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Job Performance Measure

Swap Narrow Range Reactor Water Level Instruments With a Failure of the Second Narrow Range Instrument

JPM Number: B.1.a

Revision Number: 02

Date: 08/11/2000

Developed By: _____ 8-14-00

Instructor **Date**

Approved By: _____ 8-14-00

Operations Representative **Date**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 29 (rst 29) or any IC near rated conditions.

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

2. Place simulator in RUN.

3. VERIFY 'B' Narrow Range is selected for RWLC.

4. Run CAEP to setup simulator for failure of 'C' Narrow Range Level instrument signal after instrument is selected.

   - CAEP sets a trigger to look for the Narrow Range Selector Switch in the 'C' position.

   - CAEP sets 'C' NR Fails High malfunction on trigger to fail to 50 inches.

5. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.

6. Have a copies of LOP-RL-01 and LOA-FW-101 ready to replace procedure book procedures in the event that Candidate wishes to mark in procedure.

7. Have copies of HLA sheet for feedwater manipulations for Candidate to review.

8. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Calibration of the 'B' Narrow Range is expected to be performed within the next hour.
- For the purposes of this JPM, you will be expected to respond to all indications and alarms on the 1H13-P603 as though there were no other operators available.

INITIATING CUE

The Unit Supervisor has directed you to transfer Reactor Water Level Control from 'B' Narrow Range Level instrument to 'C' Narrow Range Level instrument. Lockup of A and B Reactor Recirc Flow Control Valves will not be required.

You were involved in a HLA briefing for the level instrument swap.

Instrument Maintenance personnel are standing by at extension 2999.

Inform the Unit Supervisor when the transfer is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note:	All steps of this JPM are to be completed at control room panel 1H13-P603.				
1.	Obtain procedure for performance of task.	Candidate locates LOP-RL-01.	___	___	___
Note:	Candidate should request that a copy of the procedure would be made for use. Provide a clean copy when requested.				
Note:	It is expected that the candidate reviews LOP-RL-01, LOA-FW-101, and annunciator response procedures he/she feels is appropriate.				
2.	LOCKUP A and B Reactor Recirc Flow Control Valves as follows (This is optional):	Candidate determines step is not applicable.	___	___	___
3.	TRANSFER Feedwater M/A Station(s) to Manual per the applicable section of this procedure.	The Candidate proceeds to Section E.4.	___	___	___
4.	VERIFY Actuator Selector Switch is selected to a non-operating component or the component that is being secured.	The Candidate verifies Actuator Selector Switch is selected to VLV.	___	___	___
5.	If time permits, PERFORM the following:	The Candidate determines that time permits and continues.	___	___	___
6.	REQUEST IMD to check that signal output voltages are approximately equal to allow for a bumpless transfer: o TDRFP 1A o TDRFP 2A	Candidate calls IMD at 2999 and requests them to check that signal output voltages are approximately equal to allow for a bumpless transfer: • TDRFP 1A • TDRFP 2A	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	As an IM, voltages for: 1A TDRFP control unit 1C34R601A-1 and manual unit 1C34R601A-2 are equal, and voltages for: 1B TDRFP control unit 1C34R601B-1 and manual unit 1C34R601B-2.				
Note:	The TDRFP M/A stations may be placed in manual in any order.				
*7.	DEPRESS MANUAL on M/A XFR STA to be transferred.	Candidate depresses MANUAL on 1A (1B) TDRFP M/A transfer station.	___	___	___
8.	VERIFY level is stable.	Candidate verifies reactor water level is stable.	___	___	___
*9.	DEPRESS MANUAL on M/A XFR STA to be transferred.	Candidate depresses MANUAL on 1A (1A) TDRFP M/A transfer station.	___	___	___
10.	VERIFY level is stable.	Candidate verifies reactor water level is stable.	___	___	___
11.	As necessary, ADJUST INCREASE/DECREASE Pushbuttons of M/A Station in MANUAL to control level.	Candidate adjusts M/A Stations as necessary to control level.	___	___	___
*12.	SWITCH to backup level control instrument. (B to C).	Candidate turns Level Selector switch from B to C.	___	___	___
Note:	When C NR is selected, the C NR meter, recorder, and process computer display should increase to approximately 50 inches causing FW CONTROL RX WATER LVL 7 HI alarm. The candidate may reselect B NR Level immediately. This action is acceptable and meets the requirements of Step 20 (below).				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note:	If candidate is reluctant to leave FW and RWLC controls to respond to annunciators, tell him that you will monitor RPV level and will inform him of any significant changes in value/trend.				
13.	Announce and acknowledge alarm. Refer to LOR-1H13-P603-A309.	Candidate announces and acknowledges alarm and refers to LOR-1H13-P603-A309.	___	___	___
CUE:	As Unit Supervisor, acknowledge report.				
Note:	The following steps are from LOR-1H13-P603-A309.				
14.	CHECK Rx Vessel level greater than or equal to alarm setpoint.	Candidate checks level instruments and determines that only selected level is greater than alarm setpoint.	___	___	___
15.	If Automatic Feedwater Level Control has malfunctioned, REFER to LOA-FW-101.	Candidate should refer to LOA-FW-101 for guidance.	___	___	___
Note:	The following steps are from LOA-FW-101 Section B.1				
16.	VERIFY all TDRFP M/A Xfr Stations are in MANUAL.	Candidate verifies all TDRFP M/A Xfr Stations in MANUAL.	___	___	___
17.	CHECK MDRFP – SHUTDOWN	Candidate checks MDRFP SHUTDOWN.	___	___	___
18.	STABILIZE reactor level using feedpump M/A Stations or TDRFP Manual Backup Station by initially matching feedwater with steam flow.	Candidate checks reactor level stable.	___	___	___
19.	CHECK selected Reactor Level instrument operating PROPERLY.	Candidate determines that selected level instrument is NOT operating properly.	___	___	___
*20.	SWITCH Reactor Water Level Control Channel Selector to an operable control instrument.	Candidate switches Reactor Water Level Control Channel Selector to 'B' or 'A'.	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
21.	CHECK Reactor Water Level - Greater than 12.5 inches.	Candidate checks and determines Reactor Water Level Greater than 12.5 inches.	___	___	___
22.	CHECK Reactor Water Level - Less than 55.5 inches.	Candidate checks and determines Reactor Water Level less than 55.5 inches.	___	___	___
23.	CHECK steam flow indication 1C34-R603A/B/C/D – NORMAL	Candidate checks steam flow indication 1C34-R603A/B/C/D and determines they are normal.	___	___	___
24.	ADJUST S/U Controller setpoint to green band.	Candidate checks S/U Controller setpoint in green band.	___	___	___
25.	CHECK S/U Controller deviation – NORMAL	Candidate check S/U Controller deviation and determines it is normal.	___	___	___
26.	CHECK TDRFP A/B an MDRFP flows NORMAL.	Candidate checks TDRFP A/B an MDRFP flows and determines they are normal.	___	___	___
Note:	Candidate should inform Unit Supervisor of direction to restore RWLC to automatic. If the candidate starts to perform LOP-RL-01, as Unit Supervisor, direct the candidate to remain in manual control until IMs troubleshoot the failure.				
27.	If RWLC restored, REFER TO LOP-RL-01 for restoration.	Candidate informs Unit Supervisor that LOA-FW-101 has been completed.	___	___	___
Terminating Cue	As US acknowledge report. Direct the candidate to remain in manual control until IMs troubleshoot the failure. State that this JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Swap Narrow Range Reactor Water Level Instruments With a Failure of the Second Narrow Range Instrument

JPM Number: B.1.a Revision Number: 0

Task Number and Title:

78.008 Provided initial conditions, perform Control Room actions to respond to a failure of automatic RWLCS IAW station procedures.

