

Limerick Generating Station**Job Performance Measure****REVIEW OF CONTROL ROOM SUPERVISOR SHIFT TURNOVER CHECKLIST**

JPM Number: 0701

Revision Number: 000

Date: 11/11/04

Developed By: _____
Instructor **Date**

Validated By: _____
SME or Instructor **Date**

Review By: _____
Operations Representative **Date**

Approved By: _____
Training Department **Date**

Job Performance Measure (JPM)**JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 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, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues 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 referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

Job Performance Measure (JPM)**Revision Record (Summary)**

1.

INITIAL CONDITIONS:

Unit 1 and 2 are in OPCON 1
The electronic OP's Log is unavailable due to a software error

INITIATING CUES:

Control Room Supervisor Shift Turnover Checklist has been completed. Review the Control Room Supervisor Shift Turnover Checklist.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. 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 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.

LLOJPM0701 Rev000

Job Performance Measure (JPM)

Operator's Name: _____
Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Review Of Control Room Supervisor Shift Turnover Checklist
JPM Number: LLOJPM0701 Revision Number: 000

K/A Number and Importance: Generic 2.1.3

Suggested Testing Environment: Simulator

Actual Testing Environment: Simulator

Testing Method: ☐ Simulate **Faulted:** ☐ No

Alternate Path: ☐ No ☐

Time Critical: ☐ No

Estimated Time to Complete: 30 minutes **Actual Time Used:** ____minutes

References:

OP-LG-112-101-1000 Rev 0
OP-LG-112-101-1002 Rev 1

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ Date: _____

Job Performance Measure (JPM)

JPM Start Time: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
(Cue: Provide candidate the Control Room Supervisor Shift Turnover Checklist)	N/A			
1. Review the Control Room Supervisor shift turnover checklist for errors and discrepancies.	Reviews the Control Room Supervisor shift turnover check list and finds the following errors:			
1.a Find error on page 1	Unit 1 is in OPCON 5 with fuel moves in progress, but Refuel Floor Sec. Cont is NOT established.			
*1.b Find error on page 1	Unit 1 box, 1A RHR in shutdown cooling, but DIV 1 LOCA LOOP testing is scheduled which will cause lose of shutdown cooling.			
1.c Find error on page 2	One of the 3 STA, 1A check box's is not checked.			
(CUE: You may stop here, you have met the termination criteria for this JPM)	N/A			

JPM Stop Time: _____

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

The electronic OP's Log is unavailable due to a software error

INITIATING CUES:

Control Room Supervisor Shift Turnover Checklist has been completed. Review the Control Room Supervisor Shift Turnover Checklist.

CANDIDATE

CONTROL ROOM SUPERVISOR SHIFT TURNOVER CHECKLIST

DATE: 12/16/04

N Shift

UNIT	1	2
MODE / % POWER	5* / 0	1 / 100
PRI CONT EST: (Y/N)	N	Y
SEC CONT EST: (Y/N)	N	Y
Refuel Floor Sec. Cont EST: (Y/N)	N	N

(If two supervisors are staffed, each SSV will fill out the checklist for the applicable unit.)

UNIT: 1	
Significant Activities in progress or planned (for next shift)	- FUEL MOVES IN PROGRESS PER CCTAS (HANDLING IRRADIATED FUEL) - DIV 1 LOCA/LOOP TESTING SCHEDULED FOR 1900, PER ST-6-092-115
T. S. Equip. Status OR Conditions (At LGS - LCOs ≤ 72 hours)	- NONE
Operational limitations	- DAY 6 OF A 19 DAY REFUELING OUTAGE
Major Equipment Status or Conditions	- 1A AHR IN SHUTDOWN COOLING

COMMON	
Significant Activities in progress or planned (for next shift)	- HIGH WIND AND EXCESSIVE RAIN EXPECTED
T. S. Equip. Status OR Conditions (At LGS - LCOs ≤ 72 hours)	- NONE
Major Equipment Status or Conditions	- PERKIDOMEN PUMP HOUSE OUT OF SERVICE DUE TO WINTERIZATION

UNIT: 2	
Significant Activities in progress or planned (for next shift)	- NONE
T. S. Equip. Status OR Conditions (At LGS - LCOs ≤ 72 hours)	- NONE
Operational limitations	- GP-5
Major Equipment Status or Conditions	- HPCI BLOCKED OUT OF SERVICE FOR MAINTENANCE

**CONTROL ROOM SUPERVISOR
SHIFT TURNOVER CHECKLIST****PRE-TURNOVER ITEM REVIEW**

- ☒ Unified Narrative Log reviewed
- ☒ LCO/PLCO Reviewed
- ☒ Panel Walkarounds Completed
- ☒ Verify Qualifications Prior to Taking Shift
- ☐ Control Key Cabinet Reviewed (☒ N/A if WCS Staffed)
- ☒ Review Standing Orders for new Entries

Applicable Turnover Sheets Reviewed:

☒
U/1 RO☒
U/2 RO☒
PRO

Select One of the Following:

- ☐ I am not the STA.
- ☐ I am the STA, the IA function is not required
AND I have notified the offgoing STA of my presence on site.
- ☐ I am the STA, the IA function is required,
AND I have performed face-to-face turnover with the offgoing STA in the Main Control Room per OP-AA-112-101.

RESPONSIBILITY ASSUMED BY: (Oncoming SSV Signature)Signature: Art SteDate: 12/10/04Time: 1810**POST-TURNOVER ITEM REVIEW**

- ☒ A/Rs reviewed for Operability Impact
- ☐ SSV ST Schedule, A-C-134 & Locked Valve Log Reviewed (☒ N/A if WCS Staffed)
- ☒ TPA Log /Report Reviewed
- ☒ Review Daily Orders

STA: PHIL HART (WCS)

IA if required: _____

Limerick Generating Station**Job Performance Measure****INTERPRETATION AND APPLICATION OF OVERTIME LIMITS**

JPM Number: 0700

Revision Number: 000

Date: 11/11/04

Developed By: _____
Instructor **Date**

Validated By: _____
SME or Instructor **Date**

Review By: _____
Operations Representative **Date**

Approved By: _____
Training Department **Date**

Job Performance Measure (JPM)**JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

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- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues 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 referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

Job Performance Measure (JPM)**Revision Record (Summary)**

1.

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

Unit 1 oncoming RO for the 1800-0600 shift has called off sick.

Date is 11/14

Time is 1500

INITIATING CUES:

There are 5 RO's available to fill the position. You are told to perform verification of overtime hours to determine if the RO's are allowed to stand Unit 1 RO.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

- Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. 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 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.

LLOJPM0700 Rev000

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Interpretation and Applications of Overtime Limits

JPM Number: LLOJPM0700

Revision Number: 000

K/A Number and Importance: Generic 2.1.10

Suggested Testing Environment: Simulator**Actual Testing Environment:** Simulator**Testing Method:** ☐ Simulate**Faulted:** ☐ No**Alternate Path:** ☐ No☐**Time Critical:** ☐ No**Estimated Time to Complete:** 30 minutes **Actual Time Used:** _____minutes**References:**

LS-AA-119 Rev 2

EVALUATION SUMMARY:Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ UnsatisfactoryComments: _____

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ Date: _____

JPM Start Time: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
*1. Reference LS-AA-119 to determine which RO's are allowed to assume the Unit 1 RO position (Cue: Provide copy of LS-AA-119 if asked for.)	LS-AA-119 is obtained			
*2. Determine candidate 1 is in violation of LS-AA-119 limits.	Candidate 1 is found in violation of limits if called in. More than 72 hours in a seven day (168 hr) period			
*3. Determine candidate 2 is in violation of LS-AA-119 limits.	Candidate 2 is found in violation of limits if called in. More than 24 hours in a 48 hour period.			
*4. Determine candidate 3 is in violation of LS-AA-119 limits.	Candidate 3 is found in violation of limits if called in. More than 16 hours in a 24 hour period and less than an 8 hour break between work periods.			
5. Determine candidate 4 is allowed to assume the Unit 1 RO position.	Candidate 4 is found in compliance with limits if called in.			
6. Determine candidate 5 is allowed to assume the Unit 1 RO position.	Candidate 5 is found in compliance with limits if called in.			
(CUE: You may stop here, you have met the termination criteria for this JPM)	N/A			

JPM Stop Time: _____

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

Unit 1 oncoming RO for the 1800-0600 shift has called off sick.

