NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: Perform the Reactor Scram Functional Test 0010 / Rod Drift / Scram

JPM NUMBER: JPM-C.4-B.01.03.C-004 **REV.** 0

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR200.226
Respond to a drifting control rod

K/A NUMBERS: 201003 A2.03 **Rating: SRO/RO:** 3.7 / 3.4

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: No

Alternate Path / Faulted: Yes

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by:	**J Ruth**	
	Instructor	Date
Validated by:		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM Number: JPM-C.4-B.01.03.C-004

JPM Title: Perform the Reactor Scram Functional Test 0010 / Rod Drift / Scram

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Plant is operating at rated conditions.
- Test 0010 (REACTOR SCRAM FUNCTIONAL TEST) is scheduled to be performed and has been approved to begin by the CRS.
- You are the Operator at the Controls

INITIATING CUES (IF APPLICABLE):

- Perform Test 0010 (REACTOR SCRAM FUNCTIONAL TEST)

JPM PERFORMANCE INFORMATION

Required Materials: Reset to any 100% power IC.

General References: Simulator

Task Standards: Test 0010, C.4-B.01.03.C, C.4-A

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: N**	Operator may review procedure prior to performance.
Standard:	None
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: Y**	Depress 5A-S3A, REACTOR SCRAM A, pushbutton (Panel C-05), AND verify the following: a. Annunciator 5-B-12 (REACTOR MANUAL SCRAM CHANNEL A) is in ALARM
Standard:	Operator depresses the A manual scram pushbutton and verifies alarm.
Evaluator Cue:	If annunciator is reported, acknowledge as CRS
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: N**	Depress 5A-S3A, REACTOR SCRAM A, pushbutton (Panel C-05), AND verify the following: b. CONTROL ROD DRIVE SCRAM SOLENOID RPS GROUP A indicating lights are OFF (Panel C-05).
Standard:	Operator verifies RPS GROUP A indicating lights are OFF.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	Depress 5A-S3A, REACTOR SCRAM A, pushbutton (Panel C-05), AND verify the following: c. Computer point RPS029 (REACTOR MANUAL SCRAM A) displays TRIP.
Standard:	Operator verifies computer point in TRIP.
Evaluator Cue:	Inform operator that the computer point is in trip.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: N**	Verify 5A-S3A, REACTOR SCRAM A, pushbutton has been released, AND CONTROL ROD DRIVE SCRAM SOLENOID RPS GROUP A indicating lights remain OFF.
Standard:	Operator verifies manual scram pushbutton is released and RPS GROUP A indicating lights remain OFF.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: Y**	RESET the half scram using 5A-S9, SCRAM LOGIC RESET, handswitch (Panel C-05), AND verify the following: a. Annunciator 5-B-12 (REACTOR MANUAL SCRAM CHANNEL A) is RESET.
Standard:	Operator resets half scram by moving the reset switch to both the left and right, and verifies annunciator is reset.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: N**	RESET the half scram using 5A-S9, SCRAM LOGIC RESET, handswitch (Panel C-05), AND verify the following: b. CONTROL ROD DRIVE SCRAM SOLENOID RPS GROUP A indicating lights are ON (Panel C-05).
Standard:	Operator verifies RPS GROUP A indicating lights are ON.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	RESET the half scram using 5A-S9, SCRAM LOGIC RESET, handswitch (Panel C-05), AND verify the following: c. Computer point RPS029 (REACTOR MANUAL SCRAM A) displays RESET.
Standard:	Operator verifies computer point is reset.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: Y**	Depress 5A-S3B, REACTOR SCRAM B, pushbutton (Panel C-05), AND verify the following: a. Annunciator 5-B-13 (REACTOR MANUAL SCRAM CHANNEL B) is in ALARM.
Simulator Operator:	When REACTOR SCRAM B, pushbutton is depressed, INSERT event 1
Standard:	Operator depresses the B manual scram pushbutton and verifies alarm. Operator reports Annunciator 5-A-27 (ROD DRIFT) is in alarm and notes 2 drifting control rods.
Evaluator Cue:	If annunciator is reported, acknowledge as CRS
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: Y**	IF more than on control rod is drifting, THEN insert a manual reactor scram. (Rod Drift immediate operator action).
Standard:	Operator depresses 5A-S3A (REACTOR SCRAM A) to insert a manual scram.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: Y**	C.4-A, Immediate Actions: Place the REACTOR MODE switch in SHUTDOWN.
Standard:	Operator places Reactor Mode switch to SHUTDOWN.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: Y**	C.4-A, Immediate Actions: Determine if all rods are inserted to or beyond position 04.
Standard:	Operator determines positions of all control rods or uses RWM to determine all rods inserted.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: N**	C.4-A, Immediate Actions: Notify Shift Supervision.
Standard:	Operator notifies Control Room Supervisor of Reactor Scram.
Evaluator Cue:	Acknowledge Report as CRS
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 14 **Critical: N**	**INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.**
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	After the scram report, state that the JPM is completed
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: After the operator makes the scram report, state that the JPM is complete.

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:

- Plant is operating at rated conditions.
- Test 0010 (REACTOR SCRAM FUNCTIONAL TEST) is scheduled to be performed and has been approved to begin by the CRS.
- You are the Operator at the Controls

INITIATING CUES (IF APPLICABLE):

- Perform Test 0010 (REACTOR SCRAM FUNCTIONAL TEST)

SIMULATOR SET UP:

Simulator Setup Instructions:

- Reset to IC-15 (or any 100% IC)
- IC-236 has setup for 2007 ILT Exam

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.	CH05	CONTROL ROD (10-39) SCRAM	00:00:00	00:00:00	1	TRUE	TRUE
2.	CH05	CONTROL ROD (14-27) SCRAM	00:00:00	00:00:00	1	TRUE	TRUE

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation ***SHALL*** sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Historical Record: (Optional)

NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: Reactor Feed Pumps Cold Startup

JPM NUMBER: JPM-B.06.05-05.D.06-001 **REV.** 0

RELATED PRA INFORMATION: N/A

TASK NUMBER(S) / TASK TITLE(S): CR259.116
Perform a Reactor Feed Pump Cold Startup

K/A NUMBERS: 259001/A4.02 **Rating: SRO/RO:** 3.7/3.9

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: No

Alternate Path / Faulted: No

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by:	**J Ruth**	
	Instructor	Date
Validated by:		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM Number: JPM-B.06.05-05.D.06-001

JPM Title: Reactor Feed Pumps Cold Startup

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:
- A reactor startup is in progress
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):
- The CRS directs you to place the 11 RFP in service per B.06.05-05.D.06
- All procedure prerequisites are met and procedure steps 1-3 have been completed.

SIMULATOR SETUP NOTE:
- This JPM requires no malfunctions, remotes, or overrides. Standard IC-7 provides the appropriate plant conditions. IC-234 is used to support efficiency of performing parallel JPMs for the 2007 ILT exam.

