 1B-Int(2B-Int) by initialing the "Verified" column for each rod.

E.3.3.14       VERIFY all control rods required to be exercised have been checked.
               INDICATE any Control Rods that were NOT tested using the following
               notations on Attachment 1B(2B):

               o       Full In - 00

               o       Isolated - Isol

               o       Electrically Disarmed - ED

E.3.3.15       OBTAIN and ATTACH an OD-7 Option 2 computer edit of the Control
               Rod Positions.

E.3.3.16       COMPARE the initial OD-7 obtained with the final OD-7 obtained to
               VERIFY there are no mispositioned rods.

E.3.3.17       RETAIN Attachment 1B(2B)/1B-Int(2B-Int) for submittal with
               Attachment     .

E.3.3.18    When control rod exercising is complete:

- EXIT the Rod Exercise mode.

o    RETURN to Power Reduction mode.

o    INCREASE core thermal power.

o    RESTORE reactor power per QNE.

o    INITIATE a Condition Report regarding any control rod(s) that double notched.

E.4    If CRDs become hot after exercising, ESTABLISH cooling water as follows:

E.4.1    OPEN CRD FCV to increase CRD cooling water flow to approximately 70 gpm for intermediate position hot CRDs.

E.4.1.1    If 70 gpm cannot be obtained with the CRD FCV 100% open, CRD drive water differential pressure should be temporarily lowered.

---

### NOTE

The increased flow should be maintained for up to fifteen minutes, in an attempt to clear as many of the hot CRDs as possible.

---

E.4.1.2    After flushing, CHECK that:

- CRD system parameters return to the normal ranges.

- Any CRD filter dP alarms caused by this evolution are clear.

Level of Use
Reference

18 of 72

LOS-AA-WI
Revision 47
March 13, 2002

# UNIT ONE
## ROD OPERABILITY CHECK SIGN-OFF SHEET FOR FULLY WITHDRAWN RODS

E.3.3.3        OBTAIN and ATTACH an OD-7 Option 2.       _____/_____

E.3.3.6.5       Rod Drift Alarm Tested Sat (Mode 1 or 2)    _____/_____

E.3.3.9        RECORD satisfactory Control Rod operation.

| ROD NO. | ROD* POSITION | INITIALS | ROD NO. | ROD* POSITION | INITIALS | ROD NO. | ROD* POSITION | INITIALS |
|---|---|---|---|---|---|---|---|---|
| 02-19 | | | 06-43 | | | 14-07 | | |
| 02-23 | | | 06-47 | | | 14-11 | | |
| 02-27 | | | 10-11 | | | 14-15 | | |
| 02-31 | | | 10-15 | | | 14-19 | | |
| 02-35 | | | 10-19 | | | 14-23 | | |
| 02-39 | | | 10-23 | | | 14-27 | | |
| 02-43 | | | 10-27 | | | 14-31 | | |
| 06-15 | | | 10-31 | | | 14-35 | | |
| 06-19 | | | 10-35 | | | 14-39 | | |
| 06-23 | | | 10-39 | | | 14-43 | | |
| 06-27 | | | 10-43 | | | 14-47 | | |
| 06-31 | | | 10-47 | | | 14-51 | | |
| 06-35 | | | 10-51 | | | 14-55 | | |
| 06-39 | | | | | | | | |

* NOTATIONS for Rod Position Column
Intermediate Position -Rod Position
Full In - 00
Isolated - Isol
Electrically Disarmed - ED
Full Out - Leave Blank

# LASALLE COUNTY NUCLEAR STATION

# JOB PERFORMANCE MEASURE

Failure of SBGT System to Automatically Initiate

<u>Examination Level: RO /SRO /SRO(I)</u>

<u>Date: April 8, 2002</u>

Developed by: <u>Raymond Keith Walton</u>          Date: <u>3/14/2002</u>

Reviewed by: _____          Date: _____

Approved by: _____          Date: _____

# JOB PERFORMANCE MEASURE

Facility: __LaSalle Nuclear Station__          Task No: __B.1.e__

Task Title:___Fuel Assembly Damage Results in Manual Actuation of ESF System___

K/A Reference: __261000A2.12__          K/A Importance: __3.2/3.4__

Examinee: _____

NRC Examiner: _____          Date: _____

Time Started: _____          Time Finished:_____

Estimated Time to Completion: _____          Time Critical Task: **NO**

Method of testing:
              Performance: ____ Simulated          Location:        __X__ Simulator
                          __X__ Actual                              ____ Plant

Task Standard:


Required Materials:
LOA-FH-001, Irradiated Fuel Assembly Damage, Rev 0, 7/31/1996
LOP-VG-01, Preparation for Standby Operation of the SBGT System, Rev. 9, 11/6/2000

General References:
LOA-FH-001, Irradiated Fuel Assembly Damage, Rev 0, 7/31/1996
LOP-VG-01, Preparation for Standby Operation of the SBGT System, Rev. 9, 11/6/2000

READ TO THE EXAMINEE:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Tell me when you have successfully complete the task.


Initial Conditions:
Unit 1 is in Mode 5 with fuel shuffles in progress. Unit 2 is operating in Mode 1. Fuel handling supervisor calls you in control room to inform you that they have just dropped a fuel bundle in the spent fuel pool. The dropped fuel is emitting gas bubbles. The radiation monitor on the fuel handling bridge is alarming. RP personnel have ordered an evacuation of the refuel floor.

Initiating Cue:
The Unit Supervisor has directed you to implement LOA-FH-001. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

Simulator Setup Instructions:

1.     Reset Simulator to IC 26 (rst 26).

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

2.     Set Simulator up for Mode 5 operations.

3.     Enter fault: SBGT system does not start with the control switch.

4.     About 10 seconds after starting this JPM, insert annunciator H13-P601-E306, Fuel Pool Vent Rad Hi, in alarm condition.

# JOB PERFORMANCE MEASURE

**INITIAL CONDITIONS**

- Unit 1 is in Mode 5 with fuel shuffles in progress.
- Unit 2 is operating in Mode 1.
- Fuel handling supervisor calls you in the control room to inform you that they have just dropped a fuel bundle in the spent fuel pool.
- The dropped fuel is emitting gas bubbles. The radiation monitor on the fuel handling bridge is alarming.
- RP personnel have ordered an evacuation of the refuel floor.