Date is 11/14

Time is 1500

INITIATING CUES:

There are 5 RO's available to fill the position. You are told to perform verification of overtime hours to determine if the RO's are allowed to stand Unit 1 RO.

RO Candidate #	Work Hours							
	11/7	11/8	11/9	11/10	11/11	11/12	11/13	11/14
1		0600- 1800	0600- 1800	0600- 1800	0600- 1800	0600- 1800	0600- 1800	
2		0800- 1600	0800- 1600	0800- 1600	0800- 1600	0800- 1600	0600- 1800	0200- 1000
3		0700- 1530	0700- 1530	0700- 1530	0700- 1530	0700- 1530		0600- 1100
4	0600- 1800			1800- 0600	1800- 0600	1800- 0600	1800- 0600	
5	1800- 0600	1800- 0600	1800- 0600	1800- 0600		1800- 0600	1800- 0600	

CANDIDATE

Limerick Generating Station**Job Performance Measure**

REVIEW CONTROL ROD EXERCISE ST

JPM Number: 0702

Revision Number: 000

Date: 11/11/04

Developed By:	_____	_____
	Instructor	Date
Validated By:	_____	_____
	SME or Instructor	Date
Review By:	_____	_____
	Operations Representative	Date
Approved By:	_____	_____
	Training Department	Date

Job Performance Measure (JPM)**JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

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- _____ 6. Task standards identified and verified by SME review.
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- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
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Job Performance Measure (JPM)**Revision Record (Summary)**

1.

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

INITIATING CUES:

ST-6-107-760-1, Control Rod Exercise, has been complete. You are asked to review ST-6-107-760-1.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. 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 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.

LLOJPM0702 REV000

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Review Control Rod Exercise ST

JPM Number: LLOJPM0701

Revision Number: 000

K/A Number and Importance: Generic 2.2.12

Suggested Testing Environment: Simulator**Actual Testing Environment:** Simulator**Testing Method:** ☐ Simulate **Faulted:** ☐ No**Alternate Path:** ☐ No ☐**Time Critical:** ☐ No**Estimated Time to Complete:** 30 minutes **Actual Time Used:** ____ minutes**References:**

ST-6-107-760-1 Rev 50

EVALUATION SUMMARY:Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ UnsatisfactoryComments: _____

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ Date: _____

JPM Start Time: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
(Cue: Provide candidate marked up copy of ST-6-107-760-1)	N/A			
1. Review ST-107-670-1 for errors and discrepancies.	Review ST-107-670-1 for errors and discrepancies and finds the following errors:			
*1.a Find error on page 1	Comments in "Additional Action/Test Comments" block, but not signed or dated.			
*1.b Find error on page 22	Rod 14-31 found at 06 but left at 04.			
*1.c Find error on page 15	Step 4.6.1.1.a requires Control rod Position Log attached to ST for as left rod positions. It is not			
(CUE: You may stop here, you have met the termination criteria for this JPM)	N/A			

JPM Stop Time: _____

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

INITIATING CUES:

ST-6-107-760-1, Control Rod Exercise, has been complete. You are asked to review ST-6-107-760-1.

CANDIDATE

W/O# RO977488
TEST DATE/TIME 12-10-04 / 1455
GRADE S

ST-6-107-760-1, Rev. 50
Page 1 of 34
ALC/RCB/JHG:eer

P.M. _____

EXELON NUCLEAR
LIMERICK GENERATING STATION

ST-6-107-760-1 CONTROL ROD EXERCISE

Test Freq: Weekly - **OR** - Initiating Events:
Tech Spec: 4.1.3.7.c 4.1.3.6

4.1.3.1.2 4.1.3.7.b
4.0.5 4.1.3.1.3
FSAR 4.6.3.1.1.5.b
SER 4.6

- A. Immovable Control Rod (Initially and once per 24 hours)
B. Three or more control rods valved out of service - as a result of rod or drive system problems (once per 24 hours)
C. Other
1. Reason _____
2. A/R No. _____

TEST RESULTS: (Circle SAT or UNSAT - Below)

SAT - All Asterisk (*) AND ISI/IST Letter (I) steps completed satisfactorily.

UNSAT - Test Results of one OR more Asterisk (*) OR ISI/IST Letter (I) steps completed unsatisfactorily.

Performed by: T.Y. TYLER (Sign/Date/Time) 12-10-04 1455

Reviewed by (SSV) ART. STAR (Sign/Date) 12-10-04

IMMEDIATE NOTIFICATION OF OPERATIONS SHIFT MANAGEMENT (UNSAT Results Only)

Shift Supervision: _____ (Sign) _____

(Date/Time) _____

Corrective Action (if required) _____ (ETT or A/R - Number) _____

ADDITIONAL ACTION/TEST COMMENTS (User may add additional pages, if necessary)

NOTE - 1 34-59 REQUIRED DRIVE PRESSURE OF 285# TO MOVE

Person making entry _____ (Sign/Date) _____

1.0 PURPOSE

- 1.1 To verify OPERABILITY of each withdrawn control rod AND its position indicating system by moving each OPERABLE control rod at least one notch during operation above the preset power level of the Rod Worth Minimizer (RWM) in OPCON 1. CM-1
- 1.2 To ensure the Control Rods are coupled to their respective drive mechanisms by observing any indicated response on nuclear instrumentation while withdrawing control rods to fully withdrawn position AND by verifying the control rods do not go to OVERTRAVEL position.
- 1.3 This test satisfies Inservice Testing requirements for 47-1-38, "Cooling Header Check Valve," (all 185 HCU's).

2.0 PREREQUISITES

- ✓ 2.1 Plant in OPCON 1.
- ✓ 2.2 Reactor power level is above the preset power level of the RWM via ROD WORTH MINIMIZER, BELOW LPSP is not displayed in POWER field at 10C603
OR PMS point A555 reads "GT LPSP."
- ✓ 2.3 IF a load drop is required per Section 4.4
OR Section 4.5,
THEN Power System Director has been informed of power reduction
AND a release obtained as required by the Power System Director.
- ✓ 2.4 No other testing
OR plant condition which could interfere with this test is being performed/present.
- ✓ 2.5 RDACS OPERABLE
- ✓ 2.6 IF known fuel defect(s) exist
THEN an evaluation of fully withdrawn control rods, within a 3X3 array of the fuel defect(s), has been obtained from Reactor Engineering. This shall include evaluation of affected control rods being inserted to notch position 44 and required power reductions, if any, to accomplish the insertion.
Otherwise, it is acceptable for all fully withdrawn control rods to be inserted to notch position 44 at full power. (Ref. 6.11)

3.0 PRECAUTIONS

- 3.1 Steps marked SO in the right hand margin of the body of the procedure require a sign off in Attachment 1.
- 3.2 IF a procedural step can not be completed
OR any other difficulty is encountered during this test,
THEN a comment shall be entered in the Additional Action/Test Comments section.
- 3.3 IF a step denoted as a Tech Spec Requirement, marked with an asterisk(*), can not be successfully completed,
THEN Shift Supervision (SSVN) shall be notified immediately.
- 3.4 Steps marked with (I) represents specific Code testing
OR evaluation requirements which must be completed satisfactorily.
- 3.5 Any observed abnormality shall be documented in the Additional Action/Test Comments section
AND brought to the attention of SSVN.

NOTE

Conditions listed in step 3.6 indicate that there may be a fault in the Rod Select Module.

- 3.6 IF any of the following conditions exist during control rod selection,
THEN do not attempt control rod movement
AND SSVN shall be immediately notified:
- Pushbutton of the selected control rod does not light.
 - The wrong set of pushbuttons light.
 - More than one set of pushbuttons light.
 - The correct set of pushbuttons light dimly.
- 3.7 IF performance of this test carries over to subsequent shift(s),
THEN a Control Rod Position Log edit shall be performed at the end of the shift(s).
- 3.8 WHEN exercising control rods,
THEN the "CRD Hydraulic HI TEMP" alarm may be introduced.
Acknowledging the alarm at 10C007 may wait until after the completion of the exercise in order to avoid responding repetitiously.