JPM PERFORMANCE INFORMATION

Required Materials: N/A

General References: Simulator

Task Standards: B.06.05-05.D.06

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: N**	Verify on C-06, both pumps suction pressure approximately equal to discharge pressure using PI-1120 and PI-1130 for 11 RFP and PI-1121 and PI-1131 for 12 RFP, and >200 psig.
Standard:	Verifies pressures approximately equal and >200 psig
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: N**	Verify CV-6-13 LOW FLOW REG is controlling RPV water level, OR is CLOSED as applicable.
Standard:	Verifies CV-6-13 LOW FLOW REG is controlling RPV water level, OR is CLOSED
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: N**	Verify the following are CLOSED: a. MO-1133, A FW HP HTR INL BLOCK b. MO-1134, B FW HP HTR INL BLOCK
Standard:	Verifies Block Valves closed.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	Station operator at pumps and verify the following for both RFPs: a. Aux Oil Pump running with control switch in HAND b. Bearing header temp ≤110°F c. Bearing header pressure 8 to 15 psig d. Oil flow through bearing sightglasses e. Seal water pressure to module >300 psig f. Service water cooling available for lube oil and motor cooler
Standard:	Directs out plant operator to verify the above parameters.
Evaluator Cue:	Reports as the out plant operator that the above conditions (a through f) are met.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: Y**	Place HS-1100, 11 RFP RECIRC VALVE handswitch in AUTO/START.
Standard:	Place HS-1100, 11 RFP RECIRC VALVE handswitch in AUTO/START.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: N**	Verify OPEN CV-3489 11 RFP P-2A FW RECIRC TO CDSR.
Standard:	Verifies CV-3489 is open.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: Y**	START 11 Reactor Feed Pump.
Standard:	Starts 11 RFP.
Evaluator Cue:	If requested as the out plant operator to investigate annunciator 6-A-35, COND DEMIN SYSTEM TROUBLE, acknowledge Panel C-80 Annunciator, and then report that the 'A' Filter Demin High dP alarm cycled in and out and that filter dP is normal.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	IF any abnormal noise or vibration develops, THEN immediately shutdown unit, AND investigate cause.
Standard:	None
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: N**	Verify LOW FLOW REG is controlling RPV water level.
Standard:	Verified LOW FLOW REG is controlling RPV water level.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: N**	Ensure that balance drum flow is 90-120 gpm.
Standard:	Directs out plant operator to verify balance drum flow is 90-120 gpm.
Evaluator Cue:	Report as out plant operator that drum flow is 100 gpm.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: N**	Ensure that vibration is less than 2.5 MILs on all local vibration monitors.
Standard:	Directs out plant operator to check vibrations <2.5 MILs
Evaluator Cue:	Report as out plant operator that vibrations are <2.5 MILs.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: N**	Ensure that axial position is between +35 and –35 MILS
Standard:	Directs out plant operator to check that axial position is between +35 and –35 MILS.
Evaluator Cue:	Report as out plant operator that axial position is between +35 and –35 MILS.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: N**	Place HS-1100, 11 RFP RECIRC VALVE handswitch, to AUTO (valve should remain OPEN)
Standard:	Places HS-1100, 11 RFP RECIRC VALVE handswitch, to AUTO.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 14 **Critical: N**	**NOTE: The pump is now operating on recirculation and should have a minimum flow of 3300 gpm.** Verify minimum flow of 3300 gpm on local flow controller FIC-3489.
Standard:	Verifies minimum flow of 3300 gpm on local flow controller FIC-3489.
Evaluator Cue:	When requested, state that flow is >3300 pgm.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 15 **Critical: N**	Verify bearing header oil flow is >8 gpm, and bearing header discharge pressure is >6 psig, THEN place 11 RFP Aux Oil Pump HS to AUTO, pausing momentarily in OFF position to allow logic to reset.
Standard:	Places 11 RFP Aux Oil Pump HS to AUTO.
Evaluator Cue:	When requested, state that bearing header oil flow is >8 gpm and bearing header discharge pressure is >6 psig.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 16 **Critical: N**	Verify 11 RFP Aux Oil Pump has stopped.
Standard:	Verifies 11 RFP Aux Oil Pump has stopped.
Evaluator Cue:	When the Aux Oil Pump has been verified to be stopped, state that the JPM is complete.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: When the Aux Oil Pump has been verified to be stopped, state that the JPM is complete.

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:

- A reactor startup is in progress
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to place the 11 RFP in service per B.06.05-05.D.06
- All procedure prerequisites are met and procedure steps 1-3 have been completed.

SIMULATOR SET UP:

Simulator Setup Instructions:

- IC-234 has setup for 2007 ILT Exam

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.							
2.							

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation ***SHALL*** sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Historical Record: (Optional)

NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: PERFORM SRV OPERABILITY AND POSITION INDICATION CHECK ON RV-2-71H IN ACCORDANCE WITH TEST NO. 0112 (RESPOND TO STUCK OPEN RELIEF VALVE).

JPM NUMBER: JPM-B.03.03-002 **REV.** 2

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR200.154
STUCK OPEN RELIEF VALVE

K/A NUMBERS: 239002 A4.01 **Rating: SRO/RO:** 4.4/4.4

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION:

In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: YES

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by: _____
Instructor Date

Validated by: _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

Approved by: _____
Training Supervisor Date

JPM Number: JPM-B.03.03-002

JPM Title: Perform SRV Operability and Position Indication Check on RV-2-71H in accordance with Test No. 0112 (RESPOND TO STUCK OPEN RELIEF VALVE)

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Reactor is at power. Reactor pressure is approximately 140 psig. One Turbine Bypass valve is approximately 90% open. RHR is in Torus Cooling mode.

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to perform Test No. 0112 on SRV 2-71H only.
- The Rx Bldg APEO has just completed a Torus walkdown to ensure no one is working in area.
- An operator is standing by panel C-07 to monitor and report TBPV position changes.
- Other operators will assist you as you specifically request.

JPM PERFORMANCE INFORMATION

Required Materials:

General References: Simulator

Task Standards: C.4-B.03.03.A (STUCK OPEN RELIEVE VALVE)

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: N**	**<u>GENERAL NOTE 1</u>:** **Operators to perform all steps, unless otherwise noted**. **<u>GENERAL NOTE 2</u>:** **Turbine bypass valves should change position by about 10% prior to closing the SRV under test.** **<u>GENERAL NOTE 3</u>:** **Annunciator 3-A-9 (AUTO BLOWDOWN RELIEF VLV LEAKING) may alarm each time an SRV is opened.** **<u>GENERAL NOTE 4</u>:** **The SRVs may be tested in any order.** Place RHR System in Torus Cooling Mode per Ops Man B.03.04-05 (RESIDUAL HEAT REMOVAL SYSTEM - SYSTEM OPERATION).
Standard:	None
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: N**	Walkdown Torus area to ensure no one is working in the area.
Standard:	None
Evaluator Cue:	If asked, state that no one is working in the torus area.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: N**	Announce over plant page that SRV testing is about to commence.
Standard:	Makes announcement.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	Perform the following to minimize level and power swings due to subsequent SRV cycling: a. PLACE Vessel Level (Feedwater) Low Flow Valve Control, 6-85, on Panel C-05 to manual. b. Instruct operator to stay at Panel C-05 for duration of test to monitor and manually control Reactor level using Low Flow Valve.
Standard:	Verifies low flow valve control, 6-85 is in manual and operator stationed to respond.
Evaluator Cue:	Feedwater Low Flow Valve control is in manual and another operator is stationed to respond as necessary.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: N**	Initiate Procedure 0444-B to record Suppression Pool temperature as required Tech Spec SR3.6.2.1.1.
Standard:	Recognize 0444-B is required.
Evaluator Cue:	When recognized, state that another operator will be assigned to initiate the procedure.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: Y**	At Panel C-03, PLACE handswitch 2E-S4H, RV-2-71H Relief Valve H, to OPEN.
Standard:	Opens RV-2-71H using handswitch 2E-S4H.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____
Sim Cue:	When RV2-71H handswitch is placed in OPEN, **INSERT** malfunction AP01H (SAFETY/RELIEF VALVE RV2-71H FAILS OPEN).

Performance Step: 7 **Critical: N**	Verify the following: a. Red light is on next to manipulated handswitch.
Standard:	Verifies red light is on.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	Verify the following: b. Amber lights are on: 1) 2E-S4H (C-03) 2) S21 (C-292)
Standard:	Verifies amber light is on.
Evaluator Cue:	When requested, report that the amber light on panel C-292 is on.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: N**	Verify the following: c. Turbine bypass valves respond by starting to close.
Standard:	Verifies bypass valve response.
Evaluator Cue:	If requested, report bypass valve response.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: N**	Verify the following: **NOTE: A change of about 10% or more in bypass valve position indicates unrestricted SRV flow.** d. SRV discharge flow is unrestricted.
Standard:	Verifies bypass valve position decreases 10% or more.
Evaluator Cue:	If requested, report bypass valve actual response.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: N**	Verify the following: e. Annunciator 5-A-46 (SRV OPEN) is in ALARM.
Standard:	Verifies Annunciator 5-A-46 is in Alarm.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: Y**	At Panel C-03, PLACE handswitch 2E-S4H to AUTO.
Standard:	Places handswitch 2E-S4H to AUTO.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: Y**	Verify the following: a. Green indicating light is on next to manipulated SRV handswitch.
Standard:	Verifies the green indicating light is ON, and Amber light still on. (Operator will identify C.4-B.03.03.A (STUCK OPEN RELIEF VALVE) entry.)
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 14 **Critical: Y**	Enters C.4-B.03.03.A (STUCK OPEN RELIEF VALVE) and performs the immediate operator actions. 1. Place the handswitch for the affected SRV to the OPEN position and then return it to the normal position.
Standard:	Places handswitch in open and then to auto.
Evaluator Cue:	If told of action, acknowledge CRS.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 15 **Critical: Y**	2. IF SRV E, G, or H open, THEN perform the following: a. Place their respective switches (2E-S4E, 2E-S4G, 2E-S4H on C-03) in CLOSE.
Standard:	Place switch 2E-S4H in CLOSE.
Evaluator Cue:	If told of action, acknowledge CRS.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 16 **Critical: Y**	2. IF SRV E, G, or H open, THEN perform the following: b. Place DIV II Lo-Lo SET LOGIC switch (HS-S3B) on Control Room Panel C-253D in BYPASS.
Standard:	Place DIV II Lo-Lo SET LOGIC switch in BYPASS.
Evaluator Cue:	If told of action, acknowledge CRS.
Sim Cue:	When DIV II Lo-Lo SET LOGIC switch is taken to BYPASS, **DELETE** malfunction AP01H (SAFETY/RELIEF VALVE RV2-71H FAILS OPEN) **AND DELETE** Safety Relief Valve RV2-71H Red Light override.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 17 **Critical: N**	Notify Shift Supervision.
Standard:	Notifies Shift Supervision.
Evaluator Cue:	Acknowledge notification as CRS.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 18 **Critical: N**	Operator refers to procedure C.4-B.03.03.A (STUCK OPEN RELIEF VALVE) and verifies immediate operator actions have been performed.
Standard:	Review immediate operator actions from procedure C.4-B.03.03.A.
Evaluator Cue:	Acknowledges any reports as CRS. When immediate operator actions have been reviewed, state the JPM is complete.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: When report is made of the task completion, state that the JPM is complete.