K/A Number and Importance:

259002 A2.03 3.6/3.7

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ❑ Yes ■ No **Alternate Path:** ■ Yes ❑ No

Time Critical: ❑ Yes ■ No

Estimated Time to Complete: 12 minutes **Actual Time Used:** ____ minutes

References: LOP-RL-01 Rev 14; LOR-1H13-P603-A309 Rev 0; LOA-FW-101 Rev 3

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)

INITIAL CONDITIONS

- Calibration of the 'B' Narrow Range is expected to be performed within the next hour.
- For the purposes of this JPM, you will be expected to respond to all indications and alarms on the 1H13-P603 as though there were no other operators available.

INITIATING CUE

The Unit Supervisor has directed you to transfer Reactor Water Level Control from 'B' Narrow Range Level instrument to 'C' Narrow Range Level instrument. Lockup of A and B Reactor Recirc Flow Control Valves will not be required.

You were involved in a HLA briefing for the level instrument swap.

Instrument Maintenance personnel are standing by at extension 2999.

Inform the Unit Supervisor when the transfer is complete.

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Job Performance Measure

Establish Cooldown Rate Using SRVs With Failure of SRV to Close

JPM Number: B.1.b

Revision Number: 01

Date: 08/11/2000

Developed By: _____ 8-14-00

Instructor **Date**

Approved By: _____ 8-14-00

Operations Representative **Date**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to the snapped IC (____) on the exam disk.

   - An acceptable IC can be made by starting in a full power IC, closing the RCIC Steam line valves, performing LGP-3-2 Hard card actions, isolating the MSIVs and MSL drains, placing 'A' RHR is in Suppression Pool Cooling mode, and stabilizing reactor water level between –30 and 0 inches.

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

2. Place simulator in RUN.

3. VERIFY a copy of LGP-2-1, Att. D is available for use should the candidate choose to use LGP-2-1 for guidance.

4. VERIFY a copy of the steam tables is available.

5. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- You are an assist NSO.
- A Group 1 isolation has occurred due to a personnel error.
- RCIC is unavailable and steam lines have been isolated.
- RPV level is being controlled by the Unit NSO.
- An assist NSO is maintaining a suppression pool temperature log due to previous SRV operation. LOS-PC-M2 has been performed since initial SRV actuation.

INITIATING CUE

The Unit Supervisor has directed you to start a 30°F/hr cooldown using SRVs IAW LGA-01.

Inform the Unit Supervisor prior to opening each SRV.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note:	To monitor cooldown rate, the candidate may use the attachment from LGP-2-1 or may track temperature/pressure separately on a separate sheet of paper.				
1.	Determine method for monitoring cooldown rate.	Candidate utilizes applicable sections of LGP-2-1 or tracks cooldown on separate sheet using steam tables or other references as appropriate	___	___	___
2.	Make a plant announcement concerning SRV operation.	Candidate makes a plant announcement concerning SRV operation.	___	___	___
*3.	Open SRV to commence cooldown.	The Candidate places the control switch for any SRV in the OPEN position.	___	___	___
4.	Monitors reactor temperature and/or pressure while SRV is open.	Candidate monitors reactor temperature and/or pressure	___	___	___
5.	Close SRV as necessary to maintain stable cooldown rate.	Candidate places control switch for open SRV in the AUTO position.	___	___	___
*6.	Recognize failure of SRV to close and inform Unit Supervisor.	Candidate recognizes the SRV fails to close and informs the Unit Supervisor.	___	___	___
7.	Refer to LOA-SRV-101.	Candidate obtains and refers to LOA-SRV-101.	___	___	___
Note:	The following step may be considered as already completed if performed earlier.				
8.	IDENTIFY SRV that has spuriously actuated or is stuck OPEN.	Candidate identifies SRV that has spuriously actuated or is stuck OPEN.	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
9.	RECUCE Generator Load up to 1000 MWe using Recirc Flow as directed by the Unit Supervisor to maintain Reactor Power less than 100%.	Candidate determines conditions met with reactor scrammed.	___	___	___
10.	CYCLE SRV control switch from AUTO to OPEN and back to AUTO.	Candidate cycles SRV control switch from AUTO to OPEN and back to AUTO.	___	___	___
11.	CHECK SRV – OPEN.	Candidate checks SRV and determines that it is still OPEN.	___	___	___
Note:	The candidate should direct the plant operator to perform steps 7 & 8 of LOA-SRV-101 but may also refer to Table 1 to determine the correct fuses to assist/check the operator.				
*12.	Direct a plant operator to perform LOA-SRV-101 Steps: B.7. REFER to Table 1 to IDENTIFY fuses associated with stuck open SRV. AND B.8 REMOVE appropriate fuses.	Candidate directs plant operator to perform LOA-SRV-101 Steps B.7 and B.8.	___	___	___
CUE:	As the plant operator, acknowledge direction.				
Sim Op:	Remove fuses for the open SRV utilizing the associated remote function.				
CUE:	As the plant operator, the fuses for *(the open)* SRV have been removed. LOA-SRV-101 Steps B.7 and B.8 are complete.				
*13.	CHECK SRV OPEN.	Candidate observes valve Leak Detection Temperature decrease on 1B21-R614A/B/C OR increase in reactor pressure and determines SRV is closed.	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
14.	WAIT ONE minute before performing step 10, (fuse replacement).	Candidate ensures one minute has passed before proceeding.	___	___	___
15.	REPLACE fuses	Candidate directs plant operator to replace fuses IAW LOA-SRV-101 Step B.10.	___	___	___

CUE:	As the plant operator, acknowledge direction.
Sim Op:	Delete malfunction for SRV and then replace fuses for the SRV utilizing the associated remote function.
CUE:	As the plant operator, the fuses for *(the open)* SRV have been replaced. LOA-SRV-101 Step B.10 is complete.

16.	CHECK SRV – OPEN.	Candidate checks SRV position on 1H13-P601 and determines SRV is closed.	___	___	___
17.	EXIT this procedure (LGA-SRV-101)	Candidate exits LOA-SRV-101 and informs Unit Supervisor of SRV and procedure status.	___	___	___

Terminating Cue	As US acknowledge report. Direct the candidate to remain in manual control until IMs troubleshoot the failure. State that this JPM is complete.

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Establish Cooldown Rate Using SRVs With Failure of SRV to Close

JPM Number: B.1.b Revision Number: 0

Task Number and Title:

40.005 Provided initial conditions, perform Control Room actions for a stuck open SRV IAW station procedures.

K/A Number and Importance:

239002 A2.03 4.1/4.2

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ■ Yes ❑ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No

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

References: LGP-2-1 Rev 56, LOA-SRV-101 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)

INITIAL CONDITIONS

- You are an assist NSO.
- A Group 1 isolation has occurred due to a personnel error.
- RCIC is OOS.
- Level control has been established and is being controlled by the Unit NSO.
- An assist NSO is maintaining a suppression pool temperature log due to previous SRV operation.

INITIATING CUE

The Unit Supervisor has directed you to start a 25°F/hr cooldown using SRVs IAW LGA-01.

Inform the Unit Supervisor prior to opening the second SRV.

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Job Performance Measure

Start Shutdown Cooling with 'A' RHR with a
Failure of the Shutdown Cooling Return Valve to Open

JPM Number: B.1.c

Revision Number: 01

Date: 08/03/2000

Developed By: _____ 8-11-00
Instructor **Date**

Approved By: _____ 8-11-00
Operations Representative **Date**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to archived IC ASDCoff.