- 3.9 **IF** performing this test as a result of a control rod being immovable because of excessive friction or mechanical interference,
THEN this test must be performed at least once per 24 hours.
- 3.10 **IF** any rod does **not** perform satisfactorily,
THEN SSVN shall be informed **immediately** to address applicable Tech Spec actions.
- 3.11 Since this is a repetitive task of long duration, consideration should be given to taking frequent breaks to avoid rod mis-positioning.

INITIALS**NOTE**

It is the responsibility of the person
OR persons performing this test to ensure all blanks/data sheets are correctly
AND completely filled in.

4.0 PROCEDURE**4.1 PREPARATION****NOTE**

IF during this test control rod(s) are moved in either direction for reasons other than proof of OPERABILITY,
THEN that movement can be used to fulfill the requirements of this test by observing that the control rod position indicating system responds correctly during rod movement AND initialing the operability check column on Attachment 1. N/A shall be entered in stall flow data column for these rods.

4.1.1 **VERIFY** all prerequisites of Section 2.0 are satisfied.

4.1.2 **VERIFY** no CRD Accumulator Trouble Lights are lit.

1. IF a CRD Accumulator trouble light is lit
THEN DISPATCH an EO to investigate the Accumulator.

4.2 SHIFT PERMISSION TO TEST

4.2.1 **OBTAIN** SSV permission to start test.

4.2.2 **OBTAIN** PRO/RO permission to start test.

4.2.3 **VERIFY** this test is being performed on Unit 1.

12-10-04 / 0919
 Date/Time

INITIALS

4.3 PRELIMINARY DATA

4.3.1 RECORD the following:

- Present reactor thermal power from PMS.
Rx Power 99.9 %
- Date/Time
Date/Time 12-10-04/09:20

A

4.3.2 PERFORM the following prior to starting test:

1. IF Control Rod Position Log is available,
THEN PERFORM the following,
Otherwise, **MARK** this step N/A:
 - a. **OBTAIN** a copy of a control rod position
printout using Control Rod Position Log
AND ATTACH to this test.
 - b. **ENTER** N/A on first page of Attachment 1 in
the space provided for Control Rod Position
Log not available for AS FOUND.
 - c. **MARK** step 4.3.2.2 as N/A.
2. IF Control Rod Position Log is not available,
THEN RECORD position of each rod in the AS
FOUND column of Attachment 1 using the PMS
AND ENTER initials in the space provided
for Control Rod Position Log not available for
AS FOUND.

A

A (SO)

A

N/A (SO)

4.3.3 ENTER N/A in the Operability Check
AND Coupling Check columns of Attachment 1 for each
control rod which is at position 00
OR has been declared INOPERABLE.

A

4.3.4 IF Control Rod Position Log was obtained,
THEN RECORD the 'As Found' positions of all partially
withdrawn rods in Attachment 1.

A

INITIALS

NOTE

1. Each OPERABLE control rod which is **not** fully inserted is determined OPERABLE by moving the control rod one notch.
2. The Rod Position Information System (RPIS) is determined OPERABLE by verifying that the rod position numeral changes by .02
AND there are **no** rod drift alarms.
OR the conditions of 4.4.1.1.e are met
AND there are **no** rod drift alarms.
3. Steps 4.4
AND 4.5 may be performed concurrently to facilitate row-by-row performance of the test.

4.4 FULLY WITHDRAWN CONTROL RODS

- 4.4.1 **PERFORM** the following to test each fully withdrawn control rod, one at a time:

NOTE

1. Satisfactory completion of step 4.4.1.1 demonstrates 47-1-38, "Cooling Header Check Valve," (Typical of 185) has exercised closed.
2. A double notch from 48 to 44 has been generically evaluated as acceptable from a reactivity standpoint by A1081913 Eval 60. (Ref 6.11)

1. **PERFORM** the following:

- a. **VERIFY** on the 4 Rod Display that the selected Rod indicates position 48.
- b. **IF** 48 is **not** being indicated on the Four Rod Display,
THEN VERIFY full-out indication is present on the Full Core Display
AND PMS.
- c. **INSERT** the control rod one notch.

DV

(SO)


PC

PC

PC

INITIALS

- d. **VERIFY** on the Four Rod Display that the selected Rod indicates position 46.



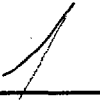
PC

- e. **IF** any control rod begins to insert
AND settles back to position 48
THEN PERFORM the following.
Otherwise, **MARK** N/A for steps 4.4.1.1.e,
through 4.4.1.1.e.11:




PC

1. **ATTEMPT** another single notch insert
to position 46.



PC

2. **IF** successful,
THEN GO TO step 4.4.1.2.



3. **IF** unsuccessful,
THEN PERFORM the following:

- a. **IF** control rod does **not** indicate
notch position 46 due to insufficient
control rod movement,
THEN REVIEW evaluation provided
by Reactor Engineering per step 2.6
to determine if it is acceptable to
insert the rod to position 44 due to
an inadvertent double-notching
without a power reduction.



- b. **IF** a power reduction is required,
THEN REDUCE core power in
accordance with GP-5 Appendix 2,
Section 3.1, using core flow per
Reactor Maneuvering Shutdown
Instructions (RMSI) to required
power level.

Otherwise, **MARK** this step N/A
AND GO TO step 4.4.1.1.e.4.


N/A

4. **RAISE** CRD System Drive pressure by
25 psid, **not** to exceed 350 psid.



PC

5. **ATTEMPT** a single notch insert.



PC

INITIALS

6. **IF** the rod double notches to position 44,
THEN WITHDRAW the rod to
position 48. (Ref 6.11) N/A **PC**
7. **IF** rod fails to latch at position 46
AND CRD System Drive Pressure is less
than 350 psid,
THEN REPEAT step 4.4.1.1.e.4. N/A **PC**
8. **ENSURE** CRD System Drive pressure is
approximately 260 psid. 1 **PC**
9. **IF** rod failed to latch at notch position 46,
THEN ENTER ON-104. N/A **PC**
10. **IF** rod did latch at notch position 46
AND increased CRD System Drive
pressure was required,
THEN INITIATE A/R
AND NOTIFY CRD System Manager for
trending purposes. (Equipment Status
Tagging is **not** required.) 1 **PC**
11. **ANNOTATE** cover sheet to indicate that
raised pressure/flow adjustment/ON-104
entry was required. 1 **PC**
- f. **ENSURE** CRD System Drive pressure is
approximately 260 psid. 1 **PC**
- g. **IF** control rod does **not** indicate notch
position 46 due to RPIS problems,
THEN PERFORM the following,
Otherwise, MARK N/A for steps 4.4.1.1.g.1
through 4.4.1.1.g.3:
1. **REVIEW** evaluation provided by Reactor
Engineering per step 2.6 to determine if it is
acceptable to insert the control rod one
notch to position 44 without a power
reduction. N/A **PC**

INITIALS

2. **IF** a power reduction is required
THEN REDUCE core power in accordance
with GP-5 Appendix 2, Section 3.1, using
core flow per Reactor Maneuvering
Shutdown Instruction (RMSI) to required
power level.

Otherwise, **MARK** this step N/A
AND GO TO step 4.4.1.1.g.3.

N/A **PC**

3. **INSERT** the control rod one notch to
position 44.

N/A **PC**

2. **WITHDRAW** control rod to position 48 while
observing control rod position indication.

1 **PC**

3. **IF** Control Rod Position Log is **not** available,
THEN RECORD the AS LEFT position of
each control rod on Attachment 1.

4. Periodically **DEMAND** Control Rod Position Logs
AND ENSURE control rod positions match
'As Found' Control Rod Position Log as
required by Attachment 1.

NOTE

1. **IF** CRD withdrawal stall flow data is required,
THEN coupling check step shall be performed using continuous withdraw.
2. Stall flow check is required for first test performance each month.

- 4.4.2 **WHEN** a control rod is withdrawn to FULL OUT position,
THEN PERFORM coupling check at panel 10C603 by
notch withdraw
OR continuous withdraw (stall flow check) selected rod.

1 **PC**

- 4.4.3 **IF** this is the first performance of the month,
THEN RECORD stall flow from FI-46-1R604, "Drive
Water Flow Indicator" (FL), in Attachment 1, otherwise
the stall flow data column shall be left blank.