Stop Time: _____

Critical Time N/A

TURNOVER SHEET

INITIAL CONDITIONS:

- Reactor is at power. Reactor pressure is approximately 140 psig. One Turbine Bypass valve is approximately 90% open. RHR is in Torus Cooling mode.

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to perform Test No. 0112 on SRV 2-71H only.
- The Rx Bldg APEO has just completed a Torus walkdown to ensure no one is working in area.
- An operator is standing by panel C-07 to monitor and report TBPV position changes.
- Provide the operator with a marked up copy of Test No. 0112.
- Other operators will assist you as you specifically request.

SIMULATOR SET UP: (*Modify table as necessary)*

Simulator Setup Instructions:

- Initialize to any IC with the Reactor critical at approximately 140 psig and one Turbine Bypass valve 90% open. RHR is in Torus Cooling mode.
- IC-234 has setup for 2007 ILT Exam
- Fill in Test 0112 as follows:
  - Sign Control Room Supervisor approval on cover sheet.
  - Reason for Performing Step 2.
  - Initial prerequisites.
  - Initial Part A, Steps 1 and 2.
  - N/A all Steps in Parts B, C, D, E, F, G, H and I.
  - Operator will be performing Parts A, J and K.

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.	AP01H	Safety/Relief Valve RV2-71-H Fails Open	00:00:00	00:00:00	1	TRUE	TRUE
2.							

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.	DS220-02	Safety Relief Valve RV2-71-H Red Light	00:00:00	00:00:00	1	ON	ON
2.							

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.							

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

Validation Personnel /Date	Validation Personnel/Date
Validation Personnel /Date	Validation Personnel/Date
Validation Personnel /Date	Validation Personnel/Date
Validation Personnel /Date	Validation Personnel/Date

Historical Record: (Optional)

NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: Manual Initiation of RCIC

JPM NUMBER: JPM-B.02.03-009 **REV.** 0

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR217.107 Manually Initiate RCIC

K/A NUMBERS: 217000, A4.04 **Rating: SRO/RO:** 3.6 / 3.6

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [x]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [x] Other: [ ]

Lab: [ ]

Time for Completion: 10 Minutes Time Critical: No

Alternate Path / Faulted: Yes

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by:	**J Ruth**	
	Instructor	Date
Validated by:		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM Number: JPM-B.02.03-009

JPM Title: Manual Initiation of RCIC

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A reactor scram has occurred due to a loss of normal feedwater
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):

- Restore RPV water level by manual initiation of RCIC per the hard card.

JPM PERFORMANCE INFORMATION

Required Materials: Simulator

General References: B.02.03-05

Task Standards: Inject with RCIC into the RPV

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: N**	At any time while performing this procedure, IF conditions permit, THEN place RHR in torus Cooling for cooling/mixing the Torus water, per Ops Man Section B.03.04-05.
Standard:	Informs CRS for step to place Torus Cooling in service.
Evaluator Cue:	Acknowledge report and state that another operator will be directed to place Torus Cooling in service.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: N**	Verify flow controller FIC-13-91 is in AUTO, AND set to 400 gpm.
Standard:	Verifies flow controller FIC-13-91 is in AUTO, AND set to 400 gpm.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: Y**	OPEN MO-2096, RCIC Cooling Water Supply Valve
Standard:	Opens MO-2096, RCIC Cooling Water Supply Valve
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	Place P-211 (RCIC Barometric Condenser Vacuum Pump) Handswitch, 13A-S15, in the START position.
Standard:	Places Handswitch, 13A-S15, in the START position.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: N**	OPEN CV-2104, RCIC Pump Minimum flow Valve
Standard:	Opens CV-2104, RCIC Pump Minimum flow Valve
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: Y**	OPEN the following: a. MO-2107, RCIC Pump Disch Inbd valve b. MO-2106, RCIC Pump Disch Otbd valve
Standard:	Opens MO-2107 and MO-2106
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: Y**	OPEN MO-2078, RCIC Turbine Steam Supply
Standard:	Opens MO-2078, RCIC Turbine Steam Supply
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	Verify the following valves are closed: a. CV-2848 and CV-2849, RCIC Cond Pump Discharge to CRW b. CV-2082A and CV-2082B, RCIC Steam Line Drain to Main Condenser
Standard:	Verifies CV-2848, CV-2849, CV-2082A and CV-2082B are closed.
Evaluator Cue:	
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: Y**	Verify SI-7321, RCIC Turbine Speed Indicator is increasing, indicating that unit is rolling.
Standard:	Notes turbine speed is cycling between 0-500 rpm and the Turbine Control Valve, HO-8, is cycling and annunciator 4-A-14 (RCIC LOW FLOW) is in alarm.
Evaluator Cue:	If operator reports failure of speed to increase, acknowledge report.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: Y**	Place RCIC Flow Controller, FIC-13-91 in MANUAL and turns speed control knob in the clockwise direction.
Standard:	Places RCIC Flow Controller, FIC-13-91 in MANUAL and turns speed control knob in the clockwise direction.
Evaluator Cue:	If operator reports speed increasing, acknowledge report.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: N**	Verify AO-13-22, RCIC Injection Testable Ckv, is open.
Standard:	Verifies AO-13-22, RCIC Injection Testable Ckv, is open.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: N**	Verify RCIC pump flow is maintained at desired level.
Standard:	Verifies RCIC pump flow is maintained at desired level.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: N**	Refer to Ops Man Section B.02.03-05.E, Operating Procedures, for further guidance on reactor vessel level and pressure control.
Standard:	Refers to Ops Man Section B.02.03-05.E, Operating Procedures, for further guidance on reactor vessel level and pressure control or asks CRS for further guidance on RCIC operation.
Evaluator Cue:	When operator refers to B.02.03-05.E state JPM is complete.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: **Critical: N**	**INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.**
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	When operator informs evaluator that the task is completed, state that the JPM is completed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: **When operator informs evaluator that the task is completed, state that the JPM is completed.**

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:

- A reactor scram has occurred due to a loss of normal feedwater
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):

- Restore RPV water level by manual initiation of RCIC per the hard card

SIMULATOR SET UP:

Simulator Setup Instructions:

- IC-235 has setup for 2007 ILT Exam
- Establish a condition with a reactor scram and both RFPs and HPCI unavailable for RPV injection
- Insert malfunction RC05B, RCIC SPEED CONTROL FAILS LOW

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.	RC05B	RCIC Speed Control Fails Low	00:00:00	00:00:00	N/A	TRUE	TRUE
2.							

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation ***SHALL*** sign and date this form.