Initiating Cue:
The Unit Supervisor has directed you to implement LOA-FH-001. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

NOTE: All steps of the JPM are to be completed at Control Room

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 1. | REFERS to LOA-FH-101, Irradiated Fuel Assembly Damage. | Locates and opens LOA-FH-101. | ___ | ___ | ___ |
| 2. | CHECK Reactor Bldg Exhaust Duct Radiation <10 mr/hr. | RB exhaust radiation >10 mr/hr Annunciators H13-P601-E204, E205 & Annunciators H13-P601-F204, F205 illuminated. | ___ | ___ | ___ |
| 3. | VERIFY that Reactor Bldg Ventilation System isolates | Verifies RB Ventilation fans off and RB Ventilation inlet/outlet valves closed. | ___ | ___ | ___ |
| *4. | IDENTIFY SBGT system failed to start. | SBGT fans <u>NOT</u> operating, SBGT valves did <u>NOT</u> open. | ___ | ___ | ___ |
| 5. | Informs Unit Supervisor that SBGT failed to start. | If the candidate asks **CUE: Start SBGT using the Manual System Test Pushbutton on Panel PM07J.** | ___ | ___ | ___ |
| 6. | START SBGT by DEPRESSING SBGT Test Push button on Panel PM07J. | Depresses SBGT PB on PM07J. SBGT fans <u>NOT</u> operating, SBGT valves did <u>NOT</u> open. | ___ | ___ | ___ |
| 7. | Informs Unit Supervisor that SBGT failed to start using Manual System Test Pushbutton. | **CUE: Need to have SBGT operating.** | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

**NOTE TO EXAMINER: INITIATE ALTERNATE PATH PORTION OF JPM.
Goal is to manually initiate SBGT system.**

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 8. | REFERs to LGA-VG-101, Secondary Containment Pressure Control. | Locates and Opens LGA-VG-101 | ___ | ___ | ___ |
| *9. | Manually lines up and initiates at least one SBGT system IAW LGA-VG-101, Secondary Containment Pressure Control. | OPEN:<br>1/2VG002, SBGT Inlet Isol Valve.<br>1/2VG003, SBGT Disch Isol Valve.<br>ON:<br>1/2VG01C, SBGT Primary fan<br>1/2VG01A, SBGT Electric Htr Coil<br>OFF:<br>1/2VG02C, SBGT Cooling Fan<br>Verify flow 3600 - 4400 CFM on 1/2FR-VG009 & 1/2FI-VG003. | ___ | ___ | ___ |
| 10.<br>11. | SUSPEND all refueling operations. | Picks up CR phone, calls refuel floor RP desk and informs supervisor to suspend all refueling operations and evacuate personnel from refuel floor. | | | |
| 12. | EVACUATE unnecessary personnel from Refuel Floor. | | | | |

**CUE: THIS COMPLETES THIS JPM**
**Record Stop Time: _____**

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result:  SAT or UNSAT

Examiner's signature and date: _____    _____    _____

# LASALLE COUNTY NUCLEAR STATION


# JOB PERFORMANCE MEASURE


Transfer Electrical Loads from SAT 142 to UAT 141


Examination Level: RO /SRO /SRO(I)


Date: March 5, 2002


Developed by: Raymond Keith Walton          Date: _____


Reviewed by: _____          Date: _____


Approved by: _____          _____

# JOB PERFORMANCE MEASURE

Facility: <u>LaSalle Nuclear Station</u>

Task No: <u>B.1.f</u>

Task Title: <u>Transfer Loads from SAT 142 to UAT 141</u>

K/A Reference: <u>262001K5.01</u>

K/A Importance: <u>3.1/3.4</u>

Examinee: _____

NRC Examiner: _____

Date: _____

Time Started: _____

Time Finished: _____

Estimated Time to Completion: _____

Time Critical Task: **NO**

<u>Method of testing:</u>

Performance: ____ Simulated

**X** Actual

Location: **X** Simulator

____ Plant

Task Standard:

Required Materials:
LOP-AP-08, System Auxiliary Transformer SAT 142 Operation in Shutdown, Rev 25, 4/2/2002.

General References:
LOP-AP-08, System Auxiliary Transformer SAT 142 Operation in Shutdown
LOP-AP-01, Unit Auxiliary Transformer Backfeeding Operations
LOR PM01J-A317, SAT 142 Trouble Alarm
LOA-TRAN-101, Unit 1 Transformer Trouble, B13, Combustible Gas Monitor

<u>READ TO THE EXAMINEE:</u>
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Inform me when you successfully completed the task..

Initial Conditions:
Unit 1 is shutdown (Mode 4). All electrical loads are powered from SAT 142. U1 Main Generator Disconnect Links open and UAT 141 Transformer Disconnect Links to Switchyard are closed. Backfeeding operations had previously been completed IAW LOP-AP-01, Unit Auxiliary Transformer Backfeeding Operations. UAT 141 is available for backfeeding.

Initiating Cue:
Monitor Panel PM01J for alarms. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

1.      Reset Simulator

2.      Set up Simulator for Mode 4 with Unit 2 at full power.

3.      All Unit 1 loads powered from SAT 142.  ACBs 1415 & 1425 are closed.

4.      Backfeed operations for UAT141 have been completed, Generator Output disconnect
open, UAT141 Transformer Output disconnect closed.

5.      When cued by examiner, input annunciator SAT 142 Trouble alarm (PM01J-A317).

6.      After a short period of time, call and inform candidate that SAT 142 has a high gas
concentration.  Fifth LED OFF (Confirms very high gas reading).  Other LED status as
follows: first LED: blinking yellow, second LED ON (green), third LED ON (green), fourth
LED ON (green).  If asked, sixth LED is OFF (high gas reading). Gas level is _____(?)

# JOB PERFORMANCE MEASURE

## INITIAL CONDITIONS

(To be read by examinee)

Initial Conditions:
Unit 1 is shutdown (Mode 4). All electrical loads are powered from SAT 142. U1 Main Generator Disconnect Links open and UAT 141 Transformer Disconnect Links to Switchyard are closed. Backfeeding operations had previously been completed IAW LOP-AP-01, Unit Auxiliary Transformer Backfeeding Operations. UAT 141 is available for backfeeding.

