

Nuclear Generation Group

Job Performance Measure

Bypass the Reactor Building Ventilation Isolation

JPM Number: B.1.a.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

1. Reset the simulator to IC 94 (rst 94 from zip disk).
2. **IC Description:** Shutdown reactor following a scram.

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.

3. **Manual Actuation:**

- Ensure that the QGA packet for QCOP 1600-17 is complete, including safety glasses, and in the drawer next to the ANSO desk.

4. **Malfunctions:**

- Insert a group II Isolation using malfunction RP07A & RP07B
(imf rp07a)&(imf rp07b)

5. **Remotes:** NONE

6. **Overrides:** NONE

7. When the above steps are completed for this and other JPMs to be run concurrently, then validate the concurrently run JPMs using the JPM Validation Checklist.
8. This completes the setup for this JPM.

Job Performance Measure (JPM)

Revision Record (Summary)

- Revision 0, This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.
- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 2 The JPM was revised to incorporate NRC validation comments.

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Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section 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)

INITIAL CONDITIONS

- A small leak inside the U-1 Drywell has caused the pressure to increase to 3.5 psig.
- All automatic functions occurred as expected.
- The MSIV room temperature has increased to 164°F and the Unit Supervisor wants to restart the Reactor building ventilation per QGA 300.
- This JPM is NOT time critical.

INITIATING CUE

Bypass the Reactor building ventilation isolation on U-1 IAW QCOP 1600-17

Provide examinee with:

QGA support packet for QCOP 1600-17 when directed by cue.

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



Job Performance Measure (JPM)

Operator's Name: _____
Job Title: RO SRO

JPM Title: Bypass the Reactor Building Ventilation Isolation

JPM Number: B.1.a. Revision Number: 2

Task Number and Title:
SRN-1600-P25 Given a reactor plant in a QGA situation, perform/simulate installing and removing one of the following sets of jumpers in accordance with the indicated procedure.

K/A Number and Importance:
K/A: 288000 A2.01 Rating: 3.3/3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: Simulator Plant
 Control Room

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

Time Critical: Yes No

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

References:
QCOP 1600-17 Rev. 3

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- A small leak inside the U-1 Drywell has caused the pressure to increase to 3.5 psig.
- All automatic functions occurred as expected.
- The MSIV room temperature has increased to 164°F and the Unit Supervisor wants to restart the Reactor building ventilation per QGA 300.
- This JPM is NOT time critical.

INITIATING CUE

Bypass the Reactor building ventilation isolation on U-1 IAW QCOP 1600-17

Nuclear Generation Group

Job Performance Measure

RCIC Manual Initiation (Hardcard) with a Turbine Trip

JPM Number: B.1.b.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

9. Reset the simulator to IC 94 (rst 94).
10. **IC Description:** Reactor stable after scram.
11. **Manual Actuation:**
 - Ensure that the RCIC system is in its normal standby lineup.
12. **Malfunctions:**
 - Simulate failure of the RCIC exhaust check valve to open by closing the exhaust line manual isolation valve using remote function (*mrf rc04r close*)
 - When prompted by the evaluator, reopen the valve using (*mrf rc04r open*) and give the report that the check valve appeared to be stuck closed but you have cycled it manually and it now is free to move. No damage and everything is satisfactory in the RCIC room.
 - When prompted by the evaluator, give report as NLO dispatched to RCIC room to verify the rupture diaphragm intact, report diaphragm is intact and all looks normal and satisfactory.
13. **Remotes:** NONE
14. **Overrides:** NONE
15. 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.
16. This completes the setup for this JPM.

Job Performance Measure (JPM)

Revision Record (Summary)

- Revision 0, This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.
- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 2 The JPM was revised to incorporate NRC validation comments.

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Information For Evaluator's Use:

UNSAT requires written comments on respective step.

* Denotes CRITICAL steps.

Number any comments in the "Comment Number" column on the following pages. Then annotate that comment in the "Comments" section 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)

INITIAL CONDITIONS

- A loss of feedwater has resulted in a reactor scram and entry into QGA 100.
- The Unit Supervisor has decided that RCIC should be used to restore reactor water level.
- Hardcard use has been authorized by the Unit Supervisor.
- RCIC is in its normal standby lineup.
- This JPM is not time critical

INITIATING CUE

Manually initiate Unit 1 RCIC using the hardcard and inject into the reactor vessel.

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

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Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
	Obtain hardcard for RCIC MANUAL STARTUP from the 901-4 panel.	Obtains hardcard for RCIC MANUAL STARTUP from the 901-4 panel.	[] [] []
Hardcard step 1	Manually initiates RCIC using the manual initiation pushbutton.	Depresses and holds the RCIC MAN INITIATION pushbutton on the 901-4	[] [] []
	Verifies the system lines up to inject.	Using indications on the 901-4 panel verifies system valves are lining up for injection.	[] [] []
*	Identifies turbine trip on high exhaust pressure.	Identifies turbine trip by alarm 901-4 D-15 and cause is due to high exhaust pressure by alarm 901-4 C-14.	[] [] []
901-4 C-14 step B.1.	Verifies the automatic actions occurred.	Verifies that the MO 1-1301-60 MIN FLOW VLV and the MO 1-1301-61 STM TO TURB VLV are closed	[] [] []
*901-4 C-14 step B.2.	Verifies steam exhaust check valve open by dispatching operator to RCIC room.	Verifies 1-1301-64 RCIC TURB EXH STOP CK VLV is open by dispatching NLO to RCIC room.	[] [] []
901-4 C-14 step B.3.	Determines if high torus pressure exists.	Determines that a high torus pressure does not exist as indicated on 1-1602-1 TORUS PRESS.	[] [] []
901-4 C-14 step B.4.	Determines if the exhaust diaphragm has ruptured.	Determines that the exhaust diaphragm has not ruptured by: Absence of alarm 901-4 A-16 RCIC room temp normal on 901-21 RCIC room rads normal on 901-02 Dispatches NLO to RCIC room to verify that rupture diaphragm is intact.	[] [] []

Evaluator Note: Prompt the Simulator operator to provide cue from previously dispatched (step 901-4 C-14 B.2.) operator sent to inspect the exhaust line stop-check valve, that he found it stuck, but manually cycled it and it is now free to move. No damage, everything is sat.

Also have Simulator Operator provide cue as the NLO sent to inspect the rupture diaphragm (step 901-4 C-14 B.4.) that everything appears normal in the RCIC room and that the rupture diaphragm is intact.

In the next step, if the candidate seeks input from US, provide cue that condition has been corrected and RCIC operation is required.