_____	_____
Validation Personnel /Date	Validation Personnel/Date
_____	_____
Validation Personnel /Date	Validation Personnel/Date
_____	_____
Validation Personnel /Date	Validation Personnel/Date
_____	_____
Validation Personnel /Date	Validation Personnel/Date

Historical Record: (Optional)

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: DRYWELL TO SUPPRESSION CHAMBER VACUUM BREAKER LEAKAGE OPERATIONAL CHECK

JPM NUMBER: JPM-B.04.01-006 **REV.** 0

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR999.223 Containment System

K/A NUMBERS: 223001 A3.02 **Rating: SRO/RO:** 3.4/3.4

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 35 Minutes Time Critical: NO

Alternate Path / Faulted: YES

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Developed by: **J. Ruth**
Instructor Date

Validated by: _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

Approved by: _____
Training Supervisor Date

JPM Number: JPM-B.04.01-006

JPM Title: DRYWELL TO SUPPRESSION CHAMBER VACUUM BREAKER LEAKAGE OPERATIONAL CHECK

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant is at power
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to complete Test No. 0143 (DRYWELL-TORUS MONTHLY VACUUM BREAKER CHECK).

JPM PERFORMANCE INFORMATION

Required Materials: Initialize the simulator to any IC with the plant at power.

General References: Plant

Task Standards: TEST No. 0143, Rev. 31

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: Y**	OPEN or verify open the following valves: a. AI-215 b. CV-7956
Standard:	1. Directs APEO to OPEN AI-215. **(Non-Critical Portion)** 2. Opens CV-7956 using HS-7956 on panel C-06.
Evaluator Cue:	AI-215 is open.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: Y**	**<u>NOTE 1</u>: The following steps require an operator to monitor local position indication on the wall mounted cabinet in the northeast corner of the Reactor Building at elevation 935'.** **<u>NOTE 2</u>: Verification of green indicating lights ON for the local position indication for each vacuum breaker satisfies the independent verification for returning the components to their normal position.** SELECT AO-2382A, Torus-DW Vac Breaker, on valve select switch 16A-S60, Suppression Chamber to Drywell Vac Bkr Vlv Sel Sw (Panel C-04).
Standard:	Selects AO-2382A, on valve select switch 16A-S60.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: Y**	OPEN AO-2382A by placing valve operation switch 16A-S61, Suppression Chamber to Drywell Vac Bkr Vlv Op Sw, (Panel C-04) to TEST.
Standard:	Places switch 16A-S61, to TEST and holds it there.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	Verify AO-2382A OPENED by observing the following: a. The green indicating light is OFF and the red indicating light is ON above the valve select switch, 16A-S60. b. The green indicating light is OFF and the red indicating light is ON on the wall mounted cabinet in the northeast corner of the Reactor Building at elevation 935'.
Standard:	1. Verifies green light OFF and red light ON above HS for AO-2382A, <u>AND</u> 2. Directs APEO to verify AO-2382A local green light OFF and red light is ON.
Evaluator Cue:	Local red light for AO-2382A is ON. Local green light for AO-2382A if OFF.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: N**	Verify the following annunciators are in ALARM: a. 5-A-41 (CR VAC BKR DW/TORUS) b. 5-A-42 (LOCAL VAC BKR DW/TORUS)
Standard:	Verifies 5-A-41 and 5-A-42 are alarming.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: Y**	Place valve operation switch 16A-S61 (Panel C-04) to OFF.
Standard:	Places 16A-S61 to OFF.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: Y**	Verify AO-2382A CLOSED by observing the following: a. The green indicating light is ON and the red indicating light is OFF above the valve select switch, 16A-S60. b. The green indicating light is ON and the red indicating light is OFF on the wall mounted cabinet in the northeast corner of the Reactor Building at elevation 935'.
Standard:	1. Verifies green light ON and red light ON above HS for AO-2382A, <u>AND</u> 2. Directs APEO to verify AO-2382A local green light ON and red light is OFF. 3. Reports intermediate position indication to CRS.
Evaluator Cue:	Local red light for AO-2382A is ON. Local green light for AO-2382A if ON. After report of intermediate indication, direct test suspended and that CV-7956 and AI-215 be closed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	Informs CRS of need to perform Test 0213, DRYWELL TO SUPPRESSION CHAMBER VACUUM BREAKER LEAKAGE OPERATIONAL CHECK.
Standard:	Informs CRS of need to perform test.
Evaluator Cue:	If informed, acknowledge need, if NOT informed, direct performance of test. In either case, provide an approved copy of test to be performed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: N**	Verify valve DWV-12, V-EF-25 Purge Fan Disch, is CLOSED.
Standard:	Calls Reactor Building operator and directs that valve is verified closed.
Evaluator Cue:	States DWV-12 is closed
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: Y**	IF the Reactor is in RUN mode, THEN place 16A-S53, Containment Vent Run Mode Intlk, keylock switch in the BYPASS position.
Standard:	Places 16A-S53, Containment Vent Run Mode Intlk, keylock switch in the BYPASS position.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: Y**	OPEN the following valves: a. AO-2377, Drywell & Torus Purge Otbd Isol b. AO-2381, Drywell Purge Inbd Isol
Standard:	Opens both valves
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: N**	At the liquid nitrogen storage tank, verify that valve DWV-21, Liquid N2 Make-up to Vaporizer, is CLOSED.
Standard:	Directs Out Plant operator to verify valve closed.
Evaluator Cue:	Report valve is verified closed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: N**	Verify valve DWV-29, Vaporizer Inl, is CLOSED.
Standard:	Directs Out Plant operator to verify valve closed.
Evaluator Cue:	Report valve is verified closed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 14 **Critical: N**	Verify valve DWV-14, N2 Purge Vaporizer Out, is CLOSED.
Standard:	Directs Out Plant operator to verify valve closed.
Evaluator Cue:	Report valve is verified closed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 15 **Critical: N**	**NOTE: If the nitrogen storage tank cannot supply sufficient nitrogen pressure, the Drywell instrument air system may transfer back to the instrument air supply.** During depressurization, observe nitrogen supply pressure to the Drywell instrument air header, AND IF desired following completion of pressurization, THEN transfer back to Nitrogen supply by depressing the N2 RESET pushbutton.
Standard:	None
Evaluator Cue:	If asked to monitor, acknowledge the request.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 16 **Critical: N**	Place the POST LOCA SW TO PRESS SENSING LINES PCV-3281 AND PS-3372 switch to ON (north wall by vaporizer).
Standard:	Directs Out Plant operator to Place the POST LOCA SW TO PRESS SENSING LINES PCV-3281 AND PS-3372 switch to ON.
Evaluator Cue:	State that the switch is ON.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 17 **Critical: N**	Perform the following: a. Slowly OPEN valve DWV-13, N2 Vaporizer Byp, until the desired flow is established. Maintain Nitrogen temperature above 60° F. b. IF 20-A-49 (NITROGEN TEMP LOW) is in ALARM, THEN reduce flow.
Standard:	Directs Out Plant operator to slowly OPEN valve DWV-13, N2 Vaporizer Byp, until the desired flow is established.
Evaluator Cue:	State valve is open and will monitor nitrogen temperature and alarm.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 18 **Critical: N**	Verify AO-2982, Primary Ctmt Exh Isol Plenum, is CLOSED.
Standard:	Verifies valve closed.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 19 **Critical: Y**	Manually initiate one of the SBGT trains (See Ops Man B.04.02-05).
Standard:	Refers to Ops Man B.04.02-05
Evaluator Cue:	State that another operator will manually start SBGT Train A. (Simulator booth operator will place SBGT Train A in service per B.04.02-05.D.3
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 20 **Critical: Y**	WHEN containment pressure is approximately 1 psig, THEN OPEN the following valves: a. CV-2384, Torus Purge Exhaust Inbd b. AO-2896, Torus Main Exhaust
Standard:	Waits until approximately 1 psig and opens valves.
Evaluator Cue:	When containment pressure is 0.5 psig, state that for the purpose of this JPM, containment pressure is approximately 1 psig. (It takes ~ 15 minutes to achieve 0.5 psig)
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 21 **Critical: N**	Monitor Drywell to Torus differential pressure. IF adequate differential pressure, 0.1 to 0.3 psid, can be obtained by venting the torus, THEN proceed to STEP 14, IF NOT, proceed to STEP 13a.
Standard:	Observes adequate differential pressure.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 22 **Critical: Y**	WHEN a differential pressure of 0.1 to 0.3 psid is obtained, THEN CLOSE the following valves to shutdown the nitrogen supply to the Drywell: a. DWV-13 b. AO-2377 c. AO-2381
Standard:	Directs the Out Plant Operator to close DWV-13 and closes AO-2377 and AO-2381.
Evaluator Cue:	Report as the Out Plant Operator that DWV-13 is closed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 23 **Critical: Y**	**NOTE: SBGT may be secured per Ops Manual B.04.02-05 following this step.** CLOSE the following valves to terminate Torus venting: a. CV-2384 b. CV-2896
Standard:	Closes CV-2384 and CV-2896.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 24 **Critical: Y**	**NOTE: Primary Containment temperature and Torus water level must be stable while taking pressure decay data. Changes in temperature and water level impact the drywell and suppression chamber pressures.** WHEN Primary Containment temperature and Torus water level are stable, THEN record Drywell-to-Torus differential pressure at 10 second intervals, for a period of at least 2 minutes, on the attached data sheet.
Standard:	Record Drywell-to-Torus differential pressure at 10 second intervals, for a period of at least 2 minutes, on the attached data sheet.
Evaluator Cue:	When 2 minutes of data have been recorded on the data sheet, state that the JPM is complete.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 25 **Critical: N**	**THE TASK HAS BEEN COMPLETED.**
Standard:	Operator acknowledges from evaluator that the task is completed.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: Provided in Step 24.