Initiating Cue:
Monitor Panel PM01J for alarms.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 1. | Annunciator PM01J-A317 alarms. | Candidate reviews annunciator response procedure for alarm. | ___ | ___ | ___ |
| *2. | Refers to annunciator response procedure. Requires that an operator be DISPATCHED to SAT 142. | Candidate calls simulator operator and dispatches auxiliary operator to SAT 142. | ___ | ___ | ___ |

**CUE: Receives a call from operator stating that the Combustible Gas Monitor is Alarming.**

| | | |
|---|---|---|
| 3. | REFERS to LOA-TRAN-101: CHECK SAT 142 energized | On Panel PM01J: SAT 142 indicates energized |

c

| | | |
|---|---|---|
| 4. | REMOVE Outer Monitor Cover and locate 6 small LEDs | Directs NLO to perform actions. |
| 5. | CHECK fifth LED OFF | (NLO reports that 5th LED is ON) |
| 6. | VERIFY the Combustible Gas Monitor is operating properly: CHECK status of LEDs:1st LED blinking yellow: 2nd, 3rd & 4th LEDs are ON (green) | 1st LED blinking yellow: 2nd, 3rd & 4th LEDs are ON (green) (Normal conditions). |
| 7. | CONTACT System Engineering with Gas Level. | **CUE: Shift Supv to contact System Engineering** |
| *8. | IMMEDIATELY REMOVE SAT 142 from service | Candidate RECOMMENDS removing loads from SAT 142 |

**CUE: Inform candidate to transfer electrical loads from SAT 142 to UAT 141 by establishing a backfeed IAW LOP-AP-08, "SAT 142 Operation in Shutdown," step E.1.**

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---------|-------------------|-----|-------|-----------|
| 9. | VERIFY UAT 141 ready to supply power for backfeeding per LOP-AP-01. | Candidate may verify 345 KV bkrs CLOSED: OCB 1-9, OCB 9-10, OCB 10-11, OCB 11-13, OCB 1-13. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

NOTE: Allow candidate to locate and review copy of LOP-AP-08.

<table>
<tr><td align="center"><u>Element</u></td><td align="center"><u>Expected Response</u></td></tr>
<tr><td></td><td>SYNCHRONIZE ACB:</td></tr>
<tr>
<td>*8.     Transfer Bus 152 from<br>SAT to UAT:<br>VERIFY CLOSED ACB<br>1522,<br>SYNCHRONIZE & CLOSE<br>ACB 1521,<br>OPEN ACB 1522.</td>
<td>
•     Engage Synchroscope for oncoming ACB.<br>
•     Verify synchroscope at 12:00 position, incoming &<br>      running voltages equal and sync lights NOT<br>      illuminated.<br>
•     Verify 6.9 KV Paralleled Bus Alarm annunciates.<br>
•     Open off going circuit bkr.<br>
•     Verify electrical bus parameters are normal<br>
•     Disengage the synchroscope.<br>
•     Reset Parallelled Bus Annunciator<br><br>
ACB 1521 indicate closed,<br>
ACB 1522 indicates open.<br><br>
      SAT_____     UNSAT _____
</td>
</tr>
<tr>
<td>*9.     Transfer Bus 151 from<br>SAT to UAT:<br>VERIFY CLOSED ACB<br>1512,<br>SYNCHRONIZE & CLOSE<br>ACB 1511,<br>OPEN ACB 1512.</td>
<td>
SYNCHRONIZE ACB:<br>
•     Engage Synchroscope for oncoming ACB.<br>
•     Verify synchroscope at 12:00 position, incoming &<br>      running voltages equal and sync lights NOT<br>      illuminated.<br>
•     Verify 6.9 KV Paralleled Bus Alarm annunciates.<br>
•     Open off going circuit bkr.<br>
•     Verify electrical bus parameters are normal<br>
•     Disengage the synchroscope.<br>
•     Reset Parallelled Bus Annunciator<br><br>
ACB 1511 indicate closed,<br>
ACB 1512 indicates open.<br><br>
      SAT_____     UNSAT _____
</td>
</tr>
<tr>
<td>10.     PERFORM LOS-AP-01.</td>
<td>OUT Step E.1.4, LOS-AP-R1, Alternate Power Source<br>Breaker Operability Surveillance is <u>**NOT**</u> required.</td>
</tr>
</table>

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| Element | Expected Response |
|---|---|
| **\*11.** Transfer Bus 141Y & 141X from SAT to UAT: VERIFY CLOSED ACB 1415, SYNCHRONIZE & CLOSE ACB 1411, OPEN ACB 1412 | SYNCHRONIZE ACB: <br>• Engage Synchroscope for oncoming ACB. <br>• Verify synchroscope at 12:00 position, incoming & running voltages equal and sync lights NOT illuminated. <br>• Verify 6.9 KV Paralleled Bus Alarm annunciates. <br>• Open off going circuit bkr. <br>• Verify electrical bus parameters are normal <br>• Disengage the synchroscope. <br>• Reset Parallelled Bus Annunciator <br><br>ACBs 1415 & 1411 indicate closed, ACB 1412 indicates open. <br><br>SAT _____ UNSAT _____ |
| **\*12.** Transfer Bus 142Y & 142X from SAT to UAT: VERIFY CLOSED ACB 1425, SYNCHRONIZE & CLOSE ACB 1421, OPEN ACB 1422. | SYNCHRONIZE ACB: <br>• Engage Synchroscope for oncoming ACB. <br>• Verify synchroscope at 12:00 position, incoming & running voltages equal and sync lights NOT illuminated. <br>• Verify 6.9 KV Paralleled Bus Alarm annunciates. <br>• Open off going circuit bkr. <br>• Verify electrical bus parameters are normal <br>• Disengage the synchroscope. <br>• Reset Parallelled Bus Annunciator <br><br>ACBs 1425 & 1421 indicate closed, ACB 1422 indicates open. <br><br>SAT _____ UNSAT _____ |

**CUE:** This completes this JPM

Completion Time: _____

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result:  SAT or UNSAT

Examiner's signature and date: _____     _____

# LASALLE COUNTY NUCLEAR STATION


# JOB PERFORMANCE MEASURE


Reestablish Shutdown Cooling After Clearing Level 3 PCIS Signal


Examination Level: RO /SRO /SRO(I)


