

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Both Unit-2 emergency busses are de-energized

Only Unit-2 is in ECA-0.0

Attempts to re-energize either emergency bus have failed

**INITIATING CUE**

You have been requested to perform the "Turbine Building Operations" attachment of 2-ECA-0.0.

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

**N1578**

**TASK**

Perform local actions in the turbine building in response to a loss of all AC power (2-ECA-0.0, SOER-99-1).

**TASK STANDARDS**

Hydrogen was vented from the main generator, the condenser vacuum breaker was opened, nitrogen was isolated to the LP turbines, and the hotwell makeup valves were isolated

**K/A REFERENCE:**

05EA1.04 (3.5/3.9)

**ALTERNATE PATH:**

N/A

**TASK COMPLETION TIMES**

Validation Time = 10 minutes  
Actual Time = \_\_\_\_\_ minutes

Start Time = \_\_\_\_\_  
Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                     SATISFACTORY                                     UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**N1578**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

Before being evaluated on the task, the trainee must have completed the reactor operator's course checkout during which the objectives listed below would have been addressed.

**INITIAL CONDITIONS**

Both Unit-2 emergency busses are de-energized

Only Unit-2 is in ECA-0.0

Attempts to re-energize either emergency bus have failed

**INITIATING CUE**

You have been requested to perform the "Turbine Building Operations" attachment of 2-ECA-0.0.

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

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1	Open 2-GM-8 to vent hydrogen from the main generator.	Procedure Step <u>1</u>
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<b>CRITICAL STEP</b>	SAT [ ] UNSAT [ ]
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<u>Standard</u>	2-GM-8 is simulated to be turned in the counter-clockwise direction until it is full open
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<u>Simulation Cue(s)</u>	The valve handwheel has stopped turning
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Notes/Comments
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2	Open 2-AS-MOV-200 to break vacuum on the condenser.	Procedure Step 2
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<b>CRITICAL STEP</b>	SAT [] UNSAT []
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<u>Standard</u>	Applicant simulates engaging the clutch lever on 2-AS-MOV-200 and turning the handwheel in the counter-clockwise direction.
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<u>Simulation Cue(s)</u>	<p>If applicant does not simulate engaging the clutch say, "The handwheel is turning freely and stem is not rising."</p> <p>After MOV clutch is engaged and handwheel turned tell applicant – "You hear noise"</p> <p>The MOV handwheel has stopped turning and the stem is showing full open</p>
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Notes/Comments:
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3	Close 2-GN-203 to isolate nitrogen injection to the low-pressure turbine exhaust.	Procedure Step 3
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SAT [] UNSAT []
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<u>Standard</u>	2-GN-203 is verified closed by simulating turning in the clockwise direction and checking stem position is down
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<u>Simulation Cue(s)</u>	You are unable to turn the handwheel in the clockwise direction and the stem position is as you see it.
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Notes/Comments
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4	Isolate Hotwell Makeup valves by closing the following: <ul style="list-style-type: none"> <li>• 2-CN-151, Inlet to Makeup Valve 2-CN-LCV-209-1 Isol Valve</li> <li>• 2-CN-148, Inlet to 2-CN-LCV-209-2 Isol Valve</li> <li>• 2-CN-150, 2-CN-LCV-209-2 Bypass Valve</li> <li>• 2-CN-143, 2-CN-LCV-208 Bypass Valve</li> </ul>	Procedure Step <u>4 &amp; 5</u>
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<b>CRITICAL STEP</b>	SAT [ ] UNSAT [ ]
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<u>Standard</u>	Applicant simulates turning 2-CN-151 in the clockwise direction-critical Applicant simulates turning 2-CN-148 in the clockwise direction-critical.  2-CN-150 & 143 are verified in the closed position.  Each valve is closed or verified closed by simulating turning the handwheel in the clockwise direction and checking that the stem is fully in the down position.
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<u>Simulation Cue(s)</u>	2-CN-151 - The valve handwheel has stopped turning and the stem is fully in the down position. 2-CN-148 - The valve handwheel has stopped turning and the stem is fully in the down position. 2-CN-150 - You are unable to turn the handwheel in the clockwise direction and the stem position is as you see it. 2-CN-143 - You are unable to turn the handwheel in the clockwise direction and the stem position is as you see it.
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Notes/Comments
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5	Close 2-CN-141, Inlet To Hotwell High Level Divert Isol Valve	Procedure Step <u>6</u>
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SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
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<u>Standard</u>	2-CN-141 is verified closed by simulating turning in the clockwise direction and checking stem position is down
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<u>Simulation Cue(s)</u>	You are unable to turn the handwheel in the clockwise direction and the stem position is as you see it.
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Notes/Comments
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6	Initiate purge of the main generator using CO <sub>2</sub>	Procedure Step <u>7</u>
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SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
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<u>Simulation Cue(s)</u>	Assume that another operator has initiated purging the generator
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Notes/Comments
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7	Inform the control room operator that all local turbine building operations are complete.	Procedure Step _____
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SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
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<u>Simulation Cue(s)</u>	The control has been notified
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Notes/Comments
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>>>> END OF EVALUATION <<<<<