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:

- The plant is at power
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to complete Test No. 0143, DRYWELL-TORUS MONTHLY VACUUM BREAKER CHECK.

SIMULATOR SET UP:

NOTE: IC-237 supports this JPM and the EDG JPM for the 2007 ILT exam

From 100% power IC 15, perform the following:

Complete Test No.0143 as follows:

- Sign Shift Supv approval on cover sheet
- Put the following in the comments section on the cover sheet:
- Mark # 1 as the reason for performing this test.
- N/A all prerequisites.

Provide copy of Test No. 0143 to Operator.

- Insert remote DG10 #11 Diesel Generator speed droop in.
- Lower the 11 EDG speed adjust control switch for ~15 seconds
- Insert remote PC01, DWV-13, N2 Gas Supply valve to OPEN
- Insert remote IA07, AI-38 Instrument Air Manual Isolation valve
- Insert override DS006-02, Vac Brkr AO-2382A red lamp to ON when test switch is taken to TEST
- When directed by Evaluator to place SBGT Train A in service (JPM step 21, place SBGT in service per B.04.02-05.D.3.

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.		None	00:00:00	00:00:00			

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.	DS006-02	Vac BKR AO-2382A Red Lamp	00:00:00	00:00:00	1	OFF	ON

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.	PC01	DWV-13, N2 Gas Supply Throttle Valve	00:00:00	00:00:00	N/A	0	100
2.	IA07	AI-38 Instrument Air Manual Isolation valve	00:00:00	00:00:00	N/A	100	100
3.	DG10	#11 Diesel Generator speed droop	00:00:00	00:00:00	N/A	IN	IN

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Historical Record: (Optional)

NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: MANUALLY START NO. 11 EDG (CONTROL ROOM ACTIONS)

JPM NUMBER: JPM-B.09.08-001 **REV.** 9

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR264.101
Perform the 11(12) Emergency Diesel Generator Start and Load Test

K/A NUMBERS: 264000.A4.04 **Rating: SRO/RO:** 3.7/3.7

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by:	J. Ruth Instructor	Date
Validated by:	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	Training Supervisor	Date

JPM Number: JPM-B.09.08-001

JPM Title: Manually Start No. 11 EDG (Control Room Actions)

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:
The task conditions are as follows:
- The Reactor is at power.
- The Emergency Diesel Generator System Engineer has requested that No. 11 EDG be started and loaded to 2500 KW to perform an in-service inspection.
- You are the Balance of Plant operator.

INITIATING CUES (IF APPLICABLE):
"[STATE OPERATOR'S NAME] manually start and load No. 11 EDG to 2500 Kw per the operations manual B.09.08-05.D.1. The Turbine Building Operator has completed the EDG In-plant Pre-Start Checks. Procedure STEPS 1 through 9 have been completed."