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

2. ASDCoff was made as follows:
   - Reset to IC 2
   - Verify that lake temperature is <100°F from coolant temperature. (Increase lake temperature by up to 10°F if necessary.)
   - Verify reactor water level is ≥50 inches as indicated on narrow range instruments.
   - Prevent the 1E12-F053A from opening by overriding the control switch. **(ior k1k15jnn false)**
   - Close 1E12-F004A, A RHR Pmp Suction Vlv.
   - Close 1E12-F064A, A RHR Min Flow Vlv.
   - Verify closed and take OOS 1E12-F024A, A RHR Test to SP Vlv. **(mrf iarh24a local)**
   - Verify closed and take OOS 1E12-F027A, A RHR SP Spray Isol. **(mrf iarh27a local)**
   - Verify 1E12-F008, SDC Suct Header Otbd Isol Valve has control power. **(mrf iarh008 enerzise)**
   - Start RHR Service Water to A RHR Loop per LOP-RH-05.
   - Verify 1E12-F048A, A RHR Hx Bypass Vlv, open.
   - Close 1E12-F003A, A RHR Hx Outlet Vlv.
3. Place OOS cards on 1E12-F024A, A RHR Test to SP Vlv **and** on 1E12-F027A, A RHR SP Spray Isol.
4. Red target the 1E12-C300A & B RHR WS pumps.
5. Place the Div 1 Thermal Overload switch to TEST.
6. Place simulator in RUN to allow process computer to update prior to examinee presence.
7. Alarms need to be on for this JPM.
8. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
9. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Your are an NSO.
- Unit 1 is in Condition 4.
- '1A' RHR was tripped from shutdown cooling due to an inadvertent low level isolation.
- The cause of the isolation has been repaired and the isolation has been reset.
- LOA-RH-101 actions were completed.
- Fill and vent of the 'A' RHR loop has been verified.
- LOP-RH-07 is in progress and has been completed up to Step E.5.6
- The high flow isolation is not to be defeated per Shift Manager's instruction.
- The Div 1 Thermal Overload Bypass switch is in TEST.

INITIATING CUE

The Unit Supervisor has directed you continue LOP-RH-07 at Step E.5.6 and start '1A' RHR in Shutdown Cooling and establish 4000-5000 gpm flow with the RHR HX bypass valve fully closed.

Notify the Unit Supervisor when the conditions have been established.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note:	Most steps of this JPM are to be completed at control room panel 1H13-P601.				
1.	VERIFY CLOSED 1E12-F053A, A RHR Shtdn Clg Return Isol	Examinee verifies 1E12-F053A, A RHR Shtdn Clg Return Isol, closed by light indication.	___	___	___
2.	VERIFY CLOSED 1E12-F003A, A RHR Hx Outlet Vlv	Examinee verifies 1E12-F003A, A RHR Hx Outlet Vlv, closed by light indication.	___	___	___
3.	VERIFY Reactor Level is at 40 inches or greater.	Examinee checks reactor water level is $\geq$40 inches by multiple indications.	___	___	___
*4.	START '1A' RHR Pump	Examinee starts '1A' RHR Pump using pump control switch.	___	___	___
5.	THROTTLE OPEN 1E12-F053A, A RHR Shtdn Clg Return Isol to obtain 4000 to 5000 gpm flow.	Examinee moves control switch for 1E12-F053A to the open position within 8 seconds of pump start.	___	___	___
*6.	Identify failure of 1E12-F053A to open.	Examinee identifies the 1E12-F053A did NOT open.	___	___	___
Note	The examinee may take the action of the next three steps prior to or following referring to the LOR.				
*7.	Identify opening of 1E12-F064A as vessel inventory loss: stops pump and closes valve in flow path.	Examinee stops '1A' RHR pump and takes control switch for at least one valve in the flow path (1E12-F008, 1E12-F009, 1E12-F006A, 1E12-F064A) to the closed position prior to receiving a Group VI isolation signal.	___	___	___
8.	Verifies reactor water level is stable following isolation of flowpath (manual or automatic).	Examinee verifies reactor water level is stable following RHR isolation.	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
9.	Informs Unit Supervisor of event, action taken and status of reactor water level.	Informs Unit Supervisor of event, action taken and status of reactor water level.	___	___	___
Cue	As Unit Supervisor, acknowledge report.				
10.	Refers to LOR-1H13-P601-C203, RHR VLVS 1E12-F006A 1E12-F064A OPEN.	Examinee refers to LOR-1H13-P601-C203, RHR VLVS 1E12-F006A 1E12-F064A OPEN.	___	___	___
11.	VERIFY RHR Pump A Minimum Flow Valve 1E12-F064A is CLOSING.	Examinee verifies 1E12-F064A, A RHR PUMP Minimum Flow Valve is closing.	___	___	___
12.	CHECK RHR Pump A is required to be running.	Examinee determines that RHR pump was NOT required to be running.	___	___	___
13.	SHUTDOWN RHR System per appropriate operating procedure.	Examinee references LOP-RH-07 for shutdown sequence.	___	___	___
Terminating CUE	When candidate enters LOP-RH-07 to shutdown A RHR, as Unit Supervisor, state: Another operator has been assigned the task of completing the shutdown of A RHR. This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Start Shutdown Cooling with 'A' RHR with a Failure of the Shutdown Cooling Return Valve to Open

JPM Number: B.1.c Revision Number: 01

Task Number and Title:

64.023 Startup and Operate Shutdown Cooling IAW LOP-RH-07.

K/A Number and Importance:

205000 A2.10 2.9/2.9

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ■ Yes ❑ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No **SRO Only:** ❑ Yes ■ No

Estimated Time to Complete: 18 minutes **Actual Time Used:** _____ minutes

References: LOP-RH-07 Rev 45, LOR-1H13-P601-C203 Rev 0

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)

INITIAL CONDITIONS

- Your are an NSO.
- Unit 1 is in Condition 4.
- '1A' RHR was tripped from shutdown cooling due to an inadvertent low level isolation.
- The cause of the isolation has been repaired and the isolation has been reset.
- LOA-RH-101 actions were completed.
- Fill and vent of the 'A' RHR loop has been verified.
- LOP-RH-07 is in progress and has been completed up to Step E.5.6
- The high flow isolation is not to be defeated per Shift Manager's instruction.
- The Div 1 Thermal Overload Bypass switch is in TEST.

INITIATING CUE

The Unit Supervisor has directed you continue LOP-RH-07 at Step E.5.6 and start '1A' RHR in Shutdown Cooling and establish 4000-5000 gpm flow with the RHR HX bypass valve fully closed.

Notify the Unit Supervisor when the conditions have been established.

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Job Performance Measure

Install Jumpers to Bypass Unit 2 MSIV Isolations per LGA-MS-01

JPM Number: B.1.d

Revision Number: 00

Date: 08/03/2000

Developed By: _____ 8-11-00

Instructor **Date**

Approved By: _____ 8-11-00

Operations Representative **Date**

Job Performance Measure (JPM)

Revision Record (Summary)

1. **Revision 00**

Job Performance Measure (JPM)

Materials

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

   a. One copy of LGA-MS-01 (after demonstrating knowledge of location of controlled copy)

   b. One laser pointer.

2. The following material may be identified by the examinee and removed from its normal storage location but should NOT break the seal of the bag:

   a. Unit 2 LGA-MS-01 equipment bag containing the following:

      1) 5 Orange jumpers

      2) Unit 2 Key 14

      3) Unit 2 Key 23

      4) Unit 2 Key 32

      5) Unit 2 Key 40

      6) Unit 2 Key 84

      7) Unit 2 Key 85

      8) Unit 2 Key 86

      9) Unit 2 Key 87

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Your are an NSO.
- A failure to scram on Unit 2 has occurred an LGA-10 has been entered.
- Reactor water level is about to be lowered intentionally. It is anticipated that level will go less than –129 inches.

INITIATING CUE

The Unit 2 NSO has requested you to perform LGA-MS-01 Attachment 2A.