STOP TIME \_\_\_\_\_



SIMULATOR, LABORATORY, IN-PLANT SETUP  
(If Required)

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Both MG sets are secured.

Unit 1 is in Mode 3 with preparations being made to withdraw the Shutdown Banks for startup.

All applicable Initial conditions of 1-OP-58.1, Section 3.0 are met.

You have a Synchronizing Switch key.

**INITIATING CUE**

You are requested to place the initial rod drive MG set in service and parallel the second MG with the running MG set in accordance with 1-OP-58.1.

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**TASK**

Place both rod control motor generator set in operation with both rod control motor generator sets shut down (1-OP-58.1).

**TASK STANDARDS**

Task was performed as directed by the procedure referenced in the task statement within parentheses (one of the underlined procedures if several are cited)

**K/A REFERENCE:**

001A4.08 (3.7/3.4)

**ALTERNATE PATH:**

N/A

**TASK COMPLETION TIMES**

Validation Time = 20 minutes                      Start Time = \_\_\_\_\_  
Actual Time = \_\_\_\_\_ minutes                      Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                       SATISFACTORY                       UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

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**PREREQUISITES**

Before being evaluated on the task, the trainee must have completed the reactor operator's course checkout during which the objectives listed below would have been addressed.

**INITIAL CONDITIONS**

Both MG sets are secured.

Unit 1 is in Mode 3 with preparations being made to withdraw the Shutdown Banks for startup.

All applicable Initial conditions of 1-OP-58.1, Section 3.0 are met.

You have a Synchronizing Switch key.

**INITIATING CUE**

You are requested to place the initial rod drive MG set in service and parallel the second MG with the running MG set in accordance with 1-OP-58.1.

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

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1	Check initial conditions and review precautions and limitations	Procedure Step 5.1.1 & 5.1.2
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SAT [ ] UNSAT [ ]

<u>Standards</u>	Initial conditions are checked and precautions and limitations are reviewed
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Notes/Comments
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2	Ensure all reactor trip breakers and reactor trip bypass breakers are open.	Procedure Step <a href="#">5.1.3</a>
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SAT  UNSAT

<u>Standards</u>	The position is checked on all four breakers
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<u>Simulation Cue(s)</u>	A green OPEN flag is indicating an all of the breakers
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Notes/Comments
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3	Check that both motor generator set output breakers are racked to CONNECT.	Procedure Step <a href="#">5.1.4</a>
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SAT  UNSAT

<u>Standards</u>	Output breakers are verified in the connect position
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<u>Simulation Cue(s)</u>	1-ED-BKR-01A1 and 01B1 are racked to CONNECT
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Notes/Comments
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4	Align all switches and devices on the applicable motor generator set control panel.	Procedure Step 5.1.5
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SAT  UNSAT