JPM PERFORMANCE INFORMATION

Required Materials: NONE

General References: B.09.08-05 Rev. 25

Task Standards: START AND LOAD EDG TO 2500 KW

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: N**	Locate procedure B.09.08-05 D.1. (11 EMERGENCY DIESEL GENERATOR STARTUP). Operator obtains and reviews procedure.
Standard:	Obtained appropriate procedure.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: Y**	Start generator G-3A by performing the following concurrently: a. PLACE switch DG1/CS in START position. Operator places Diesel Gen Control switch (DG1/CS) to START and releases and acknowledges annunciators.
Standard:	Started 11 EDG
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: N**	Start generator G-3A by performing the following concurrently: b. CHECK the following annunciators in alarm: a. 8-B-24 (NO. 11 DIESEL ENG CRANKING) b. 8-B-34 (NO. 11 DIESEL ENG RUNNING) Operator places Diesel Gen Control switch (DG1/CS) to START and releases and acknowledges annunciators. **NOTE TO EVALUATOR: 8-B-3 #11 DIESEL GEN NOT AUTO DG1/152-502 will come in on start signal, alarm will reset immediately.**
Standard:	Acknowledge annunciators.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	Start generator G-3A by performing the following concurrently: c. Locally, CHECK oil pressure gauge PI-7005, 11 EDG Lube Oil Pressure, has reached greater than 44 psig within 90 seconds.
Standard:	Contacted Turbine Building Operator to obtain status of Oil Pressure.
Evaluator Cue:	Report as Turbine Building Operator that Oil Pressure is 50 psig.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: N**	Concurrently, ALLOW generator G-3A to idle for 10 minutes, AND locally CHECK Engine for the following: a. No leakage from cylinder vent cocks. b. No leakage from crankcase inspection covers. c. Oil level between LOW (-12.5 inches) and FULL (0.0 inches) by performing the following: 1) Remove dipstick and wipe-off oil from tip. 2) Reinsert dipstick for 3 to 5 seconds THEN remove dipstick to read lube oil level. 3) Reinsert dipstick. d. No visual or audible abnormal indications.
Standard:	Directed Turbine Building Operator to perform checks.
Evaluator Cue:	Turbine Building Operator reports that all EDG local parameters are normal at idle speed, STEP 11 is complete and then inform the operator that 10 minutes has lapsed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: N**	CHECK air box drain for proper operation by performing the following: a. REMOVE Air Box Drain Plug downstream of valve DGN-6-1, 11 EDG Air Box Drain Valve. b. Slowly crack OPEN drain valve DGN-6-1. c. CHECK airflow from air box drain line. d. CLOSE valve DGN-6-1. e. INSTALL Air Box Drain Pipe Plug. f. IF no air flowed from Air Box Drain Line, THEN NOTIFY Shift Supervision before proceeding.
Standard:	Contacted Turbine Building Operator to check the air box drain.
Evaluator Cue:	Turbine Building Operator reports Procedure Step 12 has been satisfactorily completed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: Y**	Place knob 11 EDG SPEED DROOP to scribe mark between 40 and 50 on the governor dial plate.
Standard:	Instructed Turbine Building Operator to place 11 EDG Speed Droop knob to scribe mark between 40-50 on governor dial plate.
Evaluator Cue:	Turbine Building Operator reports Speed Droop knob is to the scribe mark between 40 and 50 on the governor dial plate.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	INDEPENDENTLY VERIFY knob 11 EDG SPEED DROOP is at scribe mark between 40 and 50 on the governor dial plate and log entry per PRECAUTIONS AND LIMITATIONS Item 3.
Standard:	Requested independent verification of previous step, and logs completion.
Evaluator Cue:	State that Independent verification is complete and is logged.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: Y**	PLACE and HOLD switch GSC1/CS, 11 Diesel Generator speed Adjust, in RAISE position, WHEN Generator Frequency Meter just comes on-scale, THEN release switch GSC1/CS. **EVALUATOR NOTE: This takes approximately 1 minute to occur while holding the switch in the RAISE position.**
Standard:	Raised speed until frequency meter comes on scale.
Evaluator Cue:	If asked, local operator reports speed rising.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: Y**	Parallel generator G-3A with 15 bus by performing the following: a. ADJUST generator G-3A speed with switch GSC1/CS until frequency is approximately 60 Hz. Operator turns 11 EDG speed adjust control switch GSC1/CS to RAISE until frequency indicates approximately 60 Hz.
Standard:	Frequency approximately 60 HZ.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: N**	**<u>NOTE</u>: Switch 52-711/SS, 52-711 (LC-107 to LC-108 Bus tie Bkr) Sync Switch, in ON position will affect C-08 Synchroscope.** Parallel generator G-3A with 15 bus per the following: b. VERIFY switch 52-7111/SS in OFF position (Panel C-313).
Standard:	Verifies switch 52-711/SS in OFF position.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: Y**	Parallel generator G-3A with 15 bus per the following: c. <u>IF</u> frequency is near 60 HZ, <u>THEN</u> PLACE switch 152-502/SS, Sync 11 Stby Diesel Gen to Bus 15 ACB 152-502, in ON position.
Standard:	Places sync with to ON position.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: N**	Parallel generator G-3A with 15 bus per the following: d. CHECK the following: 1) Synchronizing pointer is moving. 2) Synchronizing Voltmeters and sensing lights are activated.
Standard:	Checks pointer moving and lights activated.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 14 **Critical: Y**	Parallel generator G-3A with 15 bus per the following: e. Establish synchronous conditions by performing the following: **<u>NOTE</u>: The SYNCHRONIZING INCOMING VOLTAGE meter indicates G-3A voltage. The SYNCHRONIZING RUNNING VOLTAGE meter indicates Bus 15 voltage.** 1) ADJUST switch 190-DG1/CS, 11 Diesel Generator Voltage Adjust, to match SYNCHRONIZING INCOMING VOLTAGE with SYNCHRONIZING RUNNING VOLTAGE. 2) ADJUST speed adjust switch GSC1/CS to establish clockwise Synchroscope Pointer rotation of one revolution in 30 to 120 seconds. 3) VERIFY Synchroscope is operating by observing Synchroscope Pointer make at least two complete revolutions
Standard:	Matches incoming and running voltage.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 15 **Critical: Y**	**CAUTION 1** **To avoid possible overspeed trips of both generators, do not parallel generator G-3A and generator G-3B to the system simultaneously.** **CAUTION 2** **To avoid possible overspeed trip in case of system fault, do not parallel generator G-3A to an off-site power system in anticipation of a loss of off-site power.** **CAUTION 3** **Generator G-3A does not have Synchroscope interlock and therefore can be paralleled out of phase. Do not close breaker 152-502, G-3A (11 DG) to 15 Bus 4KV Supply, until synchronous conditions are met.** Parallel generator G-3A with 15 bus per the following: f. IF generator G-3B, 12 Emergency Diesel Generator, is NOT paralleled to the system, WHEN synchronous conditions are met (Synchroscope Pointer in green band), THEN CLOSE breaker 152-502.
Standard:	Closes EDG output breaker.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 16 **Critical: Y**	Parallel generator G-3A with 15 bus per the following: g. Immediately, ADJUST speed adjust switch GSC1/CS to pick up 5% load (approximately 125 KW).
Standard:	Adjusts speed adjust switch GSC2/CS to pick up 5% load (approximately 125 KW).
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 17 **Critical: N**	Parallel generator G-3A with 15 bus per the following: h. CHECK phase to phase voltages (A-B, B-C, C-A) are approximately equal.
Standard:	Checks phase to phase voltages (A-B, B-C, C-A) are approximately equal.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 18 **Critical: N**	Parallel generator G-3A with 15 bus per the following: i. CHECK phase currents (A, B, C) are approximately equal.
Standard:	Checks phase currents (A, B, C) are approximately equal.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 19 **Critical: Y**	RAISE load to 1875 KW using speed adjust switch GCS1/CS.
Standard:	Raises load to 1875 KW using speed adjust switch GCS1/CS.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 20 **Critical: N**	HOLD load at 1875 KW, <u>UNTIL</u> local Operator checks proper operation of G-3A.
Standard:	Holds load at 1875 KW for local Operator checks.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 21 **Critical: N**	Locally, CHECK proper operation of generator G-3A. a. No visual or audible abnormal indications. b. Temperature Regulating Valve is open. c. IF proper operation is confirmed, THEN NOTIFY Main Control Room.
Standard:	Directs Outplant Operator to perform local checks.
Evaluator Cue:	Report that the Temperature Regulating Valve is open and all diesel conditions are satisfactory.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 22 **Critical: Y**	RAISE load, as desired, up to 2500 KW maximum.
Standard:	Raises load to 2500 KW maximum.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 23 **Critical: N**	**INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.**
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	Acknowledge Report
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: **AFTER D/G IS AT 2500 KW AND REPORT IS MADE, STATE THAT THE JPM IS COMPLETE.**

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:
The task conditions are as follows:

- The Reactor is at power.
- The Emergency Diesel Generator System Engineer has requested that No. 11 EDG be started and loaded to 2500 KW to perform an in-service inspection.
- You are the Balance of Plant operator.

INITIATING CUES (IF APPLICABLE):
"[STATE OPERATOR'S NAME] manually start and load No. 11 EDG to 2500 Kw per the operations manual B.09.08-05.D.1. The Turbine Building Operator has completed the EDG In-plant Pre-Start Checks. Procedure STEPS 1 through 9 have been completed."

SIMULATOR SET UP:

NOTE: IC-237 supports this JPM and the D/W – Torus Vac Bkr JPM for the 2007 ILT exam

From 100% power IC 15, perform the following:

- Insert remote DG10 #11 Diesel Generator speed droop in.
- Lower the 11 EDG speed adjust control switch for ~15 seconds
- Insert remote PC01, DWV-13, N2 Gas Supply valve to OPEN
- Insert remote IA07, AI-38 Instrument Air Manual Isolation valve
- Insert override DS006-02, Vac Brkr AO-2382A red lamp to ON when test switch is taken to TEST
- When directed by Evaluator to place SBGT Train A in service (JPM step 21, place SBGT in service per B.04.02-05.D.3.

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.		None	00:00:00	00:00:00			

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.	DS006-02	Vac BKR AO-2382A Red Lamp	00:00:00	00:00:00	1	OFF	ON

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.	PC01	DWV-13, N2 Gas Supply Throttle Valve	00:00:00	00:00:00	N/A	0	100
2.	IA07	AI-38 Instrument Air Manual Isolation valve	00:00:00	00:00:00	N/A	100	100
3.	DG10	#11 Diesel Generator speed droop	00:00:00	00:00:00	N/A	IN	IN

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Historical Record: (Optional)

NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: PERFORM THE SERVICE WATER EFFLUENT MONITOR FUNCTIONAL TEST

JPM NUMBER: JPM-B.05.11-001 **REV.** 10

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR999.273
Process Radiation Monitoring System

K/A NUMBERS: 272000 A1.02 **Rating: SRO/RO:** 2.9/2.9
A4.02 3.0/3.0

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: No

Alternate Path / Faulted: No

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by:	**J Ruth**	
	Instructor	Date
Validated by:		
	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM Number: JPM-B.05.11-001

JPM Title: Perform the Service Water Effluent Monitor Functional Test

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant is operating at power and all systems are operable. Steps 1 through 3 of Test 0289-A (SERVICE WATER EFFLUENT MONITOR FUNCTIONAL TEST) have been completed.
- Provide the operator with a copy of Test 0289-A.

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to perform steps 4 through 14 of the Service Water Effluent Monitor Functional Test 0289-A. Steps 15 through 25 will be performed later by an operator and a Radiation Protection Specialist.