Notify the Unit 2 NSO when the attachment is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

JPM Start Time: _____

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
NOTE:	The procedure can be obtained in the upper drawer in the center desk area or from the LGA procedure book in the control room.				
1.	Obtain copy of LGA-MS-01 Attachment 2A.	Candidate demonstrates where copy of LGA-MS-01 can be obtained.	___	___	___
CUE:	Provide the candidate a copy of LGA-MS-01 when location of procedure is demonstrated.				
NOTE:	The equipment bag is located in the lower drawer in the center desk area. The equipment bag may be identified by the examinee and removed from its normal storage location but the seal of the bag should NOT be broken. Ensure examinee uses good basic work practices when installing jumpers, e.g. controls loose end of jumper, does not hold loose end by metal tip etc.				
2.	Obtain the Unit 2 LGA-MS-01 equipment bag.	Unit 2 LGA-MS-01 equipment bag obtained.	___	___	___
CUE:	You have the equipment you identified.				
NOTE:	Steps 3 through 7 can be performed in any order.				
*3.	Install jumper in panel 2H13-P609 between relay 1B22H-K10A terminal point 2 and relay 1B22H-K3A terminal point 1.	Properly labeled jumper installed between relay 1B22H-K10A terminal point 2 and relay 1B22H-K3A terminal point 1.	___	___	___
CUE:	The item you identified is installed as you described.				
*4.	Install jumper in panel 2H13-P609 between relay 1B22H-K10C terminal point 2 and relay 1B22H-K3C terminal point 1.	Properly labeled jumper installed between relay 1B22H-K10C terminal point 2 and relay 1B22H-K3C terminal point 1.	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
CUE:	The item you identified is installed as you described.				
*5.	Install jumper in panel 2H13-P611 between relay 1B22H-K10B terminal point 2 and relay 1B22H-K3B terminal point 1.	Properly labeled jumper installed between relay 1B22H-K10B terminal point 2 and relay 1B22H-K3B terminal point 1.	___	___	___
CUE:	The item you identified is installed as you described.				
*6.	Install jumper in panel 2H13-P611 between relay 1B22H-K10D terminal point 2 and relay 1B22H-K3D terminal point 1.	Properly labeled jumper installed between relay 1B22H-K10D terminal point 2 and relay 1B22H-K3D terminal point 1.	___	___	___
CUE:	The item you identified is installed as you described.				
*7.	Install jumper in panel 2H13-P604 between point BB-42 and BB-43.	Properly labeled jumper installed between points BB-42 and BB-43.	___	___	___
CUE:	The item you identified is installed as you described.				
8.	Inform Unit 2 NSO that LGA-MS-01, Attachment 2A is complete.	Unit 2 NSO informed that LGA-MS-01, Attachment 2A is complete.	___	___	___
Terminating CUE	As Unit NSO, acknowledge report. This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Install Jumpers to Bypass Unit 2 MSIV Isolations per LGA-MS-01

JPM Number: B.1.d Revision Number: 0

Task Number and Title:

6401.000 Given a LGA in progress evaluate plant conditions, locate and perform the following procedures including installation/removal of a jumper/lead IAW the LGAs. (f.) LGA-MS-01

K/A Number and Importance:

223002 A2.09 3.6/3.7

Suggested Testing Environment: Control Room

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ❑ Yes ■ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No **SRO Only:** ❑ Yes ■ No

Estimated Time to Complete: 8 minutes **Actual Time Used:** _____ minutes

References: LGA-MS-01 Rev 09

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)

Materials

3. The following material is required to be provided to examinee:

   a. One copy of LGA-MS-01 (after demonstrating knowledge of location of controlled copy)

   b. One laser pointer.

4. The following material may be identified by the examinee and removed from its normal storage location but should NOT break the seal of the bag:

   a. Unit 2 LGA-MS-01 equipment bag containing the following:

      1) 5 Orange jumpers

      2) Unit 2 Key 14

      3) Unit 2 Key 23

      4) Unit 2 Key 32

      5) Unit 2 Key 40

      6) Unit 2 Key 84

      7) Unit 2 Key 85

      8) Unit 2 Key 86

      9) Unit 2 Key 87

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Your are an NSO.
- A failure to scram on Unit 2 has occurred an LGA-10 has been entered.
- Reactor water level is about to be lowered intentionally. It is anticipated that level will go less than –129 inches.

INITIATING CUE

The Unit 2 NSO has requested you to perform LGA-MS-01 Attachment 2A.

Notify the Unit 2 NSO when the attachment is complete.

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Job Performance Measure

Shutdown the '1A' DG IAW LOP-DG-03

JPM Number: B.1.e

Revision Number: 010

Date: 08/03/2000

Developed By: _____ 8-11-00

Instructor **Date**

Approved By: _____ 8-11-00

Operations Representative **Date**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. This JPM may be run from any IC.

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

2. Run the setup Computer Aided Exercise

   a. Go to Run

   b. Place the 1A DG in parallel with the SAT supplying bus 142Y, loaded to 2600 KW.

3. Have one clean copy of LOP-DG-03 for each candidate.

4. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Unit 1 is at hot full power.
- The "1A" diesel generator has been started, closed onto Bus 142Y and loaded from the control room for post maintenance testing.
- The Joliet Load Dispatcher has been notified that the '1A' diesel generator is to be taken off of the system.
- An operator is standing by in the '1A' diesel generator room.

INITIATING CUE

The Unit Supervisor has directed you to remove the "1A" diesel generator from bus 142Y and secure it, IAW LOP-DG-03 Step E.2.2.2. The 1A Diesel Generator Cooling Water Pump is required to remain running for another surveillance.

Inform the Unit Supervisor when the DG is lined up for Auto Start.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note:	All steps of this JPM are to be completed at control room panel PM01J unless otherwise noted.				
*1.	CONCURRENTLY PERFORM the following steps: • REDUCE load on DG by selecting LOWER on Diesel Gen Governor Adjust switch. • OBSERVE DG load decreasing on Diesel Gen Kilowatts meter. • REDUCE KVAR load on generator by selecting LOWER on Diesel Gen Volt Adjust switch. • OBSERVE DG KVAR load decreasing on Diesel Gen Kilovars meter.	Control switch for 1A DIESEL GEN GOVERNOR ADJUST taken to lower as necessary to reduce KW, control switch for 1A Diesel Gen Voltage Regulator taken to lower as necessary to reduce KVARs.	___	___	___
Note:	Take care to note the values obtained when the breaker is opened.				
*2.	When DG load is less than or equal to 200 KW and KVAR loading is less than or equal to 200 KVAR, OPEN Diesel Generator Output Breaker.	DG output breaker 1423 handswitch taken to trip when DG load is less than or equal to 200 KW and KVAR loading is less than or equal to 200 KVAR.	___	___	___
3.	SET Engine Governor Speed Droop to 0.	Directs local operator to set Engine Governor Speed Droop to 0.	___	___	___
SIM OP /CUE:	As local operator: • Acknowledge direction • Set speed droop to 0 mrf (later) 0 • Inform candidate that 1A DG droop has been set to zero.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
4.	VERIFY Engine Speed at 900 RPM (60Hz).	Engine speed verified to be 900 RPM (60Hz).	___	___	___
5.	CHECK DG has operated unloaded for 5 to 10 minutes to provide adequate cooldown.	DG operated unload for 5 to 10 minutes to provide adequate cooldown.	___	___	___
CUE	If desired, the candidate may be informed that the 5-10 minutes have passed.				
6.	Direct local operator to VERIFY 1HS-DGS001, 1A DG Engine Control Switch, in AUTO.	Local operator directed to VERIFY 1HS-DGS001, 1A DG Engine Control Switch, in AUTO.	___	___	___
Sim Op / CUE:	As local operator, • acknowledge direction and report that 1HS-DGS001, 1A DG Engine Control Switch, is in AUTO.				
7.	PLACE Diesel Gen Control switch to STOP position.	1A Diesel Gen Control switch placed in STOP position.	___	___	___
NOTE:	The candidate should identify what indication(s) he will be using to determine that the DG is shutting down. (e.g. speed decreasing etc.)				
8.	CHECK DG shuts down.	DG checked to be shutting down.	___	___	___
NOTE:	The next two steps may be combined into one direction (order) by the candidate.				
9.	PLACE 1HS-DG036, 1A DG Maintenance Switch, in MAINT to prevent remote or automatic starts of DG.	Local operator directed to place 1HS-DG036, 1A DG Maintenance Switch, in MAINT to prevent remote or automatic starts of DG	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Sim Op / CUE:	As Local operator, • acknowledge direction. • **mrf iadgmana maint** • report that the engine control switch is in MAINT.				
9.	After 50 seconds following STOP signal initiation, PLACE 1HS-DG036, 1A DG Maintenance Switch, in STANDBY.	Directs local operator, after 50 seconds following STOP signal initiation, to PLACE 1HS-DG036, 1A DG Maintenance Switch, in STANDBY.	___	___	___
Sim Op / CUE:	As Local operator, • acknowledge direction. • **mrf iadgmana normal** • report that the engine control switch is in STANDBY.				
10.	CHECK Ready for auto start light is LIT on the control room panel.	Ready for auto start light is LIT on the control room panel checked to be lit.	___	___	___
11.	CHECK Engine Stop Ready For Auto Starting light is LIT on 1DG03J.	Request local operator to check • Engine Stop Ready For Auto Starting light is LIT on 1DG03J. • 1VD03C, 1A DG Room Ventilation Fan, stopped. •	___	___	___
CUE:	As Local operator, • acknowledge direction/request then report: • Engine Stop Ready For Auto Starting light is LIT on 1DG03J. • 1VD03C, 1A DG Room Ventilation Fan, stopped.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
12.	Inform Unit Supervisor that 1A DG is lined up for Auto Start	Unit Supervisor informed that 1A DG is lined up for Auto Start	___	___	___
Terminating	Acknowledge report.				
CUE	This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Shutdown the '1A' DG IAW LOP-DG-03