Job Performance Measure (JPM)

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
901-4 C-14 step B.5.	Determines cause of high exhaust pressure has been corrected and RCIC IS required for operation. Starts turbine trip recovery IAW QCOA 1300-01.	Determines cause of high exhaust pressure has been corrected and RCIC IS required for operation. Starts turbine trip recovery IAW QCOA 1300-01.	[] [] []
QCOA 1300-01 step D.1.	Verifies automatic actions occurred.	Previously done in step B.1. of 901-4C-14	[] [] []
QCOA 1300-01 step D.2.	Determines if a trip or isolation occurred.	Previously determined by 901-4 C-14 and operator reports from the field.	[] [] []
<p><i>Evaluator Note: In the next step, the candidate may ask US if initiation signal should be reset to prevent system from autostarting following reset of the turbine trip.</i></p> <p><i>Provide cue that it is NOT desired to clear the initiation signal and reiterate need for RCIC injection.</i></p>			
QCOA 1300-01 step D.4.	Determines that initiation signal has not cleared.	Determines that initiation signal is not cleared by alarm 901-4 D-16.	[] [] []
*QCOA 1300-01 step D.7.b.	Resets the turbine trip.	Verifies high exhaust pressure trip signal clear, by absence of alarm 901-4 C-14, and resets turbine trip by depressing TURB RESET pushbutton.	[] [] []
QCOA 1300-01 step D.9.	Restarts RCIC for injection IAW QCOP 1300-02 Hard Card.	Determines turbine trip is reset by absence of any alarms, and that RCIC is required for operation. References Hard card to restart system.	[] [] []
* Hardcard step 1	Manually initiates RCIC using the manual initiation pushbutton.	Depresses and holds the RCIC MAN INITIATION pushbutton on the 901-4	[] [] []
	Verifies the system lines up to inject.	Using indications on the 901-4 panel verifies system valves reposition and system is injecting at ~400 gpm.	[] [] []
<p><i>EVALUATOR: The candidate should inform you that the task is complete.</i></p>			

JPM Stop Time: _____

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Job Performance Measure (JPM)

Operator's Name: _____
 Job Title: RO SRO

JPM Title: RCIC Manual Initiation (Hardcard) with a Turbine Trip

JPM Number: B.1.b.

Revision Number: 2

Task Number and Title:

SR-1300-P01, Given a reactor plant in an accident condition where RCIC fails to autostart and/or fails to start with the auto pushbutton, start RCIC for injection in accordance with QCOP-1300-02. (Important PRA Operator Action – starting RCIC terminates 13 of the top 200 Core Damage Sequences)

K/A Number and Importance:

K/A: 217000 A2.02

Rating: 3.8/3.7

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: 30 minutes **Actual Time Used:** _____ minutes

References: QCOP 1300-02, Rev. 22
 QCOA 1300-01 Rev 11
 QCAN 901-4 C-14 Rev 1
 QCAN 901-4 D-15 Rev 4
 QCAN 901-4 D-16 Rev 6
 QCAN 901-4 E-16 Rev 0

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- A loss of feedwater has resulted in a reactor scram and entry into QGA 100.
- The Unit Supervisor has decided that RCIC should be used to restore reactor water level.
- Hardcard use has been authorized by the Unit Supervisor.
- RCIC is in its normal standby lineup.
- This JPM is not time critical

INITIATING CUE

Manually initiate Unit 1 RCIC using the hardcard and inject into the reactor vessel.

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Nuclear Generation Group

Job Performance Measure

Supply Bus 14-1 from Bus 24-1 using the Hardcard

JPM Number: B.1.c.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

Revision Record (Summary)

- Revision 0, This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.
- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 2 The JPM was revised to incorporate NRC validation comments.



Information For Evaluator’s Use:

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The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

17. Reset the simulator to IC 94 (rst 94).

18. IC Description:

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.

19. Manual Actuation:

- Place the 1B Core Spray pump in PTL on 901-3 panel.
- Place the 1C RHR pump in PTL on 901-3 panel.
- Place the 1D RHR pump in PTL on 901-3 panel.
- Place the U-1 EDG control switch in STOP on the 901-8 panel.

20. Malfunctions:

- Prevent the U-1 EDG from starting (*imf dg03a*)
- Trip the bus 14 to 14-1 tie breaker 152-1427 (*imf ed04m*)
- Acknowledge alarms associated with the bus 14 to bus 14-1 breaker trip as part of setup.

21. **Remotes:** When asked by the candidate for U-2 to close bus 24-1 to 14-1 crosstie breaker on U-2, use remote function (*mrf ed34r close*) to close in the breaker and report to candidate that the bus 24-1 to 14-1 crosstie breaker on U-2 is closed in.

22. **Overrides:** NONE

23. 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.

24. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- Unit 1 has experienced a transient resulting in a LOCA and drywell pressure of 5 psig.
- The bus 14 to bus 14-1 tie breaker has tripped.
- The Unit 1 Emergency Diesel Generator failed to start.
- Bus 14-1 is de-energized.
- No overcurrent alarms are up for any busses.
- Unit 2 is operating at 150 MWE in a split configuration (load is split between the UAT and the RAT).
- Unit 2 Emergency Diesel Generator to bus 24-1 breaker is open.
- The 1B Core Spray pump and the 1C and 1D RHR pumps are in PTL and have been verified.
- The Unit Supervisor has authorized hardcards.
- This JPM is not time critical

INITIATING CUE

Energize bus 14-1 from bus 24-1 using the hardcard.

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



Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
	Obtain hardcard for BUS 14-1 TO BUS 24-1 TIE OPERATION (BUS 14-1 DEAD) from the 901-74 panel.	Obtains hardcard for BUS 14-1 TO BUS 24-1 TIE OPERATION (BUS 14-1 DEAD) from the 901-74 panel.	[] [] []
Hardcard step 1	Places control switches in pull to lock to isolate bus 14.	Places the following control switches in PTL. * Bus 14-1 & Bus 61 Tie breaker * U1 Diesel Gen to Bus 14-1 ACB * Busses 14 and 14-1 Tie Breaker	[] [] []
*Hardcard step 2	Directs the Unit 2 NSO or ANSO to operate the synchronization switch and close bus 24-1 & 14-1 tie breaker.	Directs the Unit 2 RO to perform the following two steps on the 902-8 panel: 1. Place SYNCH switch to ON for BUS 24-1 & 14-1 tie ACB. 2. Close BUS 24-1 & 14-1 tie ACB	[] [] []
<p><i>Evaluators Note: If candidate asks the evaluator to perform this task, direct them to use the phone to contact the U-2 RO (simulator operator) for performance of these two tasks.</i></p> <p><i>Simulator Operator Note: When asked by the candidate for U-2 to close bus 24-1 to 14-1 crosstie breaker on U-2, use remote function (<u>mrf ed34r close</u>) to close in the breaker and report to candidate that the bus 24-1 to 14-1 crosstie breaker on U-2 is closed in.</i></p>			
*Hardcard step 3.a.	Places the synchronization switch ON for the crosstie.	Places the synchronization switch on the 901-8 panel to ON for BUS 24-1 & 14-1 tie ACB.	[] [] []
*Hardcard step 3.b.	Close bus 14-1 & 24-1 tie breaker.	Closes and holds (for approximately 10 seconds) the BUS 24-1 & 14-1 tie ACB on the 901-8 panel. Verifies BUS 24-1 & 14-1 tie ACB closed indication light and bus 14-1 live light lit.	[] [] []
<p><i>EVALUATOR: The candidate should inform you that the task is complete.</i></p>			

JPM Stop Time: _____



Job Performance Measure (JPM)