1 **PC**

INITIALS

4.4.4 **PERFORM** the following:

1. **VERIFY** the following:

- Annunciator ROD OVERTRAVEL remains clear at panel 108 REACTOR.
- Individual rod selected indicates 48 on Four Rod Display, (ROD HEIGHT) at panel 10C603.
- Individual rod selected RED out light is Lit on the Full Core Display at panel 10C649.

2. **IF** 48 is not indicated on the Four Rod Display at panel 10C603,
THEN VERIFY full out indication is present on the Full Core Display at panel 10C649
AND PMS.

4.4.5 **IF** step

4.4.4.1

AND

4.4.4.2 are all satisfactorily performed,
THEN ENTER initials in the appropriate column/rod in Attachment 1.

4.4.6 **IF** step

4.4.4.1

OR

4.4.4.2 is unsat,

THEN REFER TO step 3.10

AND ENTER a comment in the Additional Action/Test Comment section.

INITIALS**NOTE**

IF no partially withdrawn rods,
THEN all steps in 4.5 are N/A.

4.5 PARTIALLY WITHDRAWN CONTROL RODS

4.5.1 **PERFORM** the following to ensure there is adequate margin to thermal limits:

1. **REQUEST** 3D Monicore case
AND CHECK the following:

<u>Two Loop Operation</u>	<u>Single Loop Operation</u>
---------------------------	------------------------------

CMWT \leq 3458	CMWT \leq 2634
CMAPR \leq 0.98	CMAPR \leq 0.98
CMFLPD \leq 0.98	CMFLPD \leq 0.98
FLLLP \leq 1.0	FLLLP \leq 1.0

INITIALS

CAUTION

Flow reduction will cause reduction in margin of FLLLP to 1.0.

2. **IF** thermal limits do **not** satisfy values shown in step 4.5.1.1,
THEN REDUCE core power in accordance with GP-5 Appendix 2, Section 3.1, using core flow per Reactor Maneuvering Shutdown Instructions (RMSI) as required to satisfy limits
AND ENSURE FLLLP remains ≤ 1.0 .
Otherwise, **MARK** N/A.

N/A PC

3. **VERIFY** thermal limits are less than or equal to values specified in step 4.5.1.1.

✓ PC

NOTE

Satisfactory completion of step 4.5.2 demonstrates 47-1-38, "Cooling Header Check Valve," (Typical of 185) has exercised closed.

- 4.5.2 **PERFORM** the following to test each partially withdrawn control rod, one at a time:

1. **PERFORM** the following:

- a. **VERIFY** that selected Rod indicates a proper position on the Four Rod display.
- b. **INSERT** Control Rod one notch.
- c. **VERIFY** selected Rod indicates a position two less than above on the Four Rod display (Example: Position 08 to 06)
AND proper nuclear instrumentation response was observed.

DV ✓ (SO)

✓ PC
✓ PC

✓ PC

INITIALS

2. **WITHDRAW** control rod to original position while observing control rod position indication.
3. **RECORD** AS LEFT position of each control rod on Attachment 1.
4. **INDICATE** N/A in coupling check column of Attachment 1.
5. **IF** stall flows are being recorded,
THEN ENTER N/A in stall flow column.
Otherwise, the stall flow data column shall be left blank.
6. Periodically **DEMAND** Control Rod Position Log
AND ENSURE control rod positions match 'As Found'
Control Rod Position Log as required by Attachment 1.

 **PC**

INITIALS

4.6 RETURN TO NORMAL

4.6.1 **PERFORM** the following for final Control Rod Positions:

1. **IF** Control Rod Position Log is available
THEN PERFORM the following,
Otherwise, **MARK** this step N/A:
 - a. **OBTAIN** Control Rod Position Log
AND ATTACH to this test.
 - b. **ENTER** N/A on first page of Attachment 1 in
space provided for Control Rod Position Log
not available for AS LEFT.
 - c. **MARK** step 4.6.1.2 N/A.
2. **IF** Control Rod Position Log is **not** available
THEN ENTER initials on first page of Attachment
1 in space provided for Control Rod Position Log
not available for AS LEFT.

1

1 (SO)
1

N/A (SO)

4.6.2 **VERIFY** all control rods which were moved one notch to verify operability are returned to their original position by comparing Control Rod Position Logs obtained **OR** by comparing the AS FOUND, AS LEFT columns on Attachment 1.

1 PC

4.6.3 **IF** any control rods have **not** been returned to AS FOUND Position, **THEN LIST** rods **AND** reason for new position in the Additional Action/Test Comments section.

INITIALS

4.6.4 **DOCUMENT** in Additional Action/Test comments section
any CRD stall flow greater than or equal to 3.5 gpm.
Otherwise **ENTER** N/A for this step.

N/A

4.6.5 IF required,
THEN RETURN Unit to original power level by raising
power in accordance with GP-5 Appendix 2 Section 3.2
Otherwise, **ENTER** N/A for this step.

N/A

4.6.6 **ENSURE** IVOR completed on Attachment 2.

1

4.6.7 **NOTIFY** SSV
AND PRO/RO of the following:

1

- Test completion
- Test results

4.6.8 **ENSURE** cover sheet is correctly
AND completely filled in.

5.0 ACCEPTANCE CRITERIA

- 5.1 All OPERABLE withdrawn control rods have been moved at least one notch to demonstrate OPERABILITY.
- 5.2 During control rod movement, the position indication changes correctly.
- 5.3 Rod coupling has been verified.
- 5.4 Steps denoted with ISI (I)
OR asterisk (*) have been completed satisfactorily.

6.0 REFERENCES

- 6.1 CM-1, T01699 Control Rod Mispositioning
- 6.2 LGS-FSAR-Section 4.6.1
- 6.3 FSAR 4.6.3.1.1.5.b
- 6.4 SER 4.6
- 6.5 Pump & Valve Inservice Testing Program Plan
- 6.6 General Electric PCIOMR Implementing Procedures, NEDE-21493
- 6.7 M-47, P&ID - Control Rod Drive Hydraulic - Part B
- 6.8 GEK-75711, Control Rod Drive System
- 6.9 GEK-75712, Control Rod Drive Hydraulic System
- 6.10 GEK-75714, Reactor Manual Control System
- 6.11 A1081913 Eval 60, Analysis to insert rods to position 44 during CRD Exercise

7.0 TECHNICAL SPECIFICATIONS

7.1 4.0.5

7.2 4.1.3.7.c

7.3 4.1.3.6

7.4 4.1.3.1.2

7.5 4.1.3.7.b

7.6 4.1.3.1.3

8.0 INTERFACING PROCEDURES

8.1 GP-5 Appendix 2, Planned Rx Maneuvering Without Shutdown

ATTACHMENT 1
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CONTROL ROD EXERCISE

ACTION REQUIRED

INITIALS

4.3.2 Control Rod Position Log is not available AS FOUND.

N/A

4.6.1 Control Rod Position Log is not available AS LEFT.

N/A

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
02-19			1 / A (*, I)	A (*)	PM
02-23			1 / A (*, I)	A (*)	PM
02-27			1 / A (*, I)	A (*)	PM
02-31			1 / A (*, I)	A (*)	PM
02-35			1 / A (*, I)	A (*)	PM
02-39			1 / A (*, I)	A (*)	PM
02-43			1 / A (*, I)	A (*)	PM

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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
06-15			/ 1 A (*,l)	A (*)	PM
06-19			/ 1 A (*,l)	A (*)	PM
06-23			/ 1 A (*,l)	A (*)	PM
06-27			/ 1 A (*,l)	A (*)	PM
06-31			/ 1 A (*,l)	A (*)	PM
06-35			/ 1 A (*,l)	A (*)	PM
06-39			/ 1 A (*,l)	A (*)	PM
06-43			/ 1 A (*,l)	A (*)	PM
06-47			/ 1 A (*,l)	A (*)	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
10-11			/ 1 A (*,l)	A (*)	PM
10-15			/ 1 A (*,l)	A (*)	PM
10-19			/ 1 A (*,l)	A (*)	PM
10-23			/ 1 A (*,l)	A (*)	PM
10-27			/ 1 A (*,l)	A (*)	PM
10-31			/ 1 A (*,l)	A (*)	PM
10-35			/ 1 A (*,l)	A (*)	PM
10-39			/ 1 A (*,l)	A (*)	PM
10-43			/ 1 A (*,l)	A (*)	PM
10-47			/ 1 A (*,l)	A (*)	PM
10-51			/ 1 A (*,l)	A (*)	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

ACTION REQUIRED

INITIALS

4.4.1.4/4.5.2.6 Current Control Rod Position Log matches 'AS FOUND'
Control Rod Position Log.