Date: April 8, 2002


Developed by: Raymond Keith Watton        Date: _____


Reviewed by: _____        Date: _____


Approved by: _____        Date:_____

# JOB PERFORMANCE MEASURE

Facility: <u>LaSalle Nuclear Station</u>        Task No: <u>B.1.g</u>

Task Title: Reestablish Shutdown Cooling After PCIS Level 3 Signal Cleared

K/A Reference: <u>20500A2.06</u>        K/A Importance: <u>3.4/3.5</u>

Examinee: _____

NRC Examiner: _____        Date: _____

Time Started: _____        Time Finished: _____

Estimated Time to Completion: _____        Time Critical Task: **NO**

<u>Method of testing:</u>

        Performance: ____ Simulated        Location:        **X** Simulator
                    **X** Actual                                ____ Plant

Task Standard:

Required Materials:
LOA-RH-101, RHR Abnormal, Rv. 4, 12/5/2000
LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer, Rv. 46, 10/27/2000

General References:
LOA-RH-101, RHR Abnormal, Rv. 4, 12/5/2000
LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer, Rv. 46, 10/27/2000

<u>READ TO THE EXAMINEE:</u>
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Tell me when you have successfully complete the task.
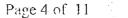
Initial Conditions:
Plant is in Mode 4. A spurious PCIS Level signal 3 had occurred which resulted in 'A' RHR pump tripping and a loss of shutdown cooling. The PCIS level 3 signal has been reset. The 'B' RHRSW is out of service for maintenance. Both trains of CS are operable. The 'A' RHRSW system is in operation

Initiating Cue:
The Shift Manager has requested you reestablish shutdown cooling on 'A' train of RHR IAW LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

<u>Simulator Setup Instructions</u>:

1.  Setup Simulator for Mode 4 operations: Reactor temperature 120 degrees F, RPV pressure 100 psig, RPV water level at 50" and both recirculation pumps operating at 15 hz.

2.  SDC valves associated with 'A train RHR have been closed by PCIS level 3 and remain closed.

3.  Plant conditions as shown:
    *   'B' RHRSW in operation
    *   'A' RHRSW system OOS (OOS tag hung on 'B' RHRSW pump control sw)

3.  Input a failure for 'A' RHR pump to start.

# JOB PERFORMANCE MEASURE

## INITIAL CONDITIONS

Initial Conditions:
Plant is in Mode 4. A spurious PCIS Level 3 signal had occurred which resulted in 'A' RHR pump tripping and a loss of shutdown cooling. The PCIS level 3 signal has been reset. The 'B' RHRSW is out of service for maintenance. Both trains of CS are operable. The 'A' RHRSW system is in operation.

Initiating Cue:
The Shift Manager has requested you reestablish shutdown cooling on 'A' train of RHR IAW LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 1. | Refer to LOP-RH-07, Shutdown Cooling System Startup, Operation and Transfer. | Locate and Open LOP-RH-07. Start at step E.1. **CUE: RHR & SDC systems have been filled & vented. Cycled Condensate is in operation and RBEDT is available.** | ___ | ___ | ___ |
| 2. | DECLARE LPCI Mode of 'A' RHR inoperable. | **CUE: Shift Manager notified.** | ___ | ___ | ___ |
| 3. | CLOSE valves: 1E12-F004A, A RHR Pmp Suction 1E12-F064A, A RHR In Flow | 1E12-F004A and 1E12-F064A valves indicate closed. | ___ | ___ | ___ |
| *4. | OPEN valve 1E12-F006A, A RHR shutdown cooling suction valve. | 1E12-F006A valve indicates open | ___ | ___ | ___ |
| 5. | LOCALLY CLOSE 1E12-F085A, A RHR/LPCS Water Leg Pump Discharge Valve. | **CUE: Operator reports 1E12-F085A valve closed.** | ___ | ___ | ___ |
| 6. | VERIFY OPEN 1E12-F048A, A RHR Hx Bypass Vlv. | 1E12-F048A valve indicates open. | ___ | ___ | ___ |
| *7. | VERIFY CLOSED: 1E12-F047A, A RHR Hx Inlet Vlv 1E12-F003A, A RHR Hx Outlet Vlv | 1E12-F047A and 1E12-F003A valves indicate closed. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| Element | Expected Response | SAT | UNSAT | Comment # |
|---------|-------------------|-----|-------|-----------|
| 8. UNLOCK and CLOSE bkr for vlv 1E12-F008 at 135X-1. | **CUE: 1E12-F008 chain operator unlocked and removed. Bkr for 1E12-F008 valve previously closed.** | ___ | ___ | ___ |
| *9. VERIFY OPEN valves: 1E12-F008, RHR Shutdown Cooling Suction Inboard and 1E12-F009, RHR Shutdown Cooling Suction Outboard Isolation | Valves 1E12-F008 and 1E12-F009 indicate closed. Operator opens F008 and F009 valves. | ___ | ___ | ___ |
| 10. Start RHRSW pump. | Should verify RHRSW 'A' pump operating. | ___ | ___ | ___ |
| 11. If reactor water temperature exceeds 'A' RHR Hx outlet temperature by 100 degrees F, perform warmup procedure. | **Cue: If necessary, warmup procedure waived by Shift Manager.** | ___ | ___ | ___ |
| 12. CHECK both recirculation pumps in operation. Both recirc suction and discharge valves OPEN. | Verifies both recirulation pumps in operation with suction and discharge valve open. | ___ | ___ | ___ |
| *13. OPEN 1E12-F047A, 'A' RHR Hx Inlet Vlv. | Opens 1E12-F047A. | ___ | ___ | ___ |
| 14. VERIFY OPEN 1E12-F048A, 'A' RHR Hx Bypass Vlv. | 1E12-F048A indicates open. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| Standard | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|

15. VERIFY CLOSED Vlvs: 1E12-F053A, 'A' Shutdown Cooling Return Isolation Vlv. 1E12-F003B, 'A' RHR Hx Outlet Vlv.

   **Expected Response:** 1E12-F053A & 1E12-F003A indicate closed.

   ___ ___ ___

16. VERIFY Reactor Level >40"

   **Expected Response:** Verifies Reactor Level >40"

   ___ ___ ___

*17. Attempts to Start 'A' RHR pump. Identifies that pump does <u>NOT</u> start

   **Expected Response:** Candidate attempts to start pump. Verifies by looking at Pump amps, flow rate and pump breaker indication light that pump does **NOT** start.