Operator's Name: _____
Job Title: RO SRO

JPM Title: Supply Bus 14-1 from Bus 24-1 using the Hardcard

JPM Number: B.1.c. Revision Number: 2

Task Number and Title:
SR-6500-P04. Given a loss of normal power to an emergency bus (13-1/14-1) with a failure of the associated emergency diesel to start, supply power to the emergency bus using the crosstie from unit 2 and restore 480 VAC busses in accordance with QOA 6500-03, QCOP 6500-08, QOA 6700-04 and QOA 6700-01. (SOER 83-6 r4)

K/A Number and Importance:
K/A: 262001 A4.01 Rating: 3.4/3.7

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: 7 minutes **Actual Time Used:** _____ minutes

References: QCOP 6500-08, Rev. 13

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- Unit 1 has experienced a transient resulting in a LOCA and drywell pressure of 5 psig.
- The bus 14 to bus 14-1 tie breaker has tripped.
- The Unit 1 Emergency Diesel Generator failed to start.
- Bus 14-1 is de-energized.
- No overcurrent alarms are up for any busses.
- Unit 2 is operating at 150 MWE in a split configuration (load is split between the UAT and the RAT).
- Unit 2 Emergency Diesel Generator to bus 24-1 breaker is open.
- The 1B Core Spray pump and the 1C and 1D RHR pumps are in PTL.
- The Unit Supervisor has authorized hardcards.
- This JPM is not time critical

INITIATING CUE

Energize bus 14-1 from bus 24-1 using the hardcard.

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Nuclear Generation Group

Job Performance Measure

Perform a Manual Scram Functional Test with Rod Drifts

JPM Number: B.1.d.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

Revision Record (Summary)

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- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 2 The JPM was revised to incorporate NRC validation comments.

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Information For Evaluator's Use:

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The timeclock starts when the candidate acknowledges the initiating cue.

Job Performance Measure (JPM)

SIMULATOR SETUP INSTRUCTIONS

25. Reset the simulator to IC 21 (rst 21).

NOTE: This JPM will result in a manual scram being inserted by the candidate. If this will effect other JPMS, it should be used alone or with administrative JPMS that do not require the use of the simulator or process computer.

26. Provide a copy of QCOS 0500-02 with section D.1. filled out for “Unit 1” as a “Normal Surveillance”, signed and dated by the Unit Supervisor, and section D.2. initialed as EO/ANSO.

27. Manual Actuation:

NONE

Malfunctions:

Assign B RPS tripped to trigger 2 “trg 2 E2”

Assign rod 1815 to drift in when RPS B is tripped “imf rd03r1815(2)”

Assign rod 2227 to drift in when RPS B is tripped “imf rd03r2227(2)”

Assign rod 1839 to drift in when RPS B is tripped “imf rd03r1839(2)”

Assign rod 0627 to drift in when RPS B is tripped “imf rd03r0627(2)”

Remotes:

NONE

Overrides:

NONE

28. 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.

29. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- The Unit Supervisor has ordered that a manual scram functional test be performed this shift on Unit 1.
- This JPM is not time critical.

INITIATING CUE

Perform a U-1 Manual Scram Functional Test IAW QCOS 0500-02.

Provide a copy of QCOS 0500-02 with section D.1. filled out for “Unit 1” as a “Normal Surveillance”, signed and dated by the Unit Supervisor, and section D.2. initialed as EO/ANSO.

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

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Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
*H.1.a.	Depress the "Channel A" manual scram pushbutton.	Depress lefthand pushbutton.	<input type="checkbox"/>	<input type="checkbox"/>	
H.1.b.	Verify red light in "Channel A" manual scram pushbutton is lit.	Red light lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H.1.c.	Verify "Channel A" scram solenoid group lights out.	Four RPS A scram solenoid lights not lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H.1.d.	Verify "Channel A Manual Scram" alarm.	Annunciator 901-5 A-10 lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*H.1.e.	Reset half scram and verify all 4 lights lit for Channel A and B.	Positions RPS scram reset switch first to position 2 and 3 then to position 1 and 4. - Verifies all 4 lights lit for Channel A and B.	<input type="checkbox"/>	<input type="checkbox"/>	
H.1.f.	Reset "Channel A Manual Trip" alarm.	Depresses reset pushbutton AND verifies Annunciator 901-5 A-10 not lit.	<input type="checkbox"/>	<input type="checkbox"/>	
*H.2.a.	Depress the "Channel B" manual scram pushbutton.	Depresses righthand pushbutton.	<input type="checkbox"/>	<input type="checkbox"/>	
H.2.b.	Verify red light in "Channel B" manual scram pushbutton is lit.	Red light lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H.2.c.	Verify "Channel B" scram solenoid GP lights out.	Four RPS B scram solenoid lights not lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H.2.d.	Verify "Channel B Manual Scram" alarm.	Annunciator 9015 A-15 lit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*F.5.	Recognizes rod drifts requiring a reactor scram per section F.5.	Recognizes that 4 rods are drifting into the core, and inserts a manual reactor scram.	<input type="checkbox"/>	<input type="checkbox"/>	

Cue: Inform candidate that JPM is over when reactor is scrammed.

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____
Job Title: RO SRO

JPM Title: Perform a Manual Scram Functional Test with Rod Drifts

JPM Number: B.1.d. Revision Number: 2

Task Number and Title:
SR-0500-P01 - Given an operating reactor plant, perform the manual scram functional test in accordance with QCOS 500-2.

K/A Number and Importance:
K/A: 212000 A4.01 **RATING:** 4.6/4.6

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: 9 minutes **Actual Time Used:** _____ minutes

References: QCOS 0500-02, Rev. 12

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- The Unit Supervisor has ordered that a manual scram functional test be performed this shift on Unit 1.
- This JPM is not time critical.

INITIATING CUE

Perform a U-1 Manual Scram Functional Test IAW QCOS 0500-02.

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Nuclear Generation Group

Job Performance Measure

Perform The Core Spray Pump Operability Test For Core Spray Pump B With
Failure Of Minimum Flow Valve

JPM Number: B.1.e.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

Revision Record (Summary)

- Revision 0, This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.
- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 2 The JPM was revised to incorporate NRC validation comments.



Information For Evaluator’s Use:

Provide a copy of QCOS 1400-04 Core Spray Pump Operability Test with section D.1 and D.2. filled out for Unit 1 for a Partial for Core Spray Subsystem B signed and dated by the Unit Supervisor.

- Steps H.1.a. marked N/A.
- H.1.b.(1),(2),(4)&(5) initialed of as EO/ANSO.
- H.1.b.(3) recorded as 5 seconds, and H.1.b.(3)(a) initialed as ANSO.
- H.2. marked N/A.
- H.4.a. marked N/A.

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)

SIMULATOR SETUP INSTRUCTIONS

30. Reset the simulator to IC 21 (rst 21).

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.

31. Provide a copy of QCOS 1400-04 Core Spray Pump Operability Test with section D.1 and D.2. filled out for Unit 1 for a Partial for Core Spray Subsystem B signed and dated by the Unit Supervisor.

Steps H.1.a. marked N/A.

H.1.b.(1),(2),(4)&(5) initialed of as EO/ANSO.

H.1.b.(3) recorded as 5 seconds, and H.1.b.(3)(a) initialed as ANSO.

H.2. marked N/A.

H.4.a. marked N/A.