[Handwritten signature]

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
14-07			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-11			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-15			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-19			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-23			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-27			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-31	06	04	<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-35			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-39			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-43			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-47			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-51			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM
14-55			<i>[Handwritten: 1, X, (*, I)]</i>	<i>[Handwritten: X, (*)]</i>	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
18-03			/ 1 A (*,I)	A (*)	PM
18-07			/ 1 A (*,I)	A (*)	PM
18-11			/ 1 A (*,I)	A (*)	PM
18-15			/ 1 A (*,I)	A (*)	PM
18-19			/ 1 A (*,I)	A (*)	PM
18-23			/ 1 A (*,I)	A (*)	PM
18-27			/ 1 A (*,I)	A (*)	PM
18-31			/ 1 A (*,I)	A (*)	PM
18-35			/ 1 A (*,I)	A (*)	PM
18-39			/ 1 A (*,I)	A (*)	PM
18-43			/ 1 A (*,I)	A (*)	PM
18-47			/ 1 A (*,I)	A (*)	PM
18-51			/ 1 A (*,I)	A (*)	PM
18-55			/ 1 A (*,I)	A (*)	PM
18-59			/ 1 A (*,I)	A (*)	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
22-03			1 / 1 A (*, I)	A (*)	PM
22-07			1 / 1 A (*, I)	A (*)	PM
22-11			1 / 1 A (*, I)	A (*)	PM
22-15			1 / 1 A (*, I)	A (*)	PM
22-19			1 / 1 A (*, I)	A (*)	PM
22-23	06	06	1 / 1 A (*, I)	A (*)	PM
22-27			1 / 1 A (*, I)	A (*)	PM
22-31			1 / 1 A (*, I)	A (*)	PM
22-35			1 / 1 A (*, I)	A (*)	PM
22-39	06	06	1 / 1 A (*, I)	A (*)	PM
22-43			1 / 1 A (*, I)	A (*)	PM
22-47			1 / 1 A (*, I)	A (*)	PM
22-51			1 / 1 A (*, I)	A (*)	PM
22-55			1 / 1 A (*, I)	A (*)	PM
22-59			1 / 1 A (*, I)	A (*)	PM

ATTACHMENT 1

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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
26-03			/ 1 X (*)	X (*)	PM
26-07			/ 1 X (*)	X (*)	PM
26-11			/ 1 X (*)	X (*)	PM
26-15			/ 1 X (*)	X (*)	PM
26-19			/ 1 X (*)	X (*)	PM
26-23			/ 1 X (*)	X (*)	PM
26-27			/ 1 X (*)	X (*)	PM
26-31			/ 1 X (*)	X (*)	PM
26-35			/ 1 X (*)	X (*)	PM
26-39			/ 1 X (*)	X (*)	PM
26-43			/ 1 X (*)	X (*)	PM
26-47			/ 1 X (*)	X (*)	PM
26-51			/ 1 X (*)	X (*)	PM
26-55			/ 1 X (*)	X (*)	PM
26-59			/ 1 X (*)	X (*)	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

ACTION REQUIRED

INITIALS

4.4.1.4/4.5.2.6 Current Control Rod Position Log matches 'AS FOUND'
Control Rod Position Log.

1

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
30-03			1, 1, A (*, I)	A (*)	PM
30-07			1, 1, A (*, I)	A (*)	PM
30-11			1, 1, A (*, I)	A (*)	PM
30-15	06	06	1, 1, A (*, I)	A (*)	PM
30-19			1, 1, A (*, I)	A (*)	PM
30-23			1, 1, A (*, I)	A (*)	PM
30-27			1, 1, A (*, I)	A (*)	PM
30-31	10	10	1, 1, A (*, I)	A (*)	PM
30-35			1, 1, A (*, I)	A (*)	PM
30-39			1, 1, A (*, I)	A (*)	PM
30-43			1, 1, A (*, I)	A (*)	PM
30-47	06	06	1, 1, A (*, I)	A (*)	PM
30-51			1, 1, A (*, I)	A (*)	PM
30-55			1, 1, A (*, I)	A (*)	PM
30-59			1, 1, A (*, I)	A (*)	PM

CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
34-03			/ 1 X (*)	X (*)	PM
34-07			/ 1 X (*)	X (*)	PM
34-11			/ 1 X (*)	X (*)	PM
34-15			/ 1 X (*)	X (*)	PM
34-19			/ 1 X (*)	X (*)	PM
34-23			/ 1 X (*)	X (*)	PM
34-27			/ 1 X (*)	X (*)	PM
34-31			/ 1 X (*)	X (*)	PM
34-35			/ 1 X (*)	X (*)	PM
34-39			/ 1 X (*)	X (*)	PM
34-43			/ 1 X (*)	X (*)	PM
34-47			/ 1 X (*)	X (*)	PM
34-51			/ 1 X (*)	X (*)	PM
34-55			/ 1 X (*)	X (*)	PM
34-59			/ 1 X (*)	X (*)	PM

*
NOTE
1

ATTACHMENT 1
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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
38-03			1, 1, A (*, I)	A (*)	PM
38-07			1, 1, A (*, I)	A (*)	PM
38-11			1, 1, A (*, I)	A (*)	PM
38-15			1, 1, A (*, I)	A (*)	PM
38-19			1, 1, A (*, I)	A (*)	PM
38-23	06	06	1, 1, A (*, I)	A (*)	PM
38-27			1, 1, A (*, I)	A (*)	PM
38-31			1, 1, A (*, I)	A (*)	PM
38-35			1, 1, A (*, I)	A (*)	PM
38-39	06	06	1, 1, A (*, I)	A (*)	PM
38-43			1, 1, A (*, I)	A (*)	PM
38-47			1, 1, A (*, I)	A (*)	PM
38-51			1, 1, A (*, I)	A (*)	PM
38-55			1, 1, A (*, I)	A (*)	PM
38-59			1, 1, A (*, I)	A (*)	PM

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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
42-03			/ 1 A (*,I)	A (*)	PM
42-07			/ 1 A (*,I)	A (*)	PM
42-11			/ 1 A (*,I)	A (*)	PM
42-15			/ 1 A (*,I)	A (*)	PM
42-19			/ 1 A (*,I)	A (*)	PM
42-23			/ 1 A (*,I)	A (*)	PM
42-27			/ 1 A (*,I)	A (*)	PM
42-31			/ 1 A (*,I)	A (*)	PM
42-35			/ 1 A (*,I)	A (*)	PM
42-39			/ 1 A (*,I)	A (*)	PM
42-43			/ 1 A (*,I)	A (*)	PM
42-47			/ 1 A (*,I)	A (*)	PM
42-51			/ 1 A (*,I)	A (*)	PM
42-55			/ 1 A (*,I)	A (*)	PM
42-59			/ 1 A (*,I)	A (*)	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

ACTION REQUIRED

INITIALS

4.4.1.4/4.5.2.6 Current Control Rod Position Log matches 'AS FOUND'
Control Rod Position Log.