<u>Simulation Cue(s)</u>	<p>Inform the trainee that each switch or device is in the position specified by the procedure as he checks them:</p> <p>The Generator No. 1 Voltage Adjust potentiometer is set to the mid range position.</p> <p>The Generator No. 2 Voltage Adjust potentiometer is set to the mid range position.</p> <p>The Generator No. 1 Synchronize switch, is OFF.</p> <p>The Generator No. 2 Synchronize switch, is OFF.</p> <p>The Generator No. 1 Ammeter switch is in position A.</p> <p>The Generator No. 2 Ammeter switch is in position A.</p> <p>The Generator No. 1 Voltmeter switch is in position A-B.</p> <p>The Generator No. 2 Voltmeter switch is in position A-B.</p> <p>The 1KS grounding switch is in the OPEN position. <b>(This switch is inside the control cabinet, DO NOT allow the cabinet to be opened)</b></p> <p><b>Provide pictures of inside cabinet and 1KS switch.</b></p>
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**Notes/Comments: The 1KS grounding switch is inside the control cabinet. DO NOT allow the operator to open the cabinet. Provide pictures of inside cabinet and switch.**

5	Check that each MG set output and supply breaker lights and control switch indications are green.	Procedure Step 5.1.6.a - d
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SAT  UNSAT

<u>Standards</u>	Output and supply breaker lights and control switch indications are checked to be GREEN
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<u>Simulation Cue(s)</u>	All breaker lights and control switch indications are green
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Notes/Comments

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6	Check the applicable relays for red flags.	Procedure Step <u>5.1.6.e</u>
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SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
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<u>Standards</u>	Relay flags are checked
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<u>Simulation Cue(s)</u>	None of the relays listed in the procedure show red flags (No RED flags should be showing)
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Notes/Comments
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7	Close the motor input circuit breaker for the motor generator set to be started.	Procedure Step <u>5.1.7</u>
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<b>Critical Step</b>	SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
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<u>Standards</u>	MG set supply breaker is closed
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<u>Simulation Cue(s)</u>	There is audible indication that the MG set is accelerating
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Notes/Comments: Precaution and Limitation Step 4.5 – When placing the first MG Set in operation, then the preferred MG-Set is "B", because all synchronizing circuitry for both MG sets is located in the "A" Cabinet. If a problem exists synchronizing MG sets and "A" is already In-Service, then when the "A" cabinet is open to work on the "B" Circuitry the "A" MG Set could be tripped.
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8	Flash the field for the generator, and adjust the generator's voltage, as required.	Procedure Step <u>5.1.8</u>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	GEN FIELD FLASH button is depressed and voltage is adjusted to normal
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<u>Simulation Cue(s)</u>	Voltage increased and stabilized at approximately 235 volts
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<u>Simulation Cue(s)</u>	After adjustment, inform the trainee that voltage now reads 260 volts
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Notes/Comments
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9	Close the generator output circuit breaker for the motor generator being placed in service.	Procedure Step <u>5.1.9</u>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	1-ED-MG-1A or 1B is closed
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<u>Simulation Cue(s)</u>	The output breaker RED light is lit
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Notes/Comments
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10	If MG set voltage is not at 260 volts, then adjust the voltage adjust potentiometer to 260 volts.	Procedure Step <u>5.1.10</u>
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SAT  UNSAT

<u>Standards</u>	Voltage is adjusted to approximately 260 volts
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<u>Simulation Cue(s)</u>	Voltage is approximately 260 volts
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Notes/Comments: The following steps are for paralleling the second MG set IAW section 5.2 of the procedure.

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11	Check initial conditions and review precautions and limitations	Procedure Step <u>5.2.1 &amp; 5.2.2</u>
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SAT  UNSAT

<u>Standards</u>	Initial conditions are checked and precautions and limitations are reviewed (Previously reviewed in section 5.1 of the procedure)
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<u>Simulation Cue(s)</u>	Tell applicant – Time compression is being used and Reactor Trip Breakers have been closed IAW Initial Conditions, Step 3.3
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Notes/Comments:

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12	Ensure that the voltage potentiometer is in mid-position and the synchronize switch is OFF.	Procedure Step 5.2.3.a & b
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SAT  UNSAT

<u>Standards</u>	Voltage potentiometer is verified in mid-position and the synchronize switch is verified OFF
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<u>Simulation Cue(s)</u>	Switches are in the desired position
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Notes/Comments

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13	Reset relay flags or motor generator set breakers, if required.	Procedure Step 5.2.3.c
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SAT  UNSAT

<u>Standards</u>	Relay flags are checked
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<u>Simulation Cue(s)</u>	No relays have RED flags
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Notes/Comments