32. **Manual Actuation:**

NONE

Malfunctions:

Fail the Core Spray Minimum Flow Valve to Auto Close using (imf cs06b)

Override 1-1402-38B handswitch to neutral using (ior dihs1140238b norm)

Remotes:

NONE

Overrides:

NONE

33. 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.

34. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- The Core Spray System is in its normal standby lineup IAW QCOP 1400-01.
- The Core Spray Pump Operability Test is required to be performed this shift.
- An EO has vented the core spray piping, performed pre-start checks on the 1B Core Spray pump, and is standing by outside the 1B Core Spray pump room.
- All personnel are cleared out of the 1B Core Spray room as controlled by the EO.
- This JPM is not time critical.

INITIATING CUE

Perform the Core Spray Pump Operability Test for the “1B” Core Spray Pump IAW QCOS 1400-04.

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

Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
H.3.a.	Verify torus level < -2” narrow range, then alternate suction pressure limit ≥ 1 psig is met.	Checks torus level. Verifies at > -2” (alternate suction pressure limit not applicable).	[] []
*H.3.b.(1).	Start 1B Core Spray pump.	Positions pump CS to start. Red light lit.	[] []
<i>CUE: If NLO is asked to report on pump operating status, report that the 1B Core Spray pump is operating satisfactorily.</i>			
H.3.b.(2).	Verify MO 1-1402-38B opens.	Verifies MO 38B open light lit.	[] []
*H.3.b.(3).	Open MO 1-1402-4B.	Positions 4B CS to fully open valve open light lit.	[] []
*H.3.b.(4).	Verify MO 1-1402-38B closes.	Determines that the 38B did not close.	[] []
H.3.b.(4).	Attempts to close the 1-1402-38B.	Positions the CS for the 38B to close. Identifies that the valve still didn't close.	[] [] []
H.3.b.(4).	Report the Min. Flow valve did not close.	Informs US that 1-1402-38B did not close.	[] []
<i>CUE: Acknowledge report as US. When candidate identifies need to shutdown the pump IAW step F.6, give cue as US to shutdown the pump IAW the procedure. If candidate informs US that QCAP 0230-19 needs to be initiated, acknowledge that you as US will perform the procedure.</i>			
*H.3.c.(1).	Close MO 1-1402-4B.	Positions CS to close. Close light lit.	[] []
*H.3.c.(3).	Stop 1B Core Spray pump.	Positions pump CS to stop Green light lit.	[] []
<i>EVALUATOR: When the pump is OFF, inform the candidate that the JPM is complete.</i>			

JPM Stop Time: _____



* Emergent Critical Step

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO SRO

JPM Title: Perform the Core Spray Pump Operability Test For Core Spray Pump B With Failure Of Minimum Flow Valve

JPM Number: B.1.e. Revision Number: 2

Task Number and Title:
SR-1400-P05 - Given a reactor plant with a core spray loop in a standby lineup, perform the Core Spray Pump Flow Rate Test and return the core spray loop to standby in accordance with QCOS 1400-01.

K/A Number and Importance:
K/A: 209001 A4.04 RATING: 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

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

References: QCOS 1400-04, Rev. 10

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- The Core Spray System is in its normal standby lineup IAW QCOP 1400-01.
- The Core Spray Pump Operability Test is required to be performed this shift.
- An EO has vented the core spray piping, performed pre-start checks on the 1B Core Spray pump, and is standing by outside the 1B Core Spray pump room.
- All personnel are cleared out of the 1B Core Spray room as controlled by the EO.
- This JPM is not time critical.

INITIATING CUE

Perform the Core Spray Pump Operability Test for the “1B” Core Spray Pump IAW QCOS 1400-04.

.....

Nuclear Generation Group

Job Performance Measure

Venting Of the Primary Containment due to High Hydrogen with a Failure of a Vent Valve to Open

JPM Number: B.1.f.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 0, This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.

Revision 1 The JPM was revised to incorporate validation time and comments.

Revision 2 The JPM was revised to incorporate NRC validation comments.



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)

SIMULATOR SETUP INSTRUCTIONS

35. Reset the simulator to IC 95 (rst 95). This IC is a shutdown reactor, stable following a scram and is setup specifically for this JPM. If it is not available follow the directions below.

36. IC Description: The Reactor is scrammed, Group II isolation in effect, DW pressure \approx 8.6 psig, Torus pressure \approx 6.9 psig.

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.

37. Manual Actuations:

- Depress both scram buttons to scram the Reactor then perform QCGP 2-3 actions.
- Prevent HPCI injection by tripping HPCI with the trip latch.
- Ensure reactor building vents have isolated and “B” SBTG train is operating.
- Ensure AO-1601-61, 62, 63, 60, 23, 24 are closed.
- Start the 7th DW cooler.

38. Malfunctions:

- Cause a Group II Isolation to seal in using malfunction RP07. Cause a
(imf rp07a) & (imf rp07b)
- Insert Main Steam line leak after the flow restrictors *(imf ms05a 0.1)* Insert Main
- Override the 1-1601-61 valve closed *(ior dihs1160161 close)* Override the

39. Remotes: NONE

40. Overrides:

- Override the Hydrogen recorder to 2.5 *(ior aoh212406a 25)* Override the

Job Performance Measure (JPM)

41. 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.
42. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- A transient has occurred resulting in hydrogen generation.
- The US has entered the Hydrogen control procedure, QGA 200-5.
- Chemistry has sampled the containment atmosphere and determined that the offsite release rate will stay below the LCO when venting has commenced.
- Chemistry has recommended using SBGTS as a vent path.
- There are as many fans as possible operating.
- SBGT is operating.
- The Essential Service bus and both RPS busses are energized.
- Station Director has given permission to vent (NOT OK to exceed release rates).
- This JPM is not time critical.

INITIATING CUE

Line-up and begin venting the Torus through SBGT in accordance with QCOP 1600-13 to reduce hydrogen concentration in the containment.

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



Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
	Obtain the procedure to be used.	Procedure QCOP 1600-13 obtained.	[] []
F.2.	Verify closed the following Primary Containment valves:	Verify closed the following Primary Containment valves:	
	a. Torus 2" Vent vlv.	AO 1-1601-61, closed light lit.	[] [] []
	b. DW 2" Vent vlv.	AO 1-1601-62, closed light lit.	[] [] []
	c. Vent to SBGTS.	AO 1-1601-63, closed light lit.	[] [] []
	d. Torus 18" Vent vlv.	AO 1-1601-60, closed light lit.	[] [] []
	e. DW 18" Vent vlv.	AO 1-1601-23, closed light lit.	[] [] []
	f. Vent to RX Bldg. Exh Sys.	AO 1-1601-24, closed light lit.	[] [] []
F.3.a.	Verify "B" SBGTS train is running.	"B" train of SBGTS verified running.	[] [] []
F.3.b.	Announce evacuation of SBGT area and that plant radiological conditions may change as containment is vented.	Announcement made over plant page.	[] [] []
F.3.c.	Verify MASTER VENT MODE switch in NORM.	Verifies switch in NORM.	[] [] []
F.3.d.(1)	Place the VENT ISOL SIG BYP key switch to TORUS position and verifies alarm actuates.	Switch is momentarily placed in TORUS position, AND alarm 901-3 A-15 verified on.	[] [] []
F.3.d.(2)	Open Vent to SBGTS.	Positions AO 1-1601-63 CS to open open light lit.	[] [] []
F.3.d.(3)	Attempts to open the Torus 2" Vent valve and recognizes valve fails to open.	Positions AO 1-1601-61 CS to open identifies valve did not change position, open light not lit.	[] []
	Notifies US of valve failure to open.	Notifies US that 1-1601-61 valve failed to open.	[] [] []