   ___ ___ ___

*18. DETERMINES pump inoperable and trips 'A' RHR pump.

   **Expected Response:** Pump switch in OFF position

   ___ ___ ___

**NOTE TO EXAMINER: Initiate Alternate Path portion of JPM. Goal is to establish an alternative method of removing decay heat from core.**

*19. REFERS to LOA-RH-101, "U1 RHR Abnormal," Section B.1, step 4.5.1.

   **Expected Response:** Recommends another heat removal method.

   ___ ___ ___

**NOTE: Methods of alternative decay heat removal are prioritized. Applicant should recommend 'A' SDC (drain path) and LPCS (charging path). If candidate recommends another method of SDC, as Shift Supervisor, have candidate perform LOP-RH-17, "Alternate Shutdown Cooling" using 'A' train shutdown cooling suction and LPCS as return. Hand candidate Attachment A of LOP-RH-17 (Signatures on items 3 for steps E.16 and E.17).**

20. Reviews Attachment A of LOP-RH-17.

   **Expected Response:** Reviews Attachment A of LOP-RH-17.

   ___ ___ ___

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| *21 | OPEN E12-F047A, 'A' RHR Hx Inlet Valve. | E12-F047A indicates OPEN | ___ | ___ | ___ |
| 22. | VERIFY CLOSED:<br>E12-F003A, 'A' RHR Hx Outlet valve | E12-F003A, indicates closed | ___ | ___ | ___ |
| | E12-F004A, 'A' RHR pump Suction Valve | E12-F004A, indicates closed. | ___ | ___ | ___ |
| | E12-F065A, 'A' RHR Hx level Controller | E12-R604A in Manual and full closed. | ___ | ___ | ___ |
| 23. | VERIFY:<br>E12-F051A, 'A' RHR Hx Press. Controller | Switch E12-R606A in Manual and full closed. | ___ | ___ | ___ |
| | E12-R605, RHR Hx Drain to RCIC Suct. Press Controller. | Switch E12-R605 in Manual and full closed | ___ | ___ | ___ |
| 24. | PLACE applicable air supply isolation switch (no EPN) in OPEN: E12-F065A/51A. | E12-F065A/51A air supply switch in OPEN | ___ | ___ | ___ |
| *25 | VERIFY the following valves are CLOSED:<br>E12-F074A, 'A' RHR Hx vent Upstream valve | E12-F074A indicates closed. | | | |
| | E12-F073A, 'A' RHR Hx vent Downstream valve | E12-F073A indicates closed. | | | |
| | E12-F052A, 'A' RHR Hx Steam inlet valve | E12-F052A indicates closed. | | | |
| | E12-F048A, 'A' RHR H  bypass valve | E12-F048A indicates closed. | | | |
| | E12-F026A, 'A' RHR Hx Drain to RCIC. | E12-F026A indicates closed. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| *26. | OPEN E12-F020, RHR SDC Suct. Header Manual Stop Vlv. | Orders NLO to Open E12-F020 . | ___ | ___ | ___ |
| *27. | OPEN E12-F008 & E12-F009, RHR SDC Suct. Outboard and Inboard Isol Valves. | E12-F008 and E12-F009 Valves indicate open. | ___ | ___ | ___ |
| *28. | READS NOTE in LOP-RH-17. Must keep drain flow >450 gpm and must read Computer digital points to determine drain flow rate. | Accesses computer points A800. | ___ | ___ | ___ |
| *29. | OPEN E12-F006A, "A" RHR SDC Suction valve. | Valve E12-F006A indicate open | ___ | ___ | ___ |
| 30. | START 'A' RHR Service Water. | Verifies 'A' RHRSW operating. | ___ | ___ | ___ |
| 31. | NOTIFY RP of changing dose rates. | **CUE: SS will notify RP of changing dose rates.** | ___ | ___ | ___ |
| *32. | OPERATE LPCS pump per LOP-LP-05:<br>Verify open DG035, LPCS Pump Cooler Isol. Valve.<br>START LPCS pump E21-C001.<br>Throttle open E21-F012, LPCS Test to SP valve<br>Establish flow rate between 6000 gpm to 6500 gpm. | **CUE: Time does not permit performing steps E.1 and E.2.**<br><br>DG035 indicates open.<br>LPCS pump indicates ON<br><br>E21-F012 indicates open<br><br>Flow rate established between 6000 gpm and 6500 gpm. | ___<br><br>___ | ___<br><br>___ | ___<br><br>___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|

*32. OPERATE LPCS Pump per
LOP-LP-05, (Cont'd)
VERIFY E21-F011, LPCS Pump    E21-F011 indicates Closed.      ___ ___ ___
Min Flow valve closes.
VERIFY PM01J, 0 EDG Cooling    0 EDG Cooling Water Pump running.    ___ ___ ___
Water Pump RUNNING.
VERIFY Local CSCS Equipment    Local Operator calls from local panel    ___ ___ ___
Cooling panel operating.    and states all equipment is running.
RAISE reactor water level:
    Throttle Open E21-F005,    E21F005 throttled open.      ___ ___ ___
    LPCS Injection Valve.

*33. IF using E12-F024A, 'A' RHR
Test to SP Vlv. as a drain path:
CLOSE E12-F048A, 'A' RHR Hx    E12F048A indicates closed.      ___ ___ ___
Bypass Valve.
OPEN E12-F003A, 'A' RHR Hx    E12-F003A indicates open.      ___ ___ ___
Outlet Valve.

*34. BEGIN DRAINING by throttling    E12F024A indicates open. Candidate
OPEN E12-F024A, 'A' RHR      monitors flow rate on computer point    ___ ___ ___
Test to SP Valve.       A800.

*35. OBTAIN desired cooldown rate    Establishes cooldown rate of
of less than 100 °F/hr by      <100°F/hr            ___ ___ ___
adjusting drain flow.

CUE: THIS COMPLETES THIS JPM.