JPM PERFORMANCE INFORMATION

Required Materials:

General References: Plant

Task Standards: Test 0289-A

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

Performance Step: 1 **Critical: Y**	Place RM-17-351 Mode switch to STANDBY.
Standard:	On Panel C-10, places the Service Water Effluent Monitor, RM-17-351 Mode switch to STANDBY.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: Y**	Verify the following: 1. INOP indicating light is ON. 2. Annunciator 4-A-28 alarms. 3. Computer point PRM002 (LIQUID PROCESS DWNSL/INOP) is typed out.
Standard:	1. On Panel C-10, verifies the INOP indicating light is ON. 2. On Panel C-04, verifies annunciator 4-A-28 alarms. 3. Computer point PRM002 typed out.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: Y**	Place RM-17-351 Mode switch to ZERO.
Standard:	On Panel C-10, places the Service Water Effluent Monitor, RM-17-351 Mode switch to ZERO.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: Y**	Verify the following: 1. Recorder RR-4902 Ch. 4 indicates 10^{-1} cps $\pm$ 1/16 inch. 2. RM-17-351 meter indicates 10^{-1} cps $\pm$ 1/8 inch
Standard:	1. On Panel C-02, verifies recorder reading. 2. On Panel C-10, verifies meter reading.
Evaluator Cue:	After readings obtained and if questioned, state that meter indication is within 1/16 inch and/or state that recorder reading is within 1/8 inch.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: Y**	Place RM-17-351 Mode switch to 10.
Standard:	On Panel C-10, places the Service Water Effluent Monitor, RM-17-351 Mode switch to 10.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: Y**	Verify the following: 1. Recorder RR-4902 Ch. 4 indicates 10 cps ± 1/16 inch. 2. RM-17-351 meter indicates 10 cps ± 1/8 inch.
Standard:	1. On Panel C-02, verifies the recorder reading. 2. On Panel C-10, verifies the meter indication.
Evaluator Cue:	After readings obtained and if questioned, state that meter indication is within 1/16 inch and/or state that recorder reading is within 1/8 inch.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: Y**	Place RM-17-351 Mode switch to 10^5.
Standard:	On Panel C-10, places the Service Water Effluent Monitor, RM-17-351 Mode switch to 10^5.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: Y**	Verify the following: 1. Recorder RR-4902 Ch. 4 indicates 10^5 cps ±1/16 inch. 2. RM-17-351 meter indicates 10^5 cps ± 1/8 inch. 3. Indicating light UPSCALE HIGH is on. 4. Annunciator 4-A-23 alarms. 5. Computer Point PRM001 (PROCESS LIQUID HI RAD) is typed out.
Standard:	1. On Panel C-02, verifies the recorder reading. 2. On Panel C-10, verifies the meter reading. 3. On Panel C-10, verifies the UPSCALE HIGH light is on. 4. On Panel C-04, verifies annunciator 4-A-23 alarms. 5. Verifies Computer Point PRM001 prints out.
Evaluator Cue:	After readings obtained and if questioned, state that meter indication is within 1/16 inch and/or state that recorder reading is within 1/8 inch.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: Y**	Place RM-17-351 Mode witch to OPERATE.
Standard:	On Panel C-10, places the Service Water Effluent Monitor, RM-17-351 Mode switch to OPERATE.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: Y**	Actuate RM-17-351 reset switch.
Standard:	On Panel C-10, activates the reset switch on the Service Water Effluent Monitor RM-17-351.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: N**	Verify that the following reset: 1. Annunciator 4-A-23 2. Annunciator 4-A-28 3. Computer Alarm Point PRM001 4. Computer Alarm Point PRM002
Standard:	Verifies 4-A-23 and 4-A-24 Annunciator RESET. Verifies Computer Alarm Points PRM001 and PRM002 RESET.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: N**	**INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.**
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: Inform the operator that the JPM is complete.

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:

- The plant is operating at power and all systems are operable. Steps 1 through 3 of Test 0289-A (SERVICE WATER EFFLUENT MONITOR FUNCTIONAL TEST) have been completed.
- Provide the operator with a copy of Test 0289-A.

INITIATING CUES (IF APPLICABLE):

- The Control Room Supervisor directs you to perform steps 4 through 14 of the Service Water Effluent Monitor Functional Test 0289-A. Steps 15 through 25 will be performed later by an operator and a Radiation Protection Specialist.

SIMULATOR SET UP:

Simulator Setup Instructions:

- Any Power IC
- No malfunctions or overrides are required

Initialize to any IC which has the plant operating at power and the SW Effluent Monitor is operable.

Fill out 0289-A as follows:

- Sign Shift Supervisor approval to commence.
- Reason for performing – other: _X_.
- Initial steps 1 through 3.
- Place a check mark next to Test revision number.

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.							
2.							

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Historical Record: (Optional)

NMC Committed to Nuclear Excellence

JOB PERFORMANCE MEASURE (JPM)

SITE: MONTICELLO NUCLEAR GENERATING PLANT

JPM TITLE: RESTORE SBGT TO A NORMAL STANDBY LINEUP

JPM NUMBER: JPM-B.04.02-002 **REV.** 5

RELATED PRA INFORMATION: None

TASK NUMBER(S) / TASK TITLE(S): CR999.261
Operate the Standby Gas Treatment System

K/A NUMBERS: 261000 A3.01 **Rating: SRO/RO:** 3.2/3.3

APPLICABLE METHOD OF TESTING:
Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION:
In-Plant: [ ] Control Room: [ ]
Simulator: [X] Other: [ ]
Lab: [ ]

Time for Completion: 10 Minutes Time Critical: No

Alternate Path / Faulted: No

TASK APPLICABILITY: SRO: _____ SRO/RO: X SRO/RO/NLO: _____

Additional signatures may be added as needed.

Developed by:	**J Ruth** Instructor	Date
Validated by:	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	Training Supervisor	Date

JPM Number: JPM-B.04.02-002

JPM Title: SBGT Operation

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

JPM BRIEFING/TURNOVER
(See MTCP-03.32, Figure 6.2)

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:
- Reactor is at 100% power.
- "A" SBGT train is operating due to a spurious HI-HI trip of "B" Fuel Pool Rad Monitor.
- The Rad Monitor has been reset.
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):
- The CRS directs you to restore SBGT to standby status in accordance with Ops Manual B.04.02-05.F.2.

JPM PERFORMANCE INFORMATION

Required Materials:

General References: B.04.02-05.F.2 Rev. 18

Task Standards: Restore SBGT to standby readiness.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step *SHALL* result in failure of this JPM.