Job Performance Measure (JPM)

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
<p><i>CUE: Acknowledge 1-1601-61 valve failed to open. If candidate stops at this point or requests direction from the US, ask them for their recommendation. If candidate does not offer a recommendation, tell them to continue on with procedure.</i></p> <p><i>Note to evaluator: The next step in the procedure F.3.e. allows the candidate to vent the drywell if torus venting is not able to control hydrogen concentration as long as drywell pressure is less than 25psig.</i></p>			
*F.3.e.(1)	Place the VENT ISOL SIG BYP key switch to DRYWELL position and verifies alarm actuates.	Switch is momentarily placed in DRYWELL position, AND alarm 901-3 A-15 verified on.	[] []
F.3.e.(2)	Verifies Torus 2" Vent valve closed.	Verifies AO 1-1601-61 closed closed light lit.	[] []
*F.3.e.(3)	Open Vent to SBGTS.	Verifies AO 1-1601-63 open open light lit.	[] []
*F.3.e.(4)	Opens the Drywell 2" Vent valve.	Positions AO 1-1601-62 CS to open open light lit.	[] []
<p><i>Evaluator Note: Due to simulator set-up for this JPM, drywell pressure and hydrogen concentration will not show a reducing trend so you must cue candidate that these parameters are decreasing.</i></p> <p><i>Cue: Inform candidate that drywell pressure and hydrogen concentration is dropping.</i></p>			
F.3.e.(6)	Monitor Release Rate.	Monitors, 1/2-1704-19, CHIMNEY GAS ACTIVITY recorder on Panel 912-4 <u>AND</u> 1/2-1740-202, MN CHIMNEY GAS ACTIVITY recorder 912-1.	[] [] []
F.3.e.(6)(a)	Verify release rate limit is NOT being exceeded.	Contacts Chemistry or verifies absence of alarms 912-1 E-9 and F-9 on 912-1 to ensure limit is NOT being exceeded.	[] []
F.3.e.(7)	Logs data in log book.	Log the following information in the Unit Log Book: (a) Time of venting start & stop. (b) Drywell and Torus pressure at time of vent start & stop.	[] []
<p><i>EVALUATOR: The candidate should inform you that the task is completed.</i></p>			

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____
Job Title: RO SRO

JPM Title: Venting Of the Primary Containment due to High Hydrogen with a Failure of a Vent Valve to Open

JPM Number: B.1.f. Revision Number: 2

Task Number and Title:
SR-0001-P038, Post Accident Venting Of The Primary Containment

K/A Number and Importance:
K/A: 500000 EA1.03 Rating: 3.4/3.2

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: 20 minutes **Actual Time Used:** _____ minutes

References: QCOP 1600-13, Rev. 15

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- A transient has occurred resulting in hydrogen generation.
- The US has entered the Hydrogen control procedure, QGA 200-5.
- Chemistry has sampled the containment atmosphere and determined that the offsite release rate will stay below the LCO when venting has commenced.
- Chemistry has recommended using SBGTS as a vent path.
- There are as many fans as possible operating.
- SBGT is operating.
- The Essential Service bus and both RPS busses are energized.
- Station Director has given permission to vent (NOT OK to exceed release rates).
- This JPM is not time critical.

INITIATING CUE

Line-up and begin venting the Torus through SBGT in accordance with QCOP 1600-13 to reduce hydrogen concentration in the containment.

.....

Nuclear Generation Group

Job Performance Measure

Pressurize The Main Steam Lines

JPM Number: B.1.g.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

Revision Record (Summary)

- Revision 0, This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.1 "Control Room Systems," for RO/SRO candidates.
- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 2 The JPM was revised to incorporate NRC validation comments.



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)

SIMULATOR SETUP INSTRUCTIONS

43. Reset the simulator to IC 94 (rst 94). This IC is a shutdown reactor, stable following a scram and is base IC setup specifically for this JPM.

44. IC Description:

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.

45. Manual Actuation:

- **Simulator operator must control reactor pressure manually with relief valves to control pressure 800-1000 psig while candidate is reopening the MSIVS.**
- Ensure the Main Steam line drains are shut.

46. Malfunctions:

- Allow Gp I isolation to cause scram by performing the following:
- Insert, then remove, malfunction RP05 A & B.
(imf rp05a) & (imf rp05b)
(dmf rp05a) & (dmf rp05b)

47. **Remotes:** NONE

48. **Overrides:** NONE

49. 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.

50. This completes the setup for this JPM.

Job Performance Measure (JPM)

INITIAL CONDITIONS

- A Group I Isolation occurred approximately 30 minutes ago on Unit 1 due to low-low reactor water level.
- Reactor water level has been restored and is now being controlled by Feed/Condensate.
- Another RO will control pressure between 800 and 1000 psig with relief valves.
- The Main Steam Lines have been drained and the Steam line drain valves are shut.
- RPV level has been maintained less than 100” during the time the MSIVs have been closed.
- This JPM is not time critical

INITIATING CUE

Pressurize the Unit 1 Main Steam lines and re-open the MSIV's. Notify Unit Supervisor when all MSIVs are open.

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



Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
	Obtain procedure to be used.	Procedure QCOP 250-1 obtained.	[] [] []
*F.1.	Place MN STM ISOL RESET to INBD.	Places MN STM ISOL RESET to INBD.	[] []
*F.2.	Place MN STM ISOL RESET to OUTBD.	Places MN STM ISOL RESET to OUTBD.	[] []
*F.3.	<u>Adjust</u> 1 A/B PRESS SETPOINT 200 psig above Reactor Pressure, <u>OR</u> as high as possible.	Adjusts 200 psig above reactor pressure or as high as possible.	[] [] []
*F.4.	<u>Open</u> Outboard MSIVs: a. AO 1-203-2A, 2A OUTBD MSIV b. AO 1-203-2B, 2B OUTBD MSIV c. AO 1-203-2C, 2C OUTBD MSIV d. AO 1-203-2D 2D OUTBD MSIV	Opens outboard MSIVs by taking each C/S to OPEN on 901-3 AO 1-203-2A red light lit indicating OPEN AO 1-203-2B red light lit indicating OPEN AO 1-203-2C red light lit indicating OPEN AO 1-203-2D red light lit indicating OPEN	[] []
F.5.	<u>Open</u> Steamline drain valves: a. MO 1-220-90A STM LINE DRN VLV b. MO 1-220-90B STM LINE DRN VLV c. MO 1-220-90C STM LINE DRN VLV d. MO 1-220-90D STM LINE DRN VLV	Opens steamline drain valves by taking each C/S to OPEN on 901-3 MO 1-220-90A red light lit indicating OPEN MO 1-220-90B red light lit indicating OPEN MO 1-220-90C red light lit indicating OPEN MO 1-220-90D red light lit indicating OPEN	[] [] []
*F.6.	<u>Equalize</u> pressure across MSIVs: a. <u>Open</u> MO 1-220-1, STM DRN ISOL VLV b. <u>Open</u> MO 1-220-2, STM DRN ISOL VLV c. <u>Slowly throttle Open</u> MO 1-220-3, OUTSIDE DRN VLV	Opens steam drain valve by taking each C/S to OPEN on 901-3. MO 1-220-1 red light lit indicating OPEN MO 1-220-2 red light lit indicating OPEN MO 1-220-3 indicates Mid-position OR OPEN	[] []