Record Stop Time: ___ ___ ___

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____

_____

_____

Response:_____

_____

_____

Result:  SAT or UNSAT

Examiner's signature and date: _____     _____

# LASALLE COUNTY NUCLEAR STATION

# JOB PERFORMANCE MEASURE

Startup RPS MG Set and Transfer Power
from Alternate Source to Normal Source

Examination Level: RO /SRO /SRO(I)

Date: April 8, 2002

Developed by: Raymond Keith Walton        Date:  3/14/2002

Reviewed by: _____        Date: _____

Approved by: _____        Date: _____

# JOB PERFORMANCE MEASURE

Facility: <u>LaSalle Nuclear Station</u>　　　　　Task No: <u>B.2.a</u>

Task Title:<u> Startup RPS MG Set and Transfer Power from Alternate Source to Normal Source</u>

K/A Reference: <u>212000A2.02</u>　　　　　K/A Importance: <u>3.7/3.9</u>

Examinee: _____

NRC Examiner: _____　　　　　Date: _____

Time Started: _____　　　　　Time Finished:_____

Estimated Time to Completion: _____　　　　　Time Critical Task: **NO**

Method of testing:
　　　　　Performance: <u>__X__</u> Simulated　　　　　Location:　　　　____ Simulator
　　　　　　　　　　　____ Actual　　　　　　　　　　　　　　　　<u>__X_</u> Plant

Task Standard:

Required Materials:
LOP-RX-01, RPS MGS Set Startup and Operation
LOP-RX-03, RPS Bus A Transfer

General References:
LOP-RX-01, RPS MGS Set Startup and Operation
LOP-RX-03, RPS Bus A Transfer

## READ TO THE EXAMINEE:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Inform me when you have successfully completed the task.

Initial Conditions:
Unit 1 is operating in Mode 1. Bus 'A' RPS power is on Alternate supply. There are no surveillances being performed which produce half RPS or half PCIS actuations.

Initiating Cue:
You have been instructed by the Shift Manager to Startup the 'A' RPS MG set and transfer RPS power from Alternate to Normal. Previously, an operator had completed prerequisite steps for the LOP-OP-03 RPS MG Set Startup Procedure. The same operator also completed prerequisite steps and steps E.1 through E.7 for RPS Bus 'A' Transfer Operating Procedure. Inform your supervisor when this task has been completed.

Simulator Setup Instructions:

NONE: In-plant

# JOB PERFORMANCE MEASURE

## INITIAL CONDITIONS

(To be read by examinee)

Initial Conditions:
Unit 1 is operating in Mode 1. Bus 'A' RPS power is cn Alternate supply. There are no surveillances being performed which produce half RPS or half PCIS acuations.

Initiating Cue:
You have been instructed by the Shift Manager to:
- Startup the 'A' RPS MG set IAW LOP-RP-01, "RPS MG Set Startup and Operation" and
- Transfer RPS power from Alternate to Normal IAW LOP-RP-03, "RPS Bus A Transfer."

Previously, an operator had:
- completed prerequisite steps for LOP-RP-01, "RPS MG Set Startup Procedure" and
- completed prerequisite steps E.1 through E.7 for LOP-RP-03, "RPS Bus 'A' Transfer" Operating Procedure.

Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

**All plant operations are to be simulated.**

**CUE: Give candidate partially completed copies of LOP-RP-01 and LOP-RP-03**

| Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|
| 1. Refer to LOP-RP-01, RPS MG Set Startup and Operation and LOP-RP-03, RPS Bus A Transfer. | Locate and Open LOP-RP-01 Procedures. Candidate to perform steps E.1 and E.2 of LOP-RP-01. | ___ | ___ | ___ |
| *2. CLOSE feeder breaker 135X-2 Bkr A-5 to 'A' RPS MG set. | Candidate closes Feeder Breaker 135X-2, A-5. | ___ | ___ | ___ |
| *3. START the 'A' RPS MG set. | Candidate starts the 'A' RPS MG set. | ___ | ___ | ___ |
| 4. Check 'A' RPS MG set output breaker is OPEN. | 'A' RPS MG set output breaker checked open. | ___ | ___ | ___ |
| *5. PRESS and HOLD the 'A' RPS MG set Motor On pushbutton (1PB) at local 'A' RPS MG set control panel. Observe:<br>• Motor ON light illuminates<br>• Local volt meter indicates 120 VAC.<br>RELEASE Motor ON pushbutton. | Candidate presses and holds 1PB to 'A' RPS MG set.<br><br>**CUE: Motor ON light illuminates Local Voltmeter indicates 120 VAC.** | ___ | ___ | ___ |
| *6. CLOSE the 'A' RPS MG set output circuit breaker at the local MG set panel. | Candidate closes 'A' RPS MG set output breaker | ___ | ___ | ___ |
| 7. Check Electrical Protection Assembly (EPA) breaker 1C71-S003A Red Motor Gen light ON. | **CUE: EPA bkr 1C71-S003A Red Motor Gen light ON.** | ___ | ___ | ___ |

(Denote critical steps with an asterisk)

| | Standard | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| *8. | CLOSE EPA breaker 1C71-S003A. | **CUE: EPA bkr 1C71-S003A breaker indicates closed** | ___ | ___ | ___ |
| 9. | Check Electrical Protection Assembly (EPA) breaker 1C71-S003A Red RPS bus light ON. | **CUE: EPA bkr 1C71-S003A Red RPS Bus light ON.** | ___ | ___ | ___ |
| 10. | Check Electrical Protection Assembly (EPA) breaker 1C71-S003C Red Motor Gen light ON. | **CUE: EPA bkr 1C71-S003C Red Motor Gen light ON.** | ___ | ___ | ___ |
| *11. | CLOSE EPA breaker 1C71-S003C. | **CUE: EPA bkr 1C71-S003C breaker indicates closed** | ___ | ___ | ___ |
| 12. | Check Electrical Protection Assembly (EPA) breaker 1C71-S003C Red RPS bus light ON. | **CUE: EPA bkr 1C71-S003C Red RPS Bus light ON.** | ___ | ___ | ___ |
| 13. | Main Control Room panel 1H13-P610 white Generator 'A' feed light illuminated. | **CUE: 1H13-P610 white Generator 'A' feed light illuminated in MCR.** | ___ | ___ | ___ |

NOTE: Operator should transition from LOP-RP-01 to LOP-RP-03. Start at step E.8 of LOP-RP-03. Candidate should N/A step E.8.