1

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
46-07			1, 1, A (*, I)	A (*)	PM
46-11			1, 1, A (*, I)	A (*)	PM
46-15			1, 1, A (*, I)	A (*)	PM
46-19			1, 1, A (*, I)	A (*)	PM
46-23			1, 1, A (*, I)	A (*)	PM
46-27			1, 1, A (*, I)	A (*)	PM
46-31	06	06	1, 1, A (*, I)	A (*)	PM
46-35			1, 1, A (*, I)	A (*)	PM
46-39			1, 1, A (*, I)	A (*)	PM
46-43			1, 1, A (*, I)	A (*)	PM
46-47			1, 1, A (*, I)	A (*)	PM
46-51			1, 1, A (*, I)	A (*)	PM
46-55			1, 1, A (*, I)	A (*)	PM

ATTACHMENT 1
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CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
50-11			/ 1 A (*,I)	A (*)	PM
50-15			/ 1 A (*,I)	A (*)	PM
50-19			/ 1 A (*,I)	A (*)	PM
50-23			/ 1 A (*,I)	A (*)	PM
50-27			/ 1 A (*,I)	A (*)	PM
50-31			/ 1 A (*,I)	A (*)	PM
50-35			/ 1 A (*,I)	A (*)	PM
50-39			/ 1 A (*,I)	A (*)	PM
50-43			/ 1 A (*,I)	A (*)	PM
50-47			/ 1 A (*,I)	A (*)	PM
50-51			/ 1 A (*,I)	A (*)	PM

ATTACHMENT 1
Page 14 of 15

CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
54-15			/ 1 A (*,I)	A (*)	PM
54-19			/ 1 A (*,I)	A (*)	PM
54-23			/ 1 A (*,I)	A (*)	PM
54-27			/ 1 A (*,I)	A (*)	PM
54-31			/ 1 A (*,I)	A (*)	PM
54-35			/ 1 A (*,I)	A (*)	PM
54-39			/ 1 A (*,I)	A (*)	PM
54-43			/ 1 A (*,I)	A (*)	PM
54-47			/ 1 A (*,I)	A (*)	PM

ATTACHMENT 1
Page 15 of 15

CONTROL ROD EXERCISE

Control Rod	Step Number				CRD W/D Stall Flow GPM (if required)
	4.3.2.2, 4.3.4, 4.4.1.3, 4.5.2.3		4.4.1.1 4.5.2.1	4.4.5	
	Control Rod, Position		Operability Check Complete	Coupling Check Complete	
	AS FOUND	AS LEFT	Performer/DV		
58-19			1, X (*, I)	X (*)	PM
58-23			1, X (*, I)	X (*)	PM
58-27			1, X (*, I)	X (*)	PM
58-31			1, X (*, I)	X (*)	PM
58-35			1, X (*, I)	X (*)	PM
58-39			1, X (*, I)	X (*)	PM
58-43			1, X (*, I)	X (*)	PM

ATTACHMENT 2
Page 1 of 1

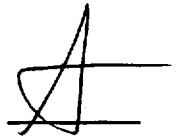
INDEPENDENT VERIFICATION OF RESTORATION

1.0 The following steps require Independent Verification of Restoration:

REFERENCE
STEP
NUMBER

IV
INITIALS

4.6.2 **VERIFY** control rods are in AS FOUND positions,
OR are as identified in the Additional Action/Test
Comments section using Control Rod Position Logs
OR AS FOUND, AS LEFT positions from Attachment 1.



10-DEC -2004 09:22 CALCULATED
10-DEC -2004 09:22 PRINTED

AS FOUND u

CONTROL ROD DENSITY 4.21%
SEQUENCE A09D

```
LOAD LINE SUMMARY
CORE POWER      99.93%
CORE FLOW       92.27%
LOAD LINE      105.87%
FLLLP          0.916
```

Limerick Generating Station**Job Performance Measure**

CALCULATE STAY TIME

JPM Number: 0703

Revision Number: 000

Date: 11/11/04

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

Job Performance Measure (JPM)**JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 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, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues 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 referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

Job Performance Measure (JPM)**Revision Record (Summary)**

1.

INITIAL CONDITIONS:

Unit 1 is in OPCIION 1

Work is being performed in the Unit 1 Main Steam Chase.

Additional high radiation exposure controls are required

Two workers are performing the work.

Job conditions and information are as follows:

- Accumulated Dose Alarms on their Electronic Dosimeter for both workers: 1200 mrem
- Worker 1 has 600 mrem accumulated dose on his Electronic Dosimeter from his first entry
- Worker 2 has 800 mrem accumulated dose on his Electronic Dosimeter from his first entry.
- 3 man-hrs are required to finish the work
- Maximum Whole Body Dose Rate in work area: 400 mrem/hr
- Time required to enter: 5 minutes
- Time required to exit: 5 minutes

INITIATING CUES:

Use RP-LG-460-2000, "Additional High Radiation Exposure Controls" attachment 3 to determine:

1. Maximum Stay Times (Worst Case) to reach the Electronic Dosimeter accumulated dose alarms for worker 1 & worker 2.
2. If the workers can finish the work without receiving accumulated dose alarms.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. Then annotate that comment in the "Comments" section. The comment section should be used to document the reason that a step is

Job Performance Measure (JPM)

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.

LLOJPM0703 REV000

Job Performance Measure (JPM)

Operator's Name: _____
Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Calculate Stay Time
JPM Number: LLOJPM0703

Revision Number: 000

K/A Number and Importance: Generic 2.3.10

Suggested Testing Environment: Simulator

Actual Testing Environment: Simulator

Testing Method: ☐ Simulate Faulted: ☐ NoAlternate Path: ☐ No ☐Time Critical: ☐ No

Estimated Time to Complete: 30 minutes Actual Time Used: _____minutes

References:

EVALUATION SUMMARY:Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ No

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

Comments: _____

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ Date: _____

JPM Start Time: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
(Cue: Provide copy of RP-LG-460-2000)	N/A			
1. Determine Maximum Stay Time for the required entry	Maximum Stay Time Determined to be:			
2. For worker 1:				
*2.a Subtract accumulated dose of 600 mr from accumulated dose alarm of 1200 mr to get remaining dose till alarm.	$\begin{array}{rcl} \text{Accum} & - & \text{Accum} = \text{Remain} \\ \text{Dose} & & \text{Dose} & & \text{Dose} \\ \text{Alarm} & & & & \text{Alarm} \\ 1200 \text{ mr} - 600 \text{ mr} & = & 600 \text{ mr} \end{array}$			
*2.b Divide Allowable Work Dose by the Maximum Whole Body Dose Rate in work area to get Maximum Stay Time (Worst Case)	$\begin{array}{rcl} \text{Remain} / & \text{Max} & = & \text{Max} \\ \text{Dose} & \text{Dose} & & \text{Stay} \\ \text{Alarm} & \text{Rate} & & \text{Time} \\ 600\text{mr} & / & 400 \text{ mr/hr} = 1.5 \text{ hr} \end{array}$			
2.c Subtract entry and exit time of 10 minutes (5 minutes+5 minutes) from the Maximum Stay Time	$\begin{array}{rcl} \text{Max} & - & \text{Entry} = \text{Max} \\ \text{Stay} & \text{Exit} & \text{Allow} \\ \text{Time} & \text{Time} & \text{Time} \\ 90 \text{ min} - 10 \text{ min} & = & 80 \text{ min} \end{array}$			
3. For worker 2:				
*3.a Subtract accumulated dose of 800 mr from accumulated dose alarm of 1200 mr to get remaining dose till alarm.	$\begin{array}{rcl} \text{Accum} & - & \text{Accum} = \text{Remain} \\ \text{Dose} & & \text{Dose} & & \text{Dose} \\ \text{Alarm} & & & & \text{Alarm} \\ 1200 \text{ mr} - 800 \text{ mr} & = & 400 \text{ mr} \end{array}$			
*3.b Divide Allowable Work Dose by the Maximum Whole Body Dose Rate in work area to get Maximum Stay Time (Worst Case)	$\begin{array}{rcl} \text{Remain} / & \text{Max} & = & \text{Max} \\ \text{Dose} & \text{Dose} & & \text{Stay} \\ \text{Alarm} & \text{Rate} & & \text{Time} \\ 400\text{mr} & / & 400 \text{ mr/hr} = 1 \text{ hr} \end{array}$			

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
3.c Subtract entry and exit time of 10 minutes (5 minutes+5 minutes) from the Maximum Stay Time	$\begin{array}{rcl} \text{Max} & - & \text{Entry} = \text{Max} \\ \text{Stay} & \text{Exit} & \text{Allow} \\ \text{Time} & \text{Time} & \text{Time} \\ 60 \text{ min} & - & 10 \text{ min} = 50 \text{ min} \end{array}$			
4. Calculate if man-hrs are exceeded:				
4.a Add worker 1 Maximum Stay Time of 80 minutes to worker 2 Maximum Stay Time of 50 minutes.	$\begin{array}{rcl} \text{Worker} & + & \text{Worker} = \text{Total} \\ 1 \text{ Stay} & 2 \text{ Stay} & \text{Stay} \\ \text{Time} & \text{Time} & \text{Time} \\ 80 \text{ min} & + & 50 \text{ min} = 130 \text{ min} \end{array}$			
*4.b Determine work can not be competed due to combined stay time less than required 3 man-hrs (180 minutes) remaining.	Determine work can not be completed			
(CUE: You may stop here, you have met the termination criteria for this JPM)	N/A			

JPM Stop Time: _____

INITIAL CONDITIONS:

Unit 1 is in OPGON 1

Work is being performed in the Unit 1 Main Steam Chase.