* Emergent Critical Step

Job Performance Measure (JPM)

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
F.7.	<p><u>Monitor</u> the following indications <u>AND</u> <u>verify</u> that differential pressure across the MSIVs are decreasing</p> <p>a. Reactor Pressure b. PI 1-3040-10, TURB THROT PRESS (at panel 901-7)</p>	Differential Pressure is decreasing using reactor pressure instrumentation and turbine throttle pressure on PI 1-3040-10 on 901-7.	[] [] []
<p><i>EVALUATORS NOTE: The next step is conditional and need not be performed to satisfactorily complete this task. Step will be performed only if D/P does not decrease to < 200 psid.</i></p>			
F.8.	<p><u>IF</u> diff. press. across MSIVs does <u>NOT</u> dec. to <200 psid, <u>THEN</u>, at panel 901-7, <u>close</u> valves</p> <p>a. MO 1-3004A, B, C and D, CONT VLVS ABOVE SEAT DRN b. MO 1-3005, CONT VLVS BELOW SEAT DRN</p>	<p>May close above and below seat drains on 901-7 if D/P is not decreasing</p> <p>MO 1-3004A, B, C and D green light lit indicating CLOSED</p> <p>MO 1-3005 green light lit indicating CLOSED on 901-7.</p>	[] [] []
<p><i>EVALUATOR: Unit Supervisor's permission is NOT a critical part of step F.9.</i></p> <p><i>Candidate may elect to open 2 valves simultaneously to avoid a high flow isolation signal from occurring.</i></p>			
*F.9.	<p><u>WHEN</u> diff. press. across the MSIVs is <200 psid <u>OR</u> has stopped decreasing and Unit Supervisor has given permission to proceed, <u>THEN</u> <u>open</u> inboard MSIVs:</p> <p>a. AO 1-203-1A, 1A INBD MSIV b. AO 1-203-1B, 1B INBD MSIV c. AO 1-203-1C, 1C INBD MSIV d. AO 1-203-1D 1D INBD MSIV</p>	<p>Opens inboard MSIVs by taking each C/S to OPEN on 901-3</p> <p>OPENS AO 1-203-1A red light lit indicating OPEN OPENS AO 1-203-1B red light lit indicating OPEN OPENS AO 1-203-1C red light lit indicating OPEN OPENS AO 1-203-1D red light lit indicating OPEN</p>	[] []
<p><i>EVALUATOR: The candidate should inform you that the task is complete.</i></p>			

JPM Stop Time: _____

.....

Job Performance Measure (JPM)

Operator's Name: _____

Job Title: RO SRO

JPM Title: Pressurize the Main Steam Lines

JPM Number: B.1.g.

Revision Number: 2

Task Number and Title:

SR-0250-P01, Given a reactor plant at power when an inadvertent Group 1 isolation occurs, determine the cause, reset the Group 1, and re-open the MSIVs in accordance with QCOP 0250-01.

K/A Number and Importance:

K/A: 239001 A4.01

Rating: 4.2/4.0

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

Estimated Time to Complete: 25 minutes **Actual Time Used:** _____ minutes

References: QCOP 250-01, Rev. 5

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- A Group I Isolation occurred approximately 30 minutes ago on Unit 1 due to low-low reactor water level.
- Reactor water level has been restored and is now being controlled by Feed/Condensate.
- Another RO will control pressure between 800 and 1000 psig with relief valves.
- The Main Steam Lines have been drained and the Steam line drain valves are shut.
- RPV level has been maintained less than 100” during the time the MSIVs have been closed.
- This JPM is not time critical

INITIATING CUE

Pressurize the Unit 1 Main Steam lines and re-open the MSIV's. Notify Unit Supervisor when all MSIVs are open.

.....

Nuclear Generation Group

Job Performance Measure

Aligning Fire Protection Water to SSMP Room Cooler

JPM Number: B.2.a.

Revision Number: 02

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____

Instructor

_____ Date

Validated By: _____

SME or Instructor

_____ Date

Review By: _____

Operations Representative

_____ Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 0, The reason for this JPM is to demonstrate the ability to terminate one of the twenty most probable Core Damage Sequences.

This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.2 "Facility Walk-Through," for RO/SRO candidates.

Revision 1 The JPM was revised to incorporate validation time and comments.

Revision 2 The JPM was revised to incorporate NRC validation comments.

.....
Information For Evaluator's Use:

All components are located in the Safe Shutdown Makeup Pump Room on the south wall.

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)

INITIAL CONDITIONS

- There is a severe fire in RB 1S. SSMP is the injection source for U-1. Service Water is no longer available to the SSMP Room Cooler.
- You have been issued a flashlight, radio, and the AR tool box which includes; a V-key, an R-Key, VHR-key, a Fire Lock key, an S-Key, a straight blade screwdriver, a wire cutters, a crescent wrench.
- This JPM is not time critical.

INITIATING CUE

Align Fire Protection Water to SSMP Room Cooler in accordance with QCARP 0010-01 Attachment D.

Provide examinee with:

Copy of QCARP 0010-01 Attachment D.

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

.....

Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT UNSAT N/A</u>
*Attachment D, step 1	Close 1/2-2901-25, SERV WTR TO SAFE SHUTDOWN PMP RM HVAC CLR SV.	Turns 1/2-2901-25 valve hand wheel clockwise until valve no longer moves.	[] [] []
<i>CUE: Indicate to the candidate that the valve will not longer turn after the proper technique is demonstrated.</i>			
*Attachment D, step 2	Unlock and Open ½-2901-9 FIRE PROTECTION WTR TO SAFE SHUTDOWN PMP RM HVAC CLR SV.	Selects “S” Key and unlocks ½-2901-9 turns valve hand wheel counterclockwise until valve no longer moves.	[] [] []
<i>CUE: Indicate to the candidate that the lock is unlocked and that the valve will no longer turn after the proper technique is demonstrated.</i>			
*Attachment D, step 3	Close 1/2-2999-9, SERVICE WATER TO SSMP ROOM COOLER BYPASS VALVE.	Turns 1/2-2999-9 valve hand wheel clockwise until valve no longer moves.	[] [] []
<i>CUE: Indicate to the candidate that the valve will not longer turn after the proper technique is demonstrated.</i>			
Attachment D, step 4	Verify SSMP Room Cooler Operation.	Checks to see if cooler is cooling room.	[] [] []
<i>CUE: After proper checks are made for Cooler operation (Proper checks should include that the candidate listens or feels for cool air flow discharging from the cooler, or verifying that the room is getting cooler), indicate to the candidate that the room is becoming cooler.</i>			
Attachment D, step 5	Notify U1 US that steps are complete.	Proper communication techniques.	[] [] []
<i>CUE: When informed, acknowledge as Unit One Unit Supervisor that you understand that the SSMP Room Cooler is lined up to the fire header.</i>			
<i>Evaluator Note: Candidate should state that the JPM is complete.</i>			