Performance Step: 1 **Critical: N**	Operator locates Procedure B.04.02-05.F.2 (SHUTDOWN AFTER AUTO INITIATION).
Standard:	Locates B.4.2-05.F.2.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 2 **Critical: Y**	Reset automatic initiation signal by momentarily placing the GROUP 2 ISOLATION VALVES RESET switch on Panel C-04 in the OUTBD and INBD positions.
Standard:	Resets Auto-initiation signal by turning GROUP 2 ISOLATION VALVES RESET switch to both the INBD (CCW) and OUTBD (CW) positions.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 3 **Critical: N**	IF SBGT A Train and SBGT B Train are both operating, THEN perform Ops Manual Procedure B.04.02-05.F.1.
Standard:	None
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 4 **Critical: N**	[ITS] IF A Train is operating and B Train is in Standby, THEN: a. [ITS] Enter appropriate Tech Spec Condition: 1) [ITS IF SBGT B Train in Standby, THEN enter Tech Spec 3.6.4.3 Condition A.
Standard:	Notifies Shift Supervision of entry into Tech Spec LCO.
Evaluator Cue:	Tech Spec LCO entered and appropriate notifications complete; logged in CR log.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 5 **Critical: Y**	IF A Train is operating and B Train is in Standby or inoperable THEN: b. Perform the following switch lineup: 1. V-EF-17A to ON 2. AO-2945 to OPEN 3. AO-2979 to OPEN 4. Place HS-2988A to Position 1 (MANUAL)
Standard:	1. Operator places V-EF-17A (HS-2983A) to ON AND 2. Places AO-2945 (HS-2945) to OPEN AND 3. Places AO-2979 (HS-2979) to OPEN AND 4. Places HS-2988A to Position 1 (MANUAL)
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 6 **Critical: N**	IF A Train is operating and B Train is in Standby or inoperable THEN: c. Verify the following indications: 1. V-EF-17A ON 2. FILTER HEATER E-34A-1 OFF 3. AO-2945 OPEN 4. AO-2979 OPEN 5. CV-2943 100% OPEN 6. FIC-2943 (or FIC-2942) ≥1200 CFM
Standard:	Verifies the following indications: 1. V-EF-17A light indication is red 2. FILTER HEATER E-34A-1 indication is green 3. AO-2945 indication is red 4. AO-2979 indication is red 5. CV-2943 indicates 100% OPEN 6. FIC-2943 indicates ≥1200 CFM
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 7 **Critical: Y**	**NOTE: Step 3.d. may be performed concurrently with the remaining steps.** IF A Train is operating and B Train is in Standby or inoperable THEN: b. WHEN ΔT on DTI-2955 and DTI-2954 < 5°F, THEN perform the following: 1) Verify Steps 5.a through 5.h have been performed. 2) Perform the following switch lineup: a. V-EF-17A to OFF b. AO-2945 to CLOSE c. AO-2979 to CLOSE d. HS-2988A to Position 2 (AUTO) 3) [ITS] Exit Tech Spec 3.6.4.3 Condition A for SBGT A.
Standard:	Verifies Steps 5.a through 5.h have been performed. (see steps 9-16) Verifies the following switch lineup: 1. V-EF-17A to OFF 2. AO-2945 to CLOSE 3. AO-2979 to CLOSE 4. HS-2998A to Position 2 (AUTO)
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 8 **Critical: N**	[ITS] IF B Train is operating and A Train is in standby, THEN:
Standard:	STEPs 4.a through 4.d. are N/A, as B Train was not operating.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 9 **Critical: Y**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: a. Evaluate Tech Specs 3.6.4.2 and enter applicable Condition for SCTMT Isolation DampersV-D-23, V-D-24, V-D-25, V-D-26, V-D-39, and V-D-40
Standard:	Notifies Shift Supervision of need to evaluate Tech Spec.
Evaluator Cue:	Tech Spec Conditions are entered and appropriate notifications complete; logged in CR log.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 10 **Critical: Y**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: b. On Panel C-24A, place HS-4887 to BYPASS. c. On Panel C-24B, place HS-4888 to BYPASS.
Standard:	1. Places HS-4887 to BYPASS. 2. Places HS-4888 to BYPASS.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 11 **Critical: N**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: d. At Panel C-20, verify that the previously operating Reactor Building Plenum Exhaust Fans indicate ON.
Standard:	On C-20, verifies the red indicating lights for V-EF-20 and V-EF-22 are ON.
Evaluator Cue:	If asked, state that V-EF-20 and V-EF-22 were previously operating.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 12 **Critical: Y**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: e. Depress both RESET pushbuttons on Panels C-24A and C-24B.
Standard:	Depresses both RESET pushbuttons.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 13 **Critical: N**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: f. At Panel C-20, verify previously operating Reactor Building fans indicate ON.
Standard:	At C-20, verifies that the red indicating lights for the Reactor Building ventilation are ON.
Evaluator Cue:	If asked, state that V-AC-10A ,V-AC-10AB, V-EF-28, V-EF-10, and V-AH-4A were previously operating.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 14 **Critical: Y**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: g. On Panel C-24A, place HS-4887 to NORMAL. h. On Panel C-24B, place HS-4888 to NORMAL.
Standard:	1. Places HS-4887 to NORMAL. 2. Places HS-4888 to NORMAL.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 15 **Critical: N**	**<u>NOTE</u>: Steps 5.i., 5.j.,5.k., 6, and 7 may be performed concurrently.** Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: i. As directed, locally START the following: 1) V-EF-10 2) V-FU-5 3) V-MZ-1 4) V-MZ-4 5) V-MZ-5 6) V-MZ-6 7) V-AH-1 8) V-AH-2
Standard:	Directs the Turbine Building and Reactor Building APEOs to start the listed fans.
Evaluator Cue:	Acknowledges direction as the out plant operator(s)
Sim Op:	Simulator operator should restart fans as directed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 16 **Critical: N**	**NOTE: Steps 5.i., 5.j.,5.k., 6, and 7 may be performed concurrently.** Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: j. At PANEL C-237, RADWASTE BLDG HVAC, CONTROL ROOM, verify Radwaste Building fans which were operating prior to the isolation indicate ON.
Standard:	Directs the Turbine Building and Reactor Building APEOs to start the listed fans.
Evaluator Cue:	Acknowledges direction as the out plant operator(s)
Sim Op:	Simulator operator should restart fans as directed.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 17 **Critical: N**	Restore Reactor Building, Radwaste Building, and Turbine Building ventilation as follows: k. IF V-EF-26 Low Flow light is on, THEN restore V-EF-26 Discharge Damper as follows: 1) On Panel C-225, place V-EF-11 handswitch to OFF. 2) Verify DO-8000A-33 is CLOSED. 3) Place V-EF-11 to ON. 4) On Panel C-20, verify that the V-EF-26 LOW FLOW light has cleared.
Standard:	Returns to step 3.d and completes actions (JPM step 7)
Evaluator Cue:	None **NOTE: Low Flow light is not to be illuminated during this JPM.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 18 **Critical: N**	Independently verify Panel C-24A: a. Panel C-24 annunciators are RESET. b. HS-2988A AUTO light is ON. c. HS-2988A in Position 2 (AUTO). d. HS-4887 in NORMAL position. e. FAN V-EF-17A is OFF. f. HS-2983A in OFF position. g. FILTER HEATER E-34A-1 is OFF. h. HS-2955 in OFF position. i. Valve AO-2945 is CLOSED. j. HS-2945 in CLOSE position. k. Valve AO-2979 is OPEN. l. HS-2979 is CLOSE position. m. FIC-2943 setpoint is at 4.0 and in M (Manual). n. Valve CV-2943 is full OPEN. o. HS-107A at Minimum Position (CLOSED). p. HS-106A in CONTROLLED PURGE position.
Standard:	Requests for someone to independently verify Panel C-24A.
Evaluator Cue:	If asked, state “Another operator has completed the verification and logged it in the Control Room Log
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 19 **Critical: N**	Independently verify Panel C-24B: a. Panel C-24B annunciators are RESET. b. HS-2988B AUTO light is ON. c. HS-2988B in Position 2 (AUTO). d. HS-4888 in NORMAL position. e. FAN V-EF-17B is OFF. f. HS-2983B in OFF position. g. FILTER HEATER E-34B-1 is OFF. h. HS-2954 in OFF position. i. VALVE AO-2944 is CLOSED. j. HS-2944 in CLOSE position. k. VALVE AO-2978 is OPEN. l. HS-2978 in CLOSE position. m. FIC-2942 setpoint is at 4.0 and in M (Manual). n. VALVE CV-2942 is full OPEN. o. HS-107B at Minimum Position (CLOSED). p. HS-106B in CONTROLLED PURGE position.
Standard:	Requests for someone to independently verify Panel C-24B.
Evaluator Cue:	Another operator has completed the verification and logged it in the Control Room Log.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 20 **Critical: N**	[ITS] Exit applicable Tech Spec Conditions, as appropriate.
Standard:	Notifies Shift Supervision of exit from Tech Spec.
Evaluator Cue:	Tech Spec exited and appropriate notifications complete; logged in C.R. log.
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: 21 **Critical: N**	**INFORM EVALUATOR THAT THE TASK HAS BEEN COMPLETED.**
Standard:	Operator informs evaluator that the task is completed.
Evaluator Cue:	None
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues:

Stop Time: _____

Critical Time ___N/A____

TURNOVER SHEET

INITIAL CONDITIONS:

- Reactor is at 100% power.
- "A" SBGT train is operating due to a spurious HI-HI trip of "B" Fuel Pool Rad Monitor.
- The Rad Monitor has been reset.
- You are the BOP operator

INITIATING CUES (IF APPLICABLE):

- The CRS directs you to restore SBGT to standby status in accordance with Ops Manual B.04.02-05.F.2.
- **INFORM EVALUATOR WHEN YOU HAVE COMPLETED THE TASK.**

SIMULATOR SET UP:

Simulator Setup Instructions:

- Any at power IC and perform the following:
  - Insert malfunction RM01G PRM F HIGH SPENT FUEL POOL CH B
  - Verify SBGT Train A is running and B is in Standby
  - Delete malfunction RM01G PRM F HIGH SPENT FUEL POOL CH B
  - Reset RM01G on back panel

SIMULATOR - MALFUNCTIONS:

	MALF ID	MALFUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL.
1.							
2.							

SIMULATOR - REMOTE FUNCTIONS:

	REMOTE FUNC. No.	REMOTE FUNCTION TITLE	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

SIMULATOR - OVERRIDES:

	OVERRIDE ID.	OVERRIDE DESCRIPTION	DELAY	RAMP	EVENT	VALUE	FINAL
1.							
2.							

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the signature page filled in correctly?	☐	☐	☐
2. Has the JPM been reviewed and validated by SMEs?	☐	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☐
4. Does the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☐	☐	☐
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☐	☐	☐
6. Has the completion time been established based on validation data or incumbent experience?	☐	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☐
8. Is the Licensee level appropriate for the task being evaluated if required?	☐	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required?	☐	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☐	☐	☐
11. Have all special tools and equipment needed to perform the task been identified and made available to the trainee?	☐	☐	☐
12. Are all references identified, current, accurate, and available to the trainee?	☐	☐	☐
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☐	☐	☐

All questions/statements must be answered "YES" or the JPM is not valid for use. If all questions/statements are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation shall sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Historical Record: (Optional)