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14	Close the motor input circuit breaker for the motor generator set to be started.	Procedure Step <u>5.2.4</u>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	MG set supply breaker is closed
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<u>Simulation Cue(s)</u>	There is audible indication that the MG set is accelerating
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Notes/Comments
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15	Flash the field for the generator, and adjust the generator's voltage, as required.	Procedure Step <u>5.2.5</u>
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<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	GEN FIELD FLASH button is depressed and voltage is adjusted to normal
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<u>Simulation Cue(s)</u>	Voltage increased and stabilized at approximately 235 volts
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Notes/Comments
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16	Adjust the voltage potentiometer as required, to match the running voltage.	Procedure Step <u>5.2.5.e</u>
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<b>Critical Step</b>	SAT [ ] UNSAT [ ]
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<u>Standards</u>	Voltage is adjusted to approximately +/- 5 volts of running voltage (running voltage is 260 volts)
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<u>Simulation Cue(s)</u>	After adjustment, inform the trainee that voltage now reads +/- 5 volts of running voltage
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Notes/Comments
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17	Turn the synchronize switch to the ON position, and verify that the applicable motor generator set's generator output breaker closes.	Procedure Step <u>5.2.5.f</u>
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<b>Critical Step</b>	SAT [ ] UNSAT [ ]
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<u>Standards</u>	Applicant inserts Synchronizing Switch Key and Synchronize switch is placed in ON
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<u>Simulation Cue(s)</u>	Inform the trainee that the MG set output breaker has closed
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Notes/Comments
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18	Turn the synchronize switch to the OFF position.	Procedure Step 5.2.5.h
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SAT [ ]	UNSAT [ ]
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<u>Standards</u>	Synchronize switch is placed in OFF
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Notes/Comments
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19	Verify voltage indicates approximately the same on each MG set. If not, then notify system engineering.	Procedure Step 5.2.5.i
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SAT [ ]	UNSAT [ ]
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<u>Standards</u>	Voltage is checked the same on both MG sets
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<u>Simulation Cue(s)</u>	Voltage indicates approximately the same on each MG set
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Notes/Comments
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20	Red-flag the motor generator set's generator output circuit breaker.	Procedure Step 5.2.5.i
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SAT [ ]	UNSAT [ ]
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<u>Standards</u>	MG set output breaker control switch is placed in CLOSE
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Notes/Comments
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>>>> END OF EVALUATION <<<<

STOP TIME \_\_\_\_\_

SIMULATOR, LABORATORY, IN-PLANT SETUP  
(If Required)

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Equipment rotation is in progress

1-GW-F-1B is running

Equipment status has been reviewed to verify station configuration will support performance of this procedure

**INITIATING CUE**

You are requested to shift process vent blowers in accordance with 0-OP-23.3 Section 5.3 "Shifting from 1-GW-F-1B, 1B Waste Gas Process Vent Blower, to 1-GW-F-1A, 1A Waste Gas Process Vent Blower"



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OPERATOR PROGRAM**

**TASK**

Shift Process Vent System blowers and isolate the out-of-service blower (0-OP-23.3).

**TASK STANDARDS**

Task was performed as directed by the procedure referenced in the task statement within parentheses (one of the underlined procedures if several are cited)

Work was performed in compliance with the Radiation Work Permit; exposure to surface and airborne contamination was minimized; and ALARA principles were applied

Final equipment configuration is as follows:

1-GW-F-1A = Running.  
1-GW-F-1B = De-energized and Isolated.  
Flow = between 270 and 330 scfm.

**K/A REFERENCE:**

071A1.06 (2.5/2.8)

**ALTERNATE PATH:**

N/A

**TASK COMPLETION TIMES**

Validation Time = 10 minutes                      Start Time = \_\_\_\_\_  
Actual Time = \_\_\_\_\_ minutes                      Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                       SATISFACTORY                       UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature / \_\_\_\_\_

Date

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**EVALUATOR'S COMMENTS**

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Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

Before being evaluated on the task, the trainee must have completed the reactor operator's course checkout during which the objectives listed below would have been addressed.