JPM Number: B.1.e Revision Number: 0

Task Number and Title:

Shutdown the DG IAW LOP-DG-03.

K/A Number and Importance:

205000 A2.10 2.9/2.9

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ❑ Yes ■ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No **SRO Only:** ❑ Yes ■ No

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

References: LOP-DG-03, Rev 19

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)

INITIAL CONDITIONS

- Unit 1 is at hot full power.
- The "1A" diesel generator has been started, closed onto Bus 142Y and loaded from the control room for post maintenance testing.
- The Joliet Load Dispatcher has been notified that the '1A' diesel generator is to be taken off of the system.
- An operator is standing by in the '1A' diesel generator room.

INITIATING CUE

The Unit Supervisor has directed you to remove the "1A" diesel generator from bus 142Y and secure it, IAW LOP-DG-03 Step E.2.2.2. The 1A Diesel Generator Cooling Water Pump is required to remain running for another surveillance.

Inform the Unit Supervisor when the DG is lined up for Auto Start.

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Nuclear Generation Group

Job Performance Measure

Secure RHR Service Water

JPM Number: B.1.f

Revision Number: 01

Date: 08/03/2000

Developed By: _____ 8-11-00

Instructor **Date**

Approved By: _____ 8-11-00

Operations Representative **Date**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. This JPM may be run from any IC.

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

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

3. Start 'B' RHR Service Water

   - 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. Have one clean copy of LOP-RH-05 for each candidate.

5. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- You are an assist NSO.
- 'B' RHR Service water has been running for a pump vibration and flow data test.
- B RHR Service Water Process Radiation Monitor is INOP.
- Chemistry has completed the required sample within the last hour.
- 1E12-F448 and 1E12-F451 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' RHR Service Water IAW LOP-RH-05.

Inform the Unit Supervisor when LOP-RH-05 is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	All steps of this JPM are to be completed at control room panel 1H13-P601 unless otherwise noted.				
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 RHR Service Water System Strainer.	___	___	____
CUE	As local operator, acknowledge direction. Report that the B RHR Service Water Strainer has been backwashed per LOP-RH-14.				
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 o logged in unit log 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.				
6.	If required, START 8 hour clock.	Candidate determines that an 8 hour timeclock must be started.	___	___	____

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
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.				
7.	If only one RHR Service Water Pump is in operation… (Step E.5.4)	Candidate determines step is not applicable and continues at step E.5.5	___	___	___
*8.	PLACE control switch for 1E12-F068B, B RHR Hx Wtr Otlt Vlv to CLOSE	Control switch for 1E12-F068B, B RHR Hx Wtr Otlt Vlv placed in CLOSE	___	___	___
*9.	When flow indicated on 1E12-R602B decreased below 4000 gpm, STOP one RHR Service Water pump 1E12-C300C/D.	One RHR Service Water pump 1E12-C300C/D control switch taken to STOP when flow indicated on 1E12-R602B decreased below 4000 gpm.	___	___	___
*10.	When 1E12-F068B, B RHR Hx Wtr Otlt Vlv is closed, STOP the running RHR Service Water pump, 1E12-C300D/C.	One RHR Service Water pump 1E12-C300D/C control switch taken to STOP when 1E12-F068B, B RHR Hx Wtr Otlt Vlv is closed.	___	___	___
11.	VERIFY flow decreases to 0 gpm on Flow Indicator 1E12-R602B	Flow decrease to 0 gpm on Flow Indicator 1E12-R602B verified.	___	___	___
12.	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 turned to NORMAL.	___	___	___
13.	Log position of O/L Bypass switch in the Unit Log.	Position of O/L Bypass switch o logged in unit log o requested to be logged by Unit NSO	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
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.				
14.	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.				
15.	SHUTDOWN the RHR Service Process Radiation Monitor per LOP-PR-06.	Step determined to be Not Applicable.	___	___	___
16.	Locally in the Diesel Generator Building Penthouse, VERIFY the Div 2 Unit 1 1VY06C RHR Service Water Ventilation Fan Stops	Local operator directed to verify 1VY06C stops.	___	___	___
CUE	As local operator, acknowledge direction, and then report that 1VY06C, Div 2 Unit 1 1VY06C RHR Service Water Ventilation Fan, has stopped.				
17.	VERIFY the appropriate ESF Status Panel Annunciator RHR B Cont Heat Rem Inop (#36) is CLEARED.	ESF Status Panel Annunciator window #36 is verified to be clear.	___	___	___
18.	Inform US that LOP-RH-05 is complete.	Unit Supervisor informed that LOP-RH-05 is complete.	___	___	___
Terminating	Acknowledge report.				
CUE	This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Secure RHR Service Water

JPM Number: B.1.f Revision Number: 01

Task Number and Title:

64.109 Operate RHR Service Water IAW LOP-RH-05.

K/A Number and Importance:

400000 A4.01 3.1/3.0

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ❑ Yes ■ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No **SRO Only:** ❑ Yes ■ No

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

References: LOP-RH-05 Rev 20

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)

INITIAL CONDITIONS

- You are an assist NSO.
- 'B' RHR Service water has been running for a pump vibration and flow data test.
- B RHR Service Water Process Radiation Monitor is INOP.
- Chemistry has completed the required sample within the last hour.
- 1E12-F448 and 1E12-F451 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' RHR Service Water IAW LOP-RH-05.

Inform the Unit Supervisor when LOP-RH-05 is complete.

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A Unicom Company

Nuclear Generation Group

Job Performance Measure

Initiate SBLC IAW LGA-SC-101 with trip of first pump started

JPM Number: B.1.g

Revision Number: 01

Date: 08/03/2000

Developed By: _____ 8-11-00

Instructor **Date**

Approved By: _____ 8-11-00

Operations Representative **Date**

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 29 (rst 29).

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

2. Load the computer aided exercise (cae) from the zip disk (Filename **ssc03.cae**)
   - Assign A SBLC ON light to trg 1 and 2
     (trgset 1 "Q3J00RRO .EQ. 1")
     (trgset 2 "Q3J00RRO .EQ. 1")
   - Assign B SBLC ON light to trg 3 and 4
     (trgset 3 "Q3K00RRO .EQ. 1")
     (trgset 4 "Q3K00RRO .EQ. 1")
   - Set SBLC pump trips on triggers 1 and 3
     (mrf iasctrpa (1) trip)
     (mrf iasctrpb (3) trip)
   - Setup for removal of SBLC malfunctions
     (trg 2 "drf iasctrpb")
     (trg 4 "drf iasctrpa")
3. Insert degraded scram discharge volume malfunctions
   (imf MRD277 95)
   (imf MRD278 95)
4. Arm and depress A & B RPS scram pushbuttons
5. Place Mode Switch in Shutdown
6. Arm and depress both divisions of ARI
7. Allow all accumulator alarms and CRD high temperature alarm to come in.
8. Silence, acknowledge and reset the annunciators and the process computer.
9. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Your are an NSO.
- Unit 1 was scrammed but not all rods fully inserted.
- Both divisions of ARI were initiated but were not successful.