(Denote critical steps with an asterisk)

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 14. | At 1H13-P610, VERIFY the GEN A Feed lamp is energized. | Feed Lamp Energized. | ___ | ___ | ___ |
| 15. | VERIFY plant conditions will allow a half scram and half isolation. | **CUE: Plant conditions allow half RPS and half PCIS.** | ___ | ___ | ___ |
| *16. | SLOWLY position the RPS BUS Power Supply Transfer Switch to NORM. | **CUE: RPS BUS Power Supply Transfer Switch to NORM. Not necessary to RESET half scram or half PCIS, this will be done by another operator.** | ___ | ___ | ___ |

**(CUE) THIS COMPLETES THIS JPM**
**Record Stop Time: _____**

## VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____

_____

_____

Response:_____

_____

_____

_____

Result:  SAT or UNSAT

Examiner's signature and date:  _____     _____     _____

# LASALLE COUNTY NUCLEAR STATION

# JOB PERFORMANCE MEASURE

Startup and Operation of RCIC from the Remote Shutdown Panel

Examination Level: RO /SRO /SRO(I)

Date: April 8, 2002

Developed by: Raymond Keith Walton          Date: 3/14/2002

Reviewed by: _____          Date: _____

Approved by: _____          Date: _____

# JOB PERFORMANCE MEASURE

Facility: _LaSalle Nuclear Station_          Task No: _B.2.b_

Task Title: _Startup and Operate RCIC from Remote Shutdown Panel_

K/A Reference: _295016 AA2.02_          K/A Importance: _4.2/4.3_

Examinee: _____

NRC Examiner: _____          Date: _____

Time Started: _____          Time Finished: _____

Estimated Time to Completion: _____          Time Critical Task: **NO**

Method of testing:

      Performance: __X__ Simulated          Location: __X__ Simulator
              ____ Actual                    ___ Plant

Task Standard:


Required Materials:
Copy of LOP-RX-04, Startup and Operation of RCIC from the Remote Shutdown Panel, Rev 12, 10/17/2000


General References:
Licensee JPM S-RX-05, Rev 6, 8/31/1999
LOP-RX-04, Startup and Operation of RCIC from the Remote Shutdown Panel, Rev 12, 10/17/2000


## READ TO THE EXAMINEE:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. Inform me when you have successfully complete the task.

Initial Conditions:
The Control Room has been evacuated. Control has been transferred to the Remote Shutdown Panel. Suppression Pool Cooling has been established from the Remote Shutdown Panel. U1 CY tank level has been locally verified to be above 15 feet. Plant operators are available.

Initiating Cue:
The Unit Supervisor has directed you to start RCIC from the Remote Shutdown Panel and inject and stabilize RPV level. Inform the Unit Supervisor when RCIC is injecting and level has stabilized. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

1.    Reset Simulator

        a.      Insert malfunction to prevent RCIC automatic initiation, **(imf mnb080-150)**

        b.      Place MDRFP control switch in PTL

        c.      Place HPCS in PTL.

        d.      Place the mode switch to Shutdown

        e.      Trip both TDRFPs and close the FW010A and FW010B valves

        f.      Place all Remote Shutdown Panel transfer switches to Emergency IAW LOA-RX-101.

        g.      Start Suppression Pool Coolin IAW LOP-RX-06

        h.      Stabilize reactor water level between -30 inches to -10 inches.

        i.      Verify the RCIC turbine trip light is NOT lit on RSP.

2.    Freeze simulator until examinee has acknowledged the initiating cue(to prevent reactor water level from going too high or too low for this JPM to be performed)

3.    Have a copy of LOP-RX-04 available to replace one used by examinee.

# JOB PERFORMANCE MEASURE

Initial Conditions:
- The Control Room has been evacuated.
- Control has been transferred to the Remote Shutdown Panel.
- Suppression Pool Cooling has been established from the Remote Shutdown Panel.
- U1 CY tank level has been locally verified to be above 15 feet.
- Plant operators are available.

Initiating Cue:

The Unit Supervisor has directed you to start RCIC from the Remote Shutdown Panel and inject and stabilize RPV level.

Inform the Unit Supervisor when RCIC is injecting and level has stabilized. Inform your supervisor when this task has been completed.

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

NOTE: All steps of the JPM are to be completed at the
**Unit 1 Remote Shutdown Panel.**

Simulator Operator: Place simulator in **RUN.**

| | Element | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 1. | VERIFY RCIC flow controller is SET at 100%. | Examinee adjusts RCIC flow controller to 600 gpm. | ___ | ___ | ___ |
| 2. | VERIFY OPEN 1E51-F068, RCIC Turbine Exhaust Valve. | Examinee verifies valve is open. | ___ | ___ | ___ |
| *3. | Open 1E51-F022, RCIC Full Flow Test Upstream Stop Vlv. | Examinee places and holds 1E51-F022 control switch in OPEN until valve is fully open. | ___ | ___ | ___ |
| *4. | CONCURRENTLY<br>• OPEN 1E51-F045, RCIC Turbine Steam Supply Stop Valve.<br>• OPEN 1E51-F059, RCIC Full Flow Test to CST Stop Valve. | Examinee simultaneously turns both control switches to OPEN. | ___ | ___ | ___ |
| 5. | START RCIC Barometric Condenser Vacuum Tank Vacuum Pump | Examinee turns control switch to START. | ___ | ___ | ___ |
| 6. | CHECK that RCIC Pump flow is increasing as indicated on RCIC flow controller. | Examinee checks flow increasing on flow controller. | ___ | ___ | ___ |
| *7. | OPEN 1E51-F046 RCIC Lube Oil Cooler Supply Stop Valve. | Examinee turns control switch to OPEN. | ___ | ___ | ___ |
| *8. | OPEN 1E51-F022, RCIC Full Flow Test Upstream Stop Valve. | Exminee turns control switch to OPEN. | ___ | ___ | ___ |
| *9. | CLOSE 1E51-F059, RCIC Full Flow Test to CST Stop Valve. | Examinee places and holds 1E51-F022 control switch in CLOSE until valve is fully closed. | ___ | ___ | ___ |