Additional high radiation exposure controls are required

Two workers are performing the work.

Job conditions and information are as follows:

- Accumulated Dose Alarms on their Electronic Dosimeter for both workers: 1200 mrem
- Worker 1 has 600 mrem accumulated dose on his Electronic Dosimeter from his first entry
- Worker 2 has 800 mrem accumulated dose on his Electronic Dosimeter from his first entry.
- 3 man-hrs are required to finish the work
- Maximum Whole Body Dose Rate in work area: 400 mrem/hr
- Time required to enter: 5 minutes
- Time required to exit: 5 minutes

INITIATING CUES:

Use RP-LG-460-2000, "Additional High Radiation Exposure Controls" attachment 3 to determine:

3. Maximum Stay Times (Worst Case) to reach the Electronic Dosimeter accumulated dose alarms for worker 1 & worker 2.
4. If the workers can finish the work without receiving accumulated dose alarms.

CANDIDATE

Limerick Generating Station**Job Performance Measure**

ACTIVATE THE FIRE BRIGADE

JPM Number: 0704

Revision Number: 000

Date: 11/11/04

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Approved By: _____
Training Department Date

Job Performance Measure (JPM)**JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 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, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues 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 referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

Job Performance Measure (JPM)**Revision Record (Summary)**

1.

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

INITIATING CUES:

Fire alarm 006 FIRE H-6-U, CIRC WATER PUMP STRUCT, is alarming. You are ordered to activate fire brigade per SE-8.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. 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 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 time clock starts when the candidate acknowledges the initiating cue.

LLOJPM0704 Rev000

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: Activate The Fire Brigade

JPM Number: LLOJPM0701

Revision Number: 000

K/A Number and Importance: Generic 2.4.27

Suggested Testing Environment: Simulator**Actual Testing Environment:** Simulator**Testing Method:** ☐ Simulate**Faulted:** ☐ No**Alternate Path:** ☐ No☐**Time Critical:** ☐ No**Estimated Time to Complete:** 30 minutes **Actual Time Used:** ____ minutes**References:**

SE-8 Rev 26

Arc 006 FIRE H-6-U

F-P-001

EVALUATION SUMMARY:Were all the Critical Elements performed satisfactorily? ☐ Yes ☐ NoThe operator's performance was evaluated against the standards contained in this JPM, and has been determined to be: ☐ Satisfactory ☐ UnsatisfactoryComments: _____

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ Date: _____

JPM Start Time: _____

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
(Cue: Provide copy off SE-8 to candidate)	N/A			
1. <u>WHEN</u> an actual fire has occurred <u>OR</u> fire alarm code is annunciated, <u>THEN</u> PRO ANNOUNCE fire at least two times on plant radio <u>AND</u> page as follows:	Make announcement 2 times			
*1.a <u>IF</u> fire notification was by fire alarm annunciator panel, <u>THEN</u> USE exact words from annunciator window in announcement.	"Circ Water Pump Structure"			
*1.b IDENTIFY fire alarm code <u>AND</u> fire location.	"Fire alarm code 6-1"			
<p style="text-align: center;">NOTE</p> <p>Examples of wording to use:</p> <p>1. "Fire alarm code (Code number) has been annunciated in (location). Fire Brigade respond." OR</p> <p>2. "A fire has been reported at (location). Fire Brigade respond."</p>				
*1.c USE appropriate wording.	"Fire alarm code 6-1 has been annunciated in Circ Water Pump Structure Fire Brigade respond."			
1.d <u>WHEN</u> fire announcements are made for drill, <u>THEN</u> PRECEDE with appropriate wording <u>AND</u> FOLLOW announcement with "This is a drill. This is a drill." (Cue: Fire Brigade Leader responds over the radio, "This is fire brigade leader responding for fire brigade and responding to fire.")	"This is a drill. This is a drill. Fire alarm code 6-1 has been annunciated in Circ Water Pump Structure Fire Brigade respond. This is a drill. This is a drill."			
2. ACKNOWLEDGE Fire Brigade member reports of response <u>AND</u> location.	Acknowledges Fire Brigade leader.			

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
3. ADVISE Fire Brigade Leader of the appropriate Pre-Fire Plan to use from information contained in the Annunciator Response Card for the fire alarm. (Cue: Provide copy of Arc 006 FIRE H-6-U if requested.)	Advises Fire Brigade Leader to use fire procedure F-P-001 to respond to the fire.			
4. VERIFY fire pump auto start <u>OR</u> START fire pump at Fire Brigade Leader's request. (Cue: Annunciators 005 FIRE A-1. "Motor Driven Fire Pump Auto Start" and 005 FIRE A-2, "Motor Driven Fire Pump Running" are alarming. If asked, Motor Driven fire Pump discharge pressure indicates 150 psig.)	Verifies Motor Driven Fire Pump Start			
5. ADVISE Fire Brigade Leader of additional fire alarm activations. (Cue: No additional fire alarm activations.)	N/A			
(Cue: Fire Brigade Leader reports that there was a fire in the Diesel Fire Pump room in the West end in Circ Water Pump Structure but the fire is out. Stationing reflash watch and securing fire scene.)	N/A			
6. <u>WHEN</u> nature/size of fire is known <u>THEN</u> NOTIFY Power System Director.	Notifies Power System Director of fire.			
(CUE: You may stop here, you have met the termination criteria for this JPM)	N/A			

JPM Stop Time: _____

INITIAL CONDITIONS:

Unit 1 is in OPCON 1

INITIATING CUES:

Fire alarm 006 FIRE H-6-U, CIRC WATER PUMP STRUCT, is alarming. You are ordered to activate fire brigade per SE-8.

CANDIDATE

Limerick Generating Station

Job Performance Measure

ERP CLASSIFICATION AND REPORTING (TIME CRITICAL)

JPM Number: 0125

Revision Number: 000

Date: __/__/__

Developed By: _____
Instructor **Date**

Validated By: _____
SME or Instructor **Date**

Review By: _____
Operations Representative **Date**

Approved By: _____
Training Department **Date**

**JOB PERFORMANCE MEASURE (JPM)
JOB PERFORMANCE MEASURE VALIDATION CHECKLIST**

NOTE: All steps of this checklist should be performed upon initial validation. Prior to JPM usage, revalidate JPM using steps 8 through 11 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, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues 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 referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

JOB PERFORMANCE MEASURE (JPM)

Revision Record (Summary)

1. New JPM

SIMULATOR SETUP INSTRUCTIONS:

- None

TASK CONDITIONS:

The following conditions exist on Unit 1

- Startup is in progress with reactor power 3%, Reactor Mode Switch is in Startup/Hot Standby
- All Safeguard DC power was lost 20 minutes ago and is not expected to be restored for another hour

INITIATING CUES: This Task is Time Critical

This JPM will start after you have reviewed the task conditions and tell the evaluator that you are ready to begin.

You are required to make the ERP classification and subsequent call outs. All communications should be made as if a drill is in progress.

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column. 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 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.