INITIATING CUE

The Unit Supervisor has directed you to inject SBLC into the vessel to shutdown the reactor.

Inform the Unit Supervisor when the SBLC injection is verified.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	All steps of this JPM are to be completed at control room panel 1H13-P603 unless otherwise noted.				
*1.	PLACE 1A/1B SBLC PMP, 1C41-C001A/B, Key 63/64 keylock switch to SYS A/SYS B.	o Key 63 turned to 'SYS A' o Key 64 turned to 'SYS B'	___	___	___
Sim Op	VERIFY that the malfunction is deleted for the other SBLC pump after the first pump is started.				
2.	CHECK 1C41-F004A, SBLC INJ SQUIB VLV, ON light extinguishes.	1C41-F004A, SBLC INJ SQUIB VLV, ON light checked to be extinguished.	___	___	___
3.	CHECK 1C41-F004B, SBLC INJ SQUIB VLV, ON light extinguishes.	1C41-F004B, SBLC INJ SQUIB VLV, ON light checked to be extinguished.	___	___	___
4.	CHECK SBLC SQUIB VLV CONTINUITY LOSS, Alarm A105, annunciates.	SBLC SQUIB VLV CONTINUITY LOSS, Alarm A105, checked to be fast flashing.	___	___	___
5.	CHECK 1C41-F001A, SBLC STRG TNK 1A OUTLET VLV, opens.	1C41-F001A, SBLC STRG TNK 1A OUTLET VLV, checked open.	___	___	___
6.	CHECK 1C41-F001B, SBLC STRG TNK 1B OUTLET VLV, opens.	1C41-F001B, SBLC STRG TNK 1B OUTLET VLV, checked open.	___	___	___
7.	CHECK 1A/B SBLC PMP, 1C41-C001A/B, starts and discharge pressure rises to reactor pressure on SBLC PMP PRESS, 1C41-R600	o 1A SBLC PMP, 1C41-C001A, checked to start and identified as tripped. o 1B SBLC PMP, 1C41-C001B, checked to start and identified as tripped	___	___	___
8.	IF RWCU isolations are NOT defeated per LGA-RT-102,	RWCU isolations ACTIVE determined.			

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
9.	VERIFY 1G33-F004, RWCU SUCT OTBD ISOL VLV, closes.	At 1H13-P602, 1G33-F004, RWCU SUCT OTBD ISOL VLV, verified close.	___	___	___
10.	VERIFY running 1A/1B RWCU PMP, 1G33-C001A/B, trips	At 1H13-P602, running 1A/1B RWCU PMP, 1G33-C001A/B, verified tripped.	___	___	___
11.	PLACE 1A/1B SBLC PMP, 1C41-C001A/B, Key 63/64 keylock switch to STOP	o Keylock switch for 1A SBLC pump placed in STOP. o Keylock switch for 1B SBLC pump placed in STOP.	___	___	___
*12.	INITIATE Standby System B/A by PLACING 1B/A SBLC PMP, 1C41-C001B/A, Key 64/63 keylock switch to SYS B/SYS A.	o Key 64 turned to 'SYS B' o Key 63 turned to 'SYS A'	___	___	___
13.	CHECK 1C41-F004A, SBLC INJ SQUIB VLV, ON light extinguishes.	1C41-F004A, SBLC INJ SQUIB VLV, ON light checked to be extinguished.	___	___	___
14.	CHECK 1C41-F004B, SBLC INJ SQUIB VLV, ON light extinguishes.	1C41-F004B, SBLC INJ SQUIB VLV, ON light checked to be extinguished.	___	___	___
15.	CHECK SBLC SQUIB VLV CONTINUITY LOSS, Alarm A105, annunciates.	SBLC SQUIB VLV CONTINUITY LOSS, Alarm A105, checked to be fast flashing.	___	___	___
16.	CHECK 1C41-F001A, SBLC STRG TNK 1A OUTLET VLV, opens	1C41-F001A, SBLC STRG TNK 1A OUTLET VLV, checked open.	___	___	___
17.	CHECK 1C41-F001B, SBLC STRG TNK 1B OUTLET VLV, opens	1C41-F001B, SBLC STRG TNK 1B OUTLET VLV, checked open.	___	___	___
18.	CHECK 1A/B SBLC PMP, 1C41-C001A/B, starts and discharge pressure rises to reactor pressure on SBLC PMP PRESS, 1C41-R600	o 1A SBLC PMP, 1C41-C001A, checked to start and discharge pressure rises to reactor pressure. o 1B SBLC PMP, 1C41-C001B, checked to start and discharge pressure rises to reactor pressure.	___	___	___

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
19.	CHECK SBLC Storage Tank level lowers on SBLC TANK LVL, 1C41-R601	SBLC Storage Tank level checked to be lowering on SBLC TANK LVL, 1C41-R601	___	___	___
20.	VERIFY 1G33-F004, RWCU SUCT OTBD ISOL VLV, closes	At 1H13-P602, 1G33-F004, RWCU SUCT OTBD ISOL VLV, verified close.	___	___	___
21.	VERIFY running 1A/1B RWCU PMP, 1G33-C001A/B, trips	At 1H13-P602, running 1A/1B RWCU PMP, 1G33-C001A/B, verified tripped.	___	___	___
22.	CHECK Neutron flux levels lowering.	Neutron flux levels checked to be lowering.	___	___	___
23.	Informs Unit Supervisor of action taken/status.	Unit Supervisor informed of action taken/status.	___	___	___
Terminating Cue	Acknowledge report. This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Initiate SBLC IAW LGA-SC-101 with trip of first pump started

JPM Number: B.1.g Revision Number: 01

Task Number and Title:

431.020 Given entry into LGA-010, Failure to Scram, evaluate plant conditions and perform SBLC injection IAW LGA-SC-01.

K/A Number and Importance:

295037 EA1.04 4.5/4.5

Suggested Testing Environment: Simulator

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ■ Yes ❑ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No

Estimated Time to Complete: 4 minutes **Actual Time Used:** ____ minutes

References: LGA-SC-101 Rev 0

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)

INITIAL CONDITIONS

- Your are an NSO.
- Unit 1 was scrammed but not all rods fully inserted.
- Both divisions of ARI were initiated but were not successful.

INITIATING CUE

The Unit Supervisor has directed you to inject SBLC into the vessel to shutdown the reactor.

Inform the Unit Supervisor when the SBLC injection is verified.

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Job Performance Measure

Electrically disarm a control rod at its HCU

JPM Number: B.2.a

Revision Number: 00

Date: 08/11/2000

Developed By: _____ 8-14-00

Instructor **Date**

Approved By: _____ 6-14-00

Operations Representative **Date**

Job Performance Measure (JPM)

Revision Record (Summary)

1. **Revision 00**

Job Performance Measure (JPM)

Materials

1. The following material is required to be provided to examinee:
   a. One copy of LOP-RD-11 (after demonstrating knowledge of location of controlled copy)
   b. An OOS with four cards for an HCU.
   c. One laser pointer.
2. The following information needs to be determined prior to performance of this JPM:
   a. HCU with low radiation doses to minimize the dose/contamination.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- You are an extra NSO.
- Unit ___ is starting up.
- Control rod ___ - ___ was determined to be uncoupled and fully inserted.
- Radiological conditions in the Reactor building are at normal values.
- You have a plant radio.

INITIATING CUE

The Unit Supervisor has directed you to electrically disarm rod __ - __ in accordance with LOP-RD-11. (Provide candidate with OOS for control rod.)