# JOB PERFORMANCE MEASURE

(Denote critical steps with an asterisk)

| | Standard | Expected Response | SAT | UNSAT | Comment # |
|---|---|---|---|---|---|
| 10. | ADJUST RCIC flow controller setpoint tape to increase or decrease flow to maintain desired level. | Examinee leaves tape setpoint at 600 gpm (level is below designated band) | ___ | ___ | ___ |
| 11. | VERIFY that RCIC System flow indicates above 120 gpm. | Examinee verifies flow above 120 gpm. | ___ | ___ | ___ |
| 12. | CLOSE 1E51-F059, RCIC Full Flow Test to CST Stop Valve. | Examinee turns control switch to CLOSE. | ___ | ___ | ___ |
| 13. | ADJUST flow to the Reactor Vessel as necessary to maintain vessel level after closing 1E51-F022, RCIC Full Flow Test Upstream Stop Valve. | Examinee leaves tape setpoint at 600 gpm (Level is below designated band). | ___ | ___ | ___ |
| 14. | OPERATE the Condensate Vacuum Tank Condensate Pump 1E51-C004 as necessary to keep the vacuum tank high level and low level lights cleared. | Examinee STARTS/STOPs pump as necessary to keep the lights cleared. | ___ | ___ | ___ |
| 15. | NOTIFY Unit Supervisor RCIC is injecting and level is stable. | Examinee notifies Unit Supervisor. | ___ | ___ | ___ |
| *16 | Have candidate locate remote shutdown panel in plant | Candidate locates remote shutdown panel in plant. | ___ | ___ | ___ |

CUE: THIS COMPLETES THIS JPM.

Record Stop Time: _____

# VERIFICATION OF COMPLETION

Job Performance Measure No. _____

Examinee's Name:

Examiner's Name:

Date performed:

Number of attempts:

Time to complete:

Question Documentation:

Question:_____

_____

_____

Response:_____

_____

_____

_____


Result:  SAT or UNSAT


Examiner's signature and date:  _____

# PREPARATION OF THE REMOTE SHUTDOWN SYSTEM FOR STANDBY OPERATION

A. **PURPOSE**

Outline the steps necessary to prepare the Remote Shutdown Panel for standby operation.

B. **REFERENCES**

1. P & ID's:

    a. M-96 (M-142), Residual Heat Removal (RHR).

    b. M-101 (M-147), Reactor Core Isolation Cooling (RCIC).

    c. M-68 Service Water (WS).

    d. M-93 (M-139), Nuclear Boiler and Reactor Recirculation.

    e. M-87 (M-134), CSCS Equipment Cooling Water System.

    f. M-90 (M-137), Reactor Building Closed Cooling Water (RBCCW).

    g. M-55 (M-116), Main Steam.

2. Electrical Schematics.

    a. 1E-1(2)-4214, Remote Shutdown RS (C61).

    b. 1E-1(2)-4226, Reactor Core Isolation Cooling RI (E51).

    c. 1E-1(2)-4220, Residual Heat Removal RH (E12).

    d. 1E-1(2)-4201, Auto Depressurization System.

    e. 1E-1(2)-4205, Reactor Recirc Pump Suction Valve.

    f. 1E-0-4449, Service Water Jockey Pump.

    g. 1E-1(2)-4097, Service Water 1WS113 Valve.

    h. 1E-1(2)-4096, Reactor Building Closed Cooling Water.

    i. 1E-1(2)-4033, Fire Detection.

3. TRM Appendix F

Level of Use
**Reference**

1 of 2

LOP-RX-01
Revision 4
September 14, 2001

C.    PREREQUISITES

    1.    None.

D.    PRECAUTIONS

    1.    Taking a Remote Shutdown Transfer switch to the "Emergency Position",
          provides system control at the Remote Shutdown Panel while disabling normal
          Control Room control.

    2.    In the "Emergency Position", Automatic system initiations, Primary Containment
          Isolation functions, and Automatic protection of the associated components is lost.

    3.    Taking a Remote Shutdown Transfer switch to the "Emergency Position" will
          cause a visual and audible alarm in the Control Room.

E.    LIMITATIONS

    1.    The Remote Shutdown Monitoring Instrumentation shall be operable as specified
          in Tech Spec 3.3.3.2, TRM Appendix F.                                          |

F.    PROCEDURE

    1.    VERIFY that the Remote Shutdown Panel is lined up in accordance with
          LOP-RX-01E(02E).

    2.    VERIFY that the RCIC Flow Controller at the Remote Shutdown Panel is set at:

          a.    600 gpm.

          b.    AUTO.

    3.    VERIFY that valve and pump control switches located on the Remote Shutdown
          Panel are in accordance with LOP-RX-01T.

G.    CHECKLISTS

    1.    None.

H.    TECHNICAL SPECIFICATION REFERENCES

    1.    Tech Spec 3.3.3.2, Remote Shutdown Monitoring System                           |

Level of Use
Reference

2 of 2

LOP-RX-01
Revision 4
September 14, 2001

# TRANSFER OF REACTOR SUPERVISORY INDICATION
# TO THE REMOTE SHUTDOWN PANEL

**A.     PURPOSE**

A.1          Objective

Outline the steps necessary to transfer reactor supervisory indication to the Remote Shutdown Panel.

**B.     PREREQUISITES**

B.1          The Remote Shutdown System is prepared for standby operation in accordance with LOP-RX-01, Preparation of the Remote Shutdown System for Standby Operation.

**C.     PRECAUTIONS**

C.1          Transfer of reactor pressure, level and RCIC alarms are from the same transfer switch.

**D.     LIMITATIONS**

D.1          Supervisory Indications referred to by this procedure are:

   • Wide Range Pressure, 0 to 1500 psig.

**E.     PROCEDURE**

E.1          PLACE Remote Shutdown Transfer Switch S-18; Nuclear Boiler Instruments, to Emergency.

**F.     REVIEW AND SIGNOFF**

F.1          None

**G.     REFERENCES**

G.1          M-93 (M-139); Nuclear Boiler and Reactor Recirculation.

G.2          Electrical Schematic; 1E-1(2)-4212; Remote Shutdown System.

G.3          TRM Appendix F

G.4          Technical Spec References

G.4.1          3.3.3.2; Remote Shutdown Monitoring System

---

| Level of Use | | |
|---|---|---|
| **Reference** | 1 of 1 | LOP-RX-02<br>Revision 3<br>September 14, 2001 |