*CRITICAL STEP

JPM Stop Time: _____

Job Performance Measure (JPM)

Operator's Name: _____
Job Title: RO SRO

JPM Title: Align Fire Protection Water to SSMP Room Cooler

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

Task Number and Title:

SN 2900-P08 Given Unit 1 in an QCARP condition, transfer SSMP HVAC cooling water supply to the fire header and verify SSMP room cooler operation in accordance with QCARP 0010-01 Attachment D. (Important PSA task/transferring cooling water supply has Risk Achievement Worth (RAW) ranging from 1.25 alone to 655 in combination with other actions. Accomplishing this task terminates 1 of the 20 most probable core damage sequences)

K/A Number and Importance:

K/A: 295018 AA1.01 **RATING:** 3.3/3.4

Suggested Testing Environment: Plant

Actual Testing Environment: Simulator Plant
 Control Room

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

Time Critical: Yes No

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

References: QCARP 0010-01 Attachment D, Rev. 1

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- There is a severe fire in RB 1S. SSMP is the injection source for U-1. Service Water is no longer available to the SSMP Room Cooler.
- You have been issued a flashlight, radio, and the AR tool box which includes; a V-key, an R-Key, VHR-key, a Fire Lock key, an S-Key, a straight blade screwdriver, a wire cutters, a crescent wrench.
- This JPM is not time critical.

INITIATING CUE

Align Fire Protection Water to SSMP Room Cooler in accordance with QCARP 0010-01 Attachment D.

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Nuclear Generation Group

Job Performance Measure

Depressurize the Scram Air Header

JPM Number: B.2.b.

Revision Number: 2

Date: 11/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____
Instructor Date

Validated By: _____
SME or Instructor Date

Review By: _____
Operations Representative Date

Job Performance Measure (JPM)

Revision Record (Summary)

- Revision 0 This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.2 "Facility Walk-Through," for RO/SRO candidates.
- Revision 1 The JPM was revised to incorporate validation time and comments.
- Revision 1 The JPM was revised to incorporate NRC validation comments.



Information For Evaluator's Use:

All components are located in the U-2 reactor building 595' elevation near the southeast corner of the north CRD bank.

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)

INITIAL CONDITIONS

- An ATWS has occurred on Unit 2 with reactor power currently at 35%.
- The Control Room is in QGA 101 and attempting to insert Control Rods.
- The Unit Supervisor has directed performance of QCOP 0300-28
- This JPM is not time critical

INITIATING CUE

Vent the U-2 scram air header to insert control rods in accordance with QCOP 0300-28 step F.3.

Provide candidate a copy of QCOP 0300-28.

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



Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
*F.3.a.(1)	Close <u>OR</u> verify closed both 2-301-147A <u>AND</u> B, INST AIR TO SCRAM VLV PILOT AIR HDR A/B (FILT) INLET VLV.	Rotates 2-301-147A <u>AND</u> 147B handwheels clockwise until they do not turn any further.	[]	[]	[]
Cue: You have rotated the handwheels clockwise and they will not turn any further.					
*F.3.a.(2)	Manually open RV 2-0399-24 SCRAM AIR RELIEF VALVE RV, by lifting the relief valve handle.	Lifts handle on RV 2-0399-24.	[]	[]	[]
Cue: You heard air blowing for several seconds, the flow then slowed and finally stopped. The Control Room reports that all the control rods have fully inserted. Restore the scram air header.					
F.3.b.(1)	Close RV 2-0399-24 SCRAM AIR RELIEF VALVE RV.	Releases handle on RV 2-0399-24.	[]	[]	[]
Cue: You have released the handle on the Relief Valve and it has returned to its original position.					
F.3.b.(2)	Open either the 2-301-147A <u>OR</u> B, INST AIR TO SCRAM VLV PILOT AIR HDR A/B (FILT) INLET.	Rotates 2-301-147A <u>OR</u> 147B handwheel counterclockwise until it does not turn any further.	[]	[]	[]
Cue: You have rotated the handwheel counterclockwise and it will not turn any further. If asked, scram air header pressure indication is 70 psig and rising.					
EVALUATOR: The candidate should inform you that the task is complete.					

JPM Stop Time: _____

.....

Job Performance Measure (JPM)

Operator's Name: _____
 Job Title: RO SRO

JPM Title: Depressurize the scram air header

JPM Number: B.2.b.

Revision Number: 2

Task Number and Title:

SRN-0300-TP019 - Given a reactor plant in an ATWS condition (QGA), locally isolate and depressurize the scram air header in accordance with QCOP 300-28.

K/A Number and Importance:

K/A: 295037 EA1.03 **Rating:** 4.1/4.1

Suggested Testing Environment: Plant

Actual Testing Environment: Simulator Plant
 Control Room

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

Time Critical: Yes No

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

References: QCOP 0300-28 Rev. 19

Job Performance Measure (JPM)

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: _____

INITIAL CONDITIONS

(Student Copy)

- An ATWS has occurred on Unit 2 with reactor power currently at 35%.
- The Control Room is in QGA 101 and attempting to insert Control Rods.
- The Unit Supervisor has directed performance of QCOP 0300-28
- This JPM is not time critical

INITIATING CUE

Vent the U-2 scram air header to insert control rods in accordance with QCOP 0300-28 step F.3.



Nuclear Generation Group

Job Performance Measure

**Perform the Aux Electric Room actions to Alignstart
RHR in the Shutdown Cooling Mode
in accordance with QCOP 1000-29.**

JPM Number: B.2.c.

Revision Number: 02

Date: 1108/2002

NOTE: Original Signed – Disk Copy No Signatures

Developed By: _____

Instructor

_____ Date

Validated By: _____

SME or Instructor

_____ Date

Review By: _____

Operations Representative

_____ Date

Approved By: _____

Training Department

_____ Date

Job Performance Measure (JPM)

Revision Record (Summary)

Revision 0, The reason for this JPM is to demonstrate the ability to terminate one of the twenty most probable Core Damage Sequences.

This JPM is developed IAW guidelines established in NUREG 1021 Rev 8 ES-301 and Appendix C. This JPM meets the criteria of Category B.2. "Facility Walk Through," for RO/SRO candidates.

Revision 1 The JPM was revised to incorporate validation time and comments.

Revision 2 The JPM was revised to incorporate NRC validation comments.