EXELON NUCLEAR

LLOJPM0125

JOB PERFORMANCE MEASURE (JPM)

TITLE: ERP CLASSIFICATION AND REPORTING (TIME CRITICAL)

Operator's Name: _____

Job Title: ☐ NLO ☐ RO ☐ SRO ☐ STA ☐ SRO Cert

JPM Title: ERP CLASSIFICATION AND REPORTING (TIME CRITICAL)

JPM Number: LLOJPM0125

Revision Number: 000

K/A Number and Importance: Generic 2.4.41 2.3/4.1

Suggested Testing Environment: Simulator

Actual Testing Environment: Simulator

Testing Method: ☐ Perform

Faulted: ☐ No

Alternate Path: ☐ No

☐

Time Critical: ☐ No

Estimated Time to Complete: 15 minutes Actual Time Used: _____minutes

References: EP-AA-1008, LGS EMERGENCY ACTION LEVEL (EAL) MATRIX, REV 05

EP-AA-112-100, Rev 5, CONTROL ROOM OPERATIONS

EP-MA-114-100, Rev 5, MAROG NOTIFICATIONS

EVALUATION SUMMARY:

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

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

Comments: _____

Evaluator's Name: _____(Print)

Evaluator's Signature: _____ Date: _____

EXELON NUCLEAR

LLOJPM0125

JOB PERFORMANCE MEASURE (JPM)

TASK CONDITIONS:

The following conditions exist on Unit 1

- Startup is in progress with reactor power 3%, Reactor Mode Switch is in Startup/Hot Standby
- All Safeguard DC power was lost 20 minutes ago and is not expected to be restored for another hour

INITIATING CUES: This Task is Time Critical

This JPM will start after you have reviewed the task conditions and tell the evaluator that you are ready to begin.

You are required to make the ERP classification and subsequent call outs. All communications should be made as if a drill is in progress.

EXELON NUCLEAR

LLOJPM0125

JOB PERFORMANCE MEASURE (JPM)

TASK STANDARD(S):

A SITE AREA EMERGENCY is declared within 15 minutes of the candidate beginning the classification.

Notification form completed and ready for Shift Communicator within 12 minutes of declaring the SITE AREA EMERGENCY

Critical Element(s) indicated by "*" in Performance Checklist.

START TIME: _____

PERFORMANCE CHECKLIST:

<u>ELEMENT</u>	<u>STANDARD</u>	SAT	UNSAT	Comment Number
EP-AA-111, Section 4.1				
1. Evaluator note time candidate begins reviewing EALs				
2. When an abnormal condition is being evaluated, REFER to the appropriate Station EAL Matrix and PERFORM the following:	N/A	N/A		
3. IDENTIFY the Unit Mode for the state of the plant prior to the abnormal condition	N/A	N/A		
4. Review the initiating conditions applicable to the operating mode	Use EAL Matrix to classify event			
5*. IF the EAL Threshold Values have been met or exceeded, then	Determine Site Area Emergency initiating conditions have been exceeded			
6. NOTE the EAL number associated with the IC	"MS3 " identified			
7*. DECLARE the event	Declare a Site Area Emergency within 15 minutes of the START TIME in Step 1 DECLARATION TIME: _____			
8. RETURN to the appropriate EP-AA-112 ERO position checklist and immediately begin notifications	N/A	N/A		
EP-AA-112-100 Attachment 1, SHIFT EMERGENCY DIRECTOR CHECKLIST				

EXELON NUCLEAR**LLOJPM0125****JOB PERFORMANCE MEASURE (JPM)**

9.	ANNOUNCE the event classification to the Control Room Staff, and over the plant Public Address (PA) system based on pre-scripted message guidelines in EP-AA-112, Attachment 6	Make announcement per scripted message			
10.	PERFORM Attachment 2, ERO Augmentation	Contact Shift Communicator to initiate callout per Attachment 2			
11.	DETERMINE the correct plant-based PAR per the appropriate site-specific PAR flowchart in EP-AA-111, Attachments 2 through 8	LGS/PBAPS is Attachment 8 N/A – No PAR for SAE			
12*.	INITIATE required State/Local notifications within 15 minutes of the event classification as required per EP-AA-114 – Refer to EP-MW(MA)-114-100 for instructions on completion and transmittal of State/County notifications	Direct Shift Communicator to perform notification within 12 minutes of DECLARATION TIME. (15 minutes minus time for Communicator to receive form and make roll call) Note: This step is graded after the next section			
EP-MA-114-100, MAROG NOTIFICATIONS, Section 4.1 – COMPLETING THE STATE/LOCAL NOTIFICATION FORM					
13.	Message number – ENTER a sequential number starting with 1	"1" or equivalent entered			
14.	APPROVED BY	Signature entered			
15*.	STATUS BLOCK	THIS IS A DRILL marked			
16*.	CLASSIFICATION	"SITE AREA EMERGENCY" checked			
17*.	AFFECTED UNIT	"ONE" checked			
18*.	DECLARED AT	Time and Date entered. "MS3" entered as EAL#			
19.	CLASSIFICATION STATUS	"INITIAL DECLARATION" checked			
20*.	BRIEF NON-TECHNICAL DESCRIPTION	"DC electrical power to vital equipment is degraded."			

EXELON NUCLEAR**LLOJPM0125****JOB PERFORMANCE MEASURE (JPM)**

21*. NON-ROUTINE RADIOLOGICAL RELEASE STATUS	"NO" checked			
22. PAR	Left blank or "NOT APPLICABLE" checked			
23*. METEOROLOGY CUE: Provide MET DATA Attachment	Wind direction 120 degrees *(Critical) Wind speed 7 mph (not critical)			
24*. STATUS	"This is a drill" checked (Critical that at least one of the two status blocks on the page is marked correctly and no contradictory info is marked. If contradictory info is marked, then the incorrect step is UNSAT. If one block is blank and the other is correct, then the blank block is N/A)			
CUE: (When State and Local Notification Form is given to Shift Communicator) You have met the termination criteria for the JPM.	N/A	N/A		

TASK CONDITIONS:

The following conditions exist on Unit 1

- Startup is in progress with reactor power 3%, Reactor Mode Switch is in Startup/Hot Standby
- All Safeguard DC power was lost 20 minutes ago and is not expected to be restored for another hour

INITIATING CUES: This Task is Time Critical

This JPM will start after you have reviewed the task conditions and tell the evaluator that you are ready to begin.

You are required to make the ERP classification and subsequent call outs. All communications should be made as if a drill is in progress

971 METEOROLOGICAL 15 MINUTE AVERAGE POINT DATA

	PID	SENSOR	DESCRIPTION	VALUE	EU
T O W E R 1	T1DTULFA	T1.SP.U	TOWER 1 270 FT WIND SPEED	6.1	MPH
	T1SPIFA	T1.SP.I	TOWER 1 175 FT WIND SPEED	7.0	MPH
	T12SPLFA	T1.SP.L	TOWER 1 30 FT WIND SPEED	4.3	MPH
	T1DRUFA	T1.DR.U	TOWER 1 270 FT WIND DIRECTION	115.0	DEG AZ
	T1DRIFA	T1.DR.I	TOWER 1 175 FT WIND DIRECTION	120.0	DEG AZ
	T1DRLFA	T1.DR.L	TOWER 1 30 FT WIND DIRECTION	116.2	DEG AZ
	T1DTULFA	T1.DT.U-L	TOWER 1 266 - 26 FT DELTA TEMP	-0.3	DEG F
	T1DTILFA	T1.DT.I-L	TOWER 1 171 - 26 FT DELTA TEMP	0.7	DEG F
	T1ATLFA	T1.AT.L	TOWER 1 26 FT AMBIENT TEMP	85.2	DEG F
	T1DPLFA	T1.DP.L	TOWER 1 26 FT DEW POINT	45.00	DEG F
	T1RNFA	T1.RN	TOWER 1 PRECIPITATION	0.1	INCHES
T O W E R 2	T2DTULFA	T2.SP.U	TOWER 2 304 FT WIND SPEED	6.4	MPH
	T2SPIFA	T2.SP.I	TOWER 2 159 FT WIND SPEED	6.8	MPH
	T22SPLFA	T2.SP.L	TOWER 2 30 FT WIND SPEED	4.6	MPH
	T2DRUFA	T2.DR.U	TOWER 2 304 FT WIND DIRECTION	115.7	DEG AZ
	T2DRIFA	T2.DR.I	TOWER 2 159 FT WIND DIRECTION	120.4	DEG AZ
	T2DRLFA	T2.DR.L	TOWER 2 30 FT WIND DIRECTION	115.6	DEG AZ
	T2DTULFA	T2.DT.U-L	TOWER 2 304 - 26 FT DELTA TEMP	-0.2	DEG F
	T2DTILFA	T2.DT.I-L	TOWER 2 155 - 26 FT DELTA TEMP	0.4	DEG F
	T2ATLFA	T2.AT.L	TOWER 2 26 FT AMBIENT TEMP	85.0	DEG F
	T2DPLFA	T2.DP.L	TOWER 2 26 FT DEW POINT	44.81	DEG F