Inform the Unit NSO when the rod is electrically disarmed.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1.	Obtain copy of LOP-RD-11.	Examinee demonstrates where copy of LOP-RD-11 can be obtained.	___	___	___
CUE	After examinee demonstrates where copy of LOP-RD-11 can be obtained, provide examinee with copy of LOP-RD-11.				
Note	The HCUs are located on the 761' elevation of the Reactor building.				
2.	Locate HCU for rod to be electrically disarmed.	HCU for rod to be electrically disarmed located.	___	___	___
*3.	At HCU to be disarmed, REMOVE locking pin for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve.	Locking pin for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
*4.	At HCU to be disarmed, REMOVE solenoid for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve.	Solenoid for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
5.	At HCU to be disarmed, ENSURE solenoid for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve is labeled for proper replacement.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve is labeled for proper replacement.	___	___	___
CUE	The item you identified is in the condition described.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
6.	At HCU to be disarmed, SECURE solenoid for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve to prevent damage.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-122, CRD HCU Withdrawal Drive Water Directional Control Valve is secured to prevent damage.	___	___	___
CUE	The item you identified is in the condition you described.				
*7.	At HCU to be disarmed, REMOVE locking pin for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve.	Locking pin for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
*8.	At HCU to be disarmed, REMOVE solenoid for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve.	Solenoid for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
9.	At HCU to be disarmed, ENSURE solenoid for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve is labeled for proper replacement.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve is labeled for proper replacement.	___	___	___
CUE	The item you identified is in the condition described.				
10.	At HCU to be disarmed, SECURE solenoid for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve to prevent damage.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-123, CRD HCU Insert Drive Water Directional Control Valve is secured to prevent damage.	___	___	___
CUE	The item you identified is in the condition you described.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*11.	At HCU to be disarmed, REMOVE locking pin for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve.	Locking pin for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
*12.	At HCU to be disarmed, REMOVE solenoid for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve.	Solenoid for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
13.	At HCU to be disarmed, ENSURE solenoid for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve is labeled for proper replacement.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve is labeled for proper replacement.	___	___	___
CUE	The item you identified is in the condition described.				
14.	At HCU to be disarmed, SECURE solenoid for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve to prevent damage.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-120, CRD HCU Withdrawal Exhaust Wtr Directional Control Valve is secured to prevent damage.	___	___	___
CUE	The item you identified is in the condition you described.				
*15.	At HCU to be disarmed, REMOVE locking pin for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve.	Locking pin for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
*16.	At HCU to be disarmed, REMOVE solenoid for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve.	Solenoid for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve removed.	___	___	___
CUE	The item you identified is in the position described.				
17.	At HCU to be disarmed, ENSURE solenoid for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve is labeled for proper replacement.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve is labeled for proper replacement.	___	___	___
CUE	The item you identified is in the condition described.				
18.	At HCU to be disarmed, SECURE solenoid for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve to prevent damage.	At HCU to be disarmed, solenoid for 1(2)C11-DXXYY-121, CRD HCU Insert Exhaust Water Directional Control Valve is secured to prevent damage.	___	___	___
CUE	The item you identified is in the condition you described.				
19.	Notify the Unit NSO that the accumulator is electrically disarmed and have him install sticker with OOS number on indication at control room panel 1(2)H13-P601.	Unit NSO notified that accumulator is electrically disarmed and directed to install sticker with OOS number on indication at control room panel 1(2)H13-P601.	___	___	___
Terminating Cue	Acknowledge report. This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Electrically disarm a control rod at its HCU

JPM Number: B.2.a Revision Number: 00

Task Number and Title:

Electrically disarm a control rod at its HCU.

K/A Number and Importance:

201003 A2.02 3.7/3.8

Suggested Testing Environment: Plant

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ☐ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ☐ Yes ■ No

Time Critical: ☐ Yes ■ No **SRO Only:** ☐ Yes ■ No

Estimated Time to Complete: 6 minutes **Actual Time Used:** _____ minutes

References: LOP-RD-11 Rev 5

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)

INITIAL CONDITIONS

- You are an extra NSO.
- Unit ___ is starting up.
- Control rod ___ - ___ was determined to be uncoupled and fully inserted.
- Radiological conditions in the Reactor building are at normal values.
- You have a plant radio.

INITIATING CUE

The Unit Supervisor has directed you to electrically disarm rod __ - __ in accordance with LOP-RD-11. (Provide candidate with OOS for control rod.)

Inform the Unit NSO when the rod is electrically disarmed.

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Job Performance Measure

Verify isokinetic flow for the main vent stack WRGM

JPM Number: B.2.b

Revision Number: 00

Date: 08/11/2000

Developed By: _____ 8-14-00

Instructor **Date**

Approved By: _____ 8.14.00

Operations Representative **Date**

Job Performance Measure (JPM)

Revision Record (Summary)

1. **Revision 00**

Job Performance Measure (JPM)

Materials

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

   a. One copy of LOP-PR-04 (after demonstrating knowledge of location of controlled copy)

   b. One laser pointer.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- You are an extra NSO.
- The Station Vent Stack WRGM failed to automatically shift to the Mid/High Range Sample Pump.
- Stack flow is 700,000 scfm.
- Radiological conditions in the Auxiliary and Reactor building are at normal values.
- You have a plant radio.

INITIATING CUE

The Unit Supervisor has directed you to manually shift the Station Vent Stack WRGM to the Mid/High Range Sample Pump IAW LOP-PR-04, Step E.8.

Notify the Unit NSO when the Stack WRGM is re-aligned with proper flow.

Inform the Unit NSO when the rod is electrically disarmed.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1.	Obtain copy of LOP-PR-04.	Examinee demonstrates where copy of LOP-PR-04 can be obtained.	___	___	___
CUE	After examinee demonstrates where copy of LOP-PR-04 can be obtained, provide examinee with copy of LOP-PR-04.				
Note	Panel 0PLE6J is located next to the Sample Conditioner, 0PLD4J, on the 786' elevation of the Auxiliary building.				
2.	Locate panel 0PLE6J.	Panel 0PLE6J located.	___	___	___
3.	VERIFY local C/S for Aux Sample Pump is in AUTO.	Local C/S for Aux Sample Pump is verified in the AUTO position.	___	___	___
CUE	The item you identified is in the position described.				
Note	Panel 0PLD5J is located on the 786' elevation of the Auxiliary building at the Sample Skid.				
4.	Locate Sample Detector Skid 0PLD5J.	Sample Detector Skid 0PLD5J located.	___	___	___
*5.	On panel 0PLD5J, START the Mid/Hi Range Sample Pump by placing the C/S to ON.	Mid/Hi Range Sample Pump C/S placed in ON position.	___	___	___
CUE	The item you identified is in the position described.				
*6.	On panel 0PLD5J, SHUTDOWN the Low Range Sample Pump by placing the C/S to OFF.	Low Range Sample Pump C/S placed in OFF position.	___	___	___
CUE	The item you identified is in the position described.				
7.	VERIFY the Aux Sample Pump (0N62-301) AUTO STARTS.	Aux Sample Pump (0N62-301) verified to start.	___	___	___
CUE	The component you is identified is rotating.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
Note	Stack flow was provided in initial conditions to be 700,000 scfm				
*8.	VERIFY isokinetic flow by taking the sum of rotometers 0D18-N532 and 0D18-N529 as the total sample flow. COMPARE with stack flow and VERIFY within the attachment A or B limits.	• 0D18-N532 read • 0D18-N529 read • Readings summed and compared to Attachment A and B • Flow rate is determined to require adjusting	___	___	___
CUE	When 0D18-N532 is looked at: point to indicate the ball at 0.8. When 0D18-N529 is looked at: point to indicate the ball at 0.3.				
*9.	If flow rate requires adjusting THROTTLE 0N62-F309, Auxiliary Sample Pump Suction Valve.	0N62-F309 is throttled OPEN (counter clockwise) to increase sample flow until total sample flow is approximately 1.45 $\pm$ 0.3.	___	___	___
CUE	If 0N62-F309 is turned clockwise, decrease the values of 0D18-N532 and 0D18-N529. If 0N62-F309 is turned counter clockwise, increase the values of 0D18-N532 and 0D18-N529.				
10.	Notify the Unit NSO that the Mid/High Range Sample Pump is in service and isokinetic flow has been verified.	Unit NSO notified that the Mid/High Range Sample Pump is in service and isokinetic flow has been verified.	___	___	___
Terminating Cue	Acknowledge report. This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Verify isokinetic flow for the main vent stack WRGM

JPM Number: B.2.b Revision Number: 00

Task Number and Title:

52.014 Given Unit Supervisor authorization, assess miscellaneous information from the Station Vent Stack or Standby Gas Treatment (SBGT) Wide Range Radiation Monitoring System IAW station procedures.