Information For Evaluator’s Use:

All components are located in the Aux. Equipment Room. A key will need to be checked out at the Work Execution Center to access the cabinets in the Aux. Electric room

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)

INITIAL CONDITIONS

- Unit 2 is entering a refueling outage.
- The Control Room has been evacuated due to toxic gas in the ventilation system.
- The Unit Supervisor has directed that the “A” Loop of Shutdown Cooling is to be placed in service from outside the Control Room.
- The Condensate Transfer system is available.
- Operators have been briefed and are standing by outside the MSIV room at phone extension 2431 with Radiation Protection support and all necessary equipment to perform step F.7.
- The reactor is shut down with reactor pressure at 37 psig.
- The plant is NOT using the QCARPs.
- The Shutdown Cooling suction header has been filled and vented.
- The RHR Service Water system is operating with discharge pressure of 275 psig.
- You have an Aux Electric Room key, and a jumper wire.
- This JPM is not time critical
- ~~- Unit 1(2) is entering a refueling outage.~~
- ~~—— The Control Room has been evacuated due to toxic gas in the ventilation system.~~
- ~~-The Unit Supervisor has determined that “A” Loop Shutdown Cooling is being placed in service from outside the Control Room.~~
- ~~-The Condensate Transfer system is available.~~
- ~~—— Operators have been briefed and are standing by in the plant with Radiation Protection support and all necessary equipment.~~
- ~~—— The reactor is shut down with reactor pressure at 37 psig.~~
- ~~-The plant is NOT using the QARPs.~~
- ~~—— The Shutdown Cooling suction header has been filled and vented.~~
- ~~—— The RHR Service Water system is operating with discharge pressure of 275 psig.~~
- ~~—— You have obtained an Aux Electric Room key, a jumper wire, and a small fuse pullers.~~
- ~~—— This JPM is not time critical~~

Initiating Cue: Perform the Aux Electric Room actions to align U-2“A”Loop RHR system in the Shutdown Cooling Mode in accordance with QCOP 1000-29 performing steps F.7.j.through F.7.l.

Initiating Cue: Perform the Aux Electric Room actions to start U1(2) “A” Loop RHR system in the Shutdown Cooling Mode in accordance with QCOP 1000-29 starting at step F.7.j.

Provide examinee with:

1. Copy of QCOP 1000-29 signed off through step F.7.i.
2. Unit 2 Auxiliary Electric Room Key

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

Job Performance Measure (JPM)

JPM Start Time: _____

	<u>PERFORMANCE</u>	<u>OBJECTIVE STANDARDS</u>	<u>SAT</u>	<u>UNSAT</u>	<u>N/A</u>
<u>Evaluator Note: Provide candidate with marked up copy of procedure and a U-2 Aux. Electric room key.</u>					
*F.7.j. Attachment B step 1.a.	Resets Group 2 isolation <u>inboard</u> logic per Attachment B.	Slides the ON/OFF switch for relay 595-115, located in the <u>901(2)-902-40</u> to the ON position.	[]	[]	[]
<i>CUE: Indicate to the candidate that the ON/OFF switch for relay 595-115 is indicating ON.</i>					
*F.7.j. Attachment B; step 1.b.	Resets Group 2 isolation <u>outboard</u> logic per Attachment B.	Slides the ON/OFF switch for relay 595-116, located in the <u>901(2)-902-41</u> to the ON position.	[]	[]	[]
<i>CUE: Indicate to the candidate that the ON/OFF switch for relay 595-116 is indicating ON.</i>					
<u>Evaluators note: Portable radio use is NOT allowed in the Auxiliary Electric room, candidate should indicate that they would either use the phone or step out of the room to use the radio.</u>					
*F.7.k.	<u>Notifies operator to open the MO 2-1001-47 valve.</u>	<u>Using phone, notifies the operator standing by near the MO 2-1001-47 valve to open the valve</u>	[]	[]	[]
<i>CUE: Acknowledge notification of step completion and then Rreport as that the an NLO that the has opened the MO 1(2)-1001-47 valve has been opened per step F.7.k. of QCOP 1000-29.</i>					
<i>NOTE to Evaluator: Once <u>started</u> closed by momentary installation of the jumper, the <u>valve</u> contactors seal in until the valve is full open (30 to 40 seconds).</i>					
*F.7.l.	Open the MO <u>1(2)-1001-50</u> SDC INBD ISOL LVL.	Momentarily places a jumper across terminals AA-12 and AA-13 in the <u>901(2)-902-40</u> panel.	[]	[]	[]
F.7.l.	Makes notification of step completion.	Notifies Unit Supervisor or other shift personnel that step F.7.l. is complete.	[]	[]	[]
<i>CUE: Acknowledge notification of step completion and inform them that the JPM is complete. <u>If questioned regarding valve position, state that an operator verified the MO 1(2)-1001-50 valve open via indication at the valve breaker.</u></i>					

*CRITICAL STEP

Job Performance Measure (JPM)

JPM Stop Time: _____



Job Performance Measure (JPM)

Operator's Name: _____

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

JPM Title: Perform the Aux Electric Room actions to start RHR in the Shutdown Cooling Mode in accordance with QCOP 1000-29.

JPM Number: B.2.c. Revision Number: 200

Task Number and Title SRN-1000-P34

Given a shutdown reactor plant with the control room evacuated, perform the aux. electric room actions to start RHR shutdown cooling operation in accordance with QCOP 1000-29

K/A Number and Importance:

K/A: -APE 295021 AA1.02 RATING: -3.5/3.5

Suggested Testing Environment: Plant

Actual Testing Environment: Simulator Plant
 Control Room

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

Time Critical: Yes No

Estimated Time to Complete: 24 10 minutes **Actual Time Used:** _____ minutes

References: QCOP 1000-29, Rev. 11

Job Performance Measure (JPM)

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

(Student Copy)

- Unit 2 is entering a refueling outage.
- The Control Room has been evacuated due to toxic gas in the ventilation system.
- The Unit Supervisor has directed that the “A” Loop of Shutdown Cooling is to be placed in service from outside the Control Room.
- The Condensate Transfer system is available.
- Operators have been briefed and are standing by outside the MSIV room at phone extension 2431 with Radiation Protection support and all necessary equipment to perform step F.7.
- The reactor is shut down with reactor pressure at 37 psig.
- The plant is NOT using the QCARPs.
- The Shutdown Cooling suction header has been filled and vented.
- The RHR Service Water system is operating with discharge pressure of 275 psig.
- You have an Aux Electric Room key, and a jumper wire.
- This JPM is not time critical

Initiating Cue: Perform the Aux Electric Room actions to align U-2“A”Loop RHR system in the Shutdown Cooling Mode in accordance with QCOP 1000-29 performing steps F.7.j.through F.7.l.

- ~~-Unit 1(2) is entering a refueling outage.~~
- ~~—The Control Room has been evacuated due to toxic gas in the ventilation system.~~
- ~~-The Unit Supervisor has determined that “A” Loop Shutdown Cooling is being placed in service from outside the Control Room.~~
- ~~-The Condensate Transfer system is available.~~
- ~~—Operators have been briefed and are standing by in the plant with Radiation Protection support and all necessary equipment.~~
- ~~—The reactor is shut down with reactor pressure at 37 psig.~~
- ~~-The plant is NOT using the QARPs.~~
- ~~—The Shutdown Cooling suction header has been filled and vented.~~
- ~~—The RHR Service Water system is operating with discharge pressure of 275 psig.~~
- ~~—You have obtained an Aux Electric Room key, a jumper wire, and a small fuse pullers.~~
- ~~—This JPM is not time critical~~

~~Initiating Cue: Perform the Aux Electric Room actions to start U1(2) “A” Loop RHR system in the Shutdown Cooling Mode in accordance with QCOP 1000-29 starting at step F.7.j.~~