K/A Number and Importance:

272000 A1.01 3.2/3.2

Suggested Testing Environment: Plant

Actual Testing Environment: ❑ Simulator ❑ Plant ❑ Control Room

Testing Method: ❑ Simulate ❑ Perform **Faulted:** ❑ Yes ■ No **Alternate Path:** ❑ Yes ■ No

Time Critical: ❑ Yes ■ No **SRO Only:** ❑ Yes ■ No

Estimated Time to Complete: 7 minutes **Actual Time Used:** _____ minutes

References: LOP-PR-04 Rev 14

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)

INITIAL CONDITIONS

- You are an extra NSO.
- The Station Vent Stack WRGM failed to automatically shift to the Mid/High Range Sample Pump.
- Stack flow is 700,000 scfm.
- Radiological conditions in the Auxiliary and Reactor building are at normal values.
- You have a plant radio.

INITIATING CUE

The Unit Supervisor has directed you to manually shift the Station Vent Stack WRGM to the Mid/High Range Sample Pump IAW LOP-PR-04, Step E.8.

Notify the Unit NSO when the Stack WRGM is re-aligned with proper flow.

Inform the Unit NSO when the rod is electrically disarmed.

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Job Performance Measure

Perform LGA-RH-01 Attachment 2A to use U-2 RHR for injection via the Shutdown Cooling Return line

JPM Number: B.2.c

Revision Number: 00

Date: 08/03/2000

Developed By: _____ 8-11-00
Instructor **Date**

Approved By: _____ 8-11-00
Operations Representative **Date**

Job Performance Measure (JPM)

Revision Record (Summary)

1. **Revision 00**

Job Performance Measure (JPM)

Materials

1. The following material is required to be provided to candidate:
   a. One copy of LGA-RH-01 (after demonstrating knowledge of location of controlled copy)
   b. One laser pointer.
2. The following material may be identified by the candidate but NOT removed from its normal storage location:
   a. Unit 2 LGA-RH-01 equipment bag containing the following:
      1) 2 Yellow jumpers
      2) 1 Nut driver
      3) Electrical Tape
      4) 1 Locked Valve and LGA Support Ladder Key
   b. Flashlights/lanterns

Job Performance Measure (JPM)

INITIAL CONDITIONS

- You are an extra NSO.
- Unit 2 is experiencing an ATWS with low RPV level due to a feedwater line break.
- 10 control rods are full out, all other rods full in.
- LGA-NB-01 is in progress with reactor power is at 4% and falling.
- RPV level is -45 inches and dropping at 3 inches per minute.
- RCIC, SBLC and CRD are injecting at rated flows.
- Radiological conditions in the Turbine and Auxiliary buildings are normal.
- Radiological conditions in the Reactor building are twice normal values.
- You have a plant radio

INITIATING CUE

The Unit Supervisor has directed you perform LGA-RH-01 Attachment 2A.

Inform Unit NSO when the attachment is complete.

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

Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

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

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

The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

JPM Start Time: _____

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
1.	Obtain copy of LGA-RH-01	Candidate demonstrates where copy of LGA-RH-01 can be obtained.	___	___	___
CUE	After candidate demonstrates where copy of LGA-RH-01 can be obtained, provide candidate with copy of LGA-RH-01.				
Note	The Main LGA Support Locker key is an 'LA' key and can be obtained from the Control Room key locker.				
2.	Obtain Main LGA Support Locker key.	Candidate obtains Main LGA Support Locker key.	___	___	___
3.	Obtain Unit 2 LGA-RH-01 equipment bag from Main LGA Support Locker.	Candidate obtains Unit 2 LGA-RH-01 Method 1 bag from Main LGA Support Locker.	___	___	___
CUE	You have the equipment that you have identified.				
Note	Sequence is not required for Number 4 through Number 11 inclusive.				
*4.	At panel 2H13-P623, INSTALL yellow jumper from Terminal Block BB Point 104 to Terminal Block DD Point 42.	Candidate locates panel 2H13-P623, and installs yellow jumper from Terminal Block BB Point 104 to Terminal Block DD Point 42.	___	___	___
CUE	The jumper is installed as you indicated.				
5.	Sign and enter date and time on LGA-RH-01, Attachment 2A.	Candidate signs and enters the current time and date on LGA-RH-01, Attachment 2A.	___	___	___
*6.	At panel 2H13-P623, Relay 2B21H-K75, LIFT lead from Point 10.	Candidate locates panel 2H13-P623, Relay 2B21H-K75, and lifts lead from Point 10.	___	___	___
CUE	The wire lead you identified is in the condition you described.				

Job Performance Measure (JPM)

STEP	ELEMENT	STANDARD	SAT	UNSAT	Comment Number
7.	Sign and enter date and time on LGA-RH-01, Attachment 2A.	Candidate signs and enters the current time and date on LGA-RH-01, Attachment 2A.	___	___	___
*8.	At panel 2H13-P623, INSTALL yellow jumper from Terminal Block DD Point 83 to Terminal Block DD Point 84.	Candidate locates panel 2H13-P623, and installs yellow jumper from Terminal Block DD Point 83 to Terminal Block DD Point 84.	___	___	___
CUE	The jumper is installed as you indicated.				
9.	Sign and enter date and time on LGA-RH-01, Attachment 2A.	Candidate signs and enters the current time and date on LGA-RH-01, Attachment 2A.	___	___	___
*10.	At panel 2H13-P623, Relay 2B21H-K75, LIFT lead from Point 12.	Candidate locates panel 2H13-P623, Relay 2B21H-K75, and lifts lead from Point 12.	___	___	___
CUE	The wire lead you identified is in the condition you described.				
11.	Sign and enter date and time on LGA-RH-01, Attachment 2A.	Candidate signs and enters the current time and date on LGA-RH-01, Attachment 2A.	___	___	___
12.	Notify Unit NSO that Attachment 2A is complete.	Candidate notifies Unit NSO that Attachment 2A is complete.	___	___	___
Terminating Cue	Acknowledge report. This JPM is complete.				

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Perform LGA-RH-01 Attachment 2A to use U-2 RHR for injection via the Shutdown Cooling Return line

JPM Number: B.2.c Revision Number: 00

Task Number and Title:

401.000 Given a LGA in progress, evaluate plant conditions, locate and perform the following procedures including installation/removal of a jumper/lead IAW the LGAs. i. LGA-RH-01

K/A Number and Importance:

295031 EA1.08 3.8/3.9

Suggested Testing Environment: Plant

Actual Testing Environment: ☐ Simulator ☐ Plant ☐ Control Room

Testing Method: ☐ Simulate ☐ Perform **Faulted:** ☐ Yes ■ No **Alternate Path:** ☐ Yes ■ No

Time Critical: ☐ Yes ■ No **SRO Only:** ☐ Yes ■ No

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

References: LGA-RH-01 Rev 7

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)

INITIAL CONDITIONS

- You are an extra NSO.
- Unit 2 is experiencing an ATWS with low RPV level due to a feedwater line break.
- 10 control rods are full out, all other rods full in.
- LGA-NB-01 is in progress with reactor power is at 4% and falling.
- RPV level is -45 inches and dropping at 3 inches per minute.
- RCIC, SBLC and CRD are injecting at rated flows.
- Radiological conditions in the Turbine and Auxiliary buildings are normal.
- Radiological conditions in the Reactor building are twice normal values.
- You have a plant radio

INITIATING CUE

The Unit Supervisor has directed you perform LGA-RH-01 Attachment 2A.

Inform Unit NSO when the attachment is complete.