**INITIAL CONDITIONS**

Equipment rotation is in progress

1-GW-F-1B is running

Equipment status has been reviewed to verify station configuration will support performance of this procedure

**INITIATING CUE**

You are requested to shift process vent blowers in accordance with 0-OP-23.3 Section 5.3 “Shifting from 1-GW-F-1B, 1B Waste Gas Process Vent Blower, to 1-GW-F-1A, 1A Waste Gas Process Vent Blower”

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

Administrative key

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

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1	Check initial conditions and review precautions and limitations.	Procedure Step 5.3.1 & 5.3.2
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SAT [ ] UNSAT [ ]

<u>Standards</u>	Initial condition is checked and precautions and limitations are reviewed
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Notes/Comments
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2	Open the following valves for 1-GW-F-1A: <ul style="list-style-type: none"> <li>• 1-GW-135, 1A Waste Gas Process Vent Blower Suct Isol Valve</li> <li>• 1-GW-138, 1A Waste Gas Process Vent Blower Disch Isol Valve</li> </ul>	Procedure Step <a href="#">5.3.3</a>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	The valves are simulated to be turned in the counter-clockwise direction until the handwheel stops turning
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<u>Simulation Cue(s)</u>	The handwheel has stopped turning and the position indicating stem is full out. If asked: 1-GW-135 has been independently verified.
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Notes/Comments
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3	Turn ON 1-EP-BKR-1A2-1 G3, 1A Waste Gas Process Vent Blower Circuit Breaker 1-GW-F-1A.	Procedure Step <a href="#">5.3.4</a>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	The breaker is simulated to be turned to the ON position
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<u>Simulation Cue(s)</u>	The breaker indicates in the ON position
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Notes/Comments
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4	Start 1-GW-F-1A, PROCESS VENT BLOWER, at Waste Disposal Panel in Control Room.	Procedure Step <u>5.3.5</u>
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SAT  UNSAT

<u>Standards</u>	The operator simulates calling the control room to start 1-GW-F-1A
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<u>Simulation Cue(s)</u>	1-GW-F-1A is running
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Notes/Comments
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5	Stop 1-GW-F-1B, PROCESS VENT BLOWER, at Waste Disposal Panel in Control Room.	Procedure Step <u>5.3.6</u>
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SAT  UNSAT

<u>Standards</u>	The operator simulates calling the control room to stop 1-GW-F-1B
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<u>Simulation Cue(s)</u>	1-GW-F-1B has been stopped
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Notes/Comments
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6	Verify 1-GW-FI-108, PROCESS VENT FLOW, at Waste Disposal Panel in Control Room, is reading 270-330 scfm.	Procedure Step <u>5.3.7</u>
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SAT  UNSAT

<u>Standards</u>	The operator simulates calling the control room to verify flow
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<u>Simulation Cue(s)</u>	Backboards operator reports flow is 350 scfm
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Notes/Comments

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7	IF flow is >330 scfm, THEN throttle closed I-GW-I38, 1A Waste Gas Process Vent Blower Disch Isol Valve, as required to obtain 270-330 scfm.	Procedure Step <u>5.3.7.b</u>
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**Critical Step** SAT  UNSAT

<u>Standards</u>	1-GW-138 is simulated to be turned in the clockwise direction
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<u>Simulation Cue(s)</u>	Once the trainee throttles closed on the discharge valve, state that flow is now 300 scfm
--------------------------	---

Notes/Comments

8	Turn OFF breaker 1-EP-BKR-1C2-1 D3, 1B Waste Gas Process Vent Blower Circuit Breaker 1-GW-F-1B.	Procedure Step <u>5.3.8</u>
---	---	-----------------------------

SAT  UNSAT

<u>Standards</u>	The breaker is simulated to be turned to the OFF position
------------------	---

<u>Simulation Cue(s)</u>	The breaker indicates in the OFF position
--------------------------	---

Notes/Comments

9	Close the following valves for 1-GW-F-1B, 1B Waste Gas Process Vent Blower: <ul style="list-style-type: none"> <li>• 1-GW-139, 1B Waste Gas Process Vent Blower Suct Isol Valve</li> <li>• 1-GW-142, 1B Waste Gas Process Vent Blower Disch Isol Valve</li> </ul>	Procedure Step <u>5.3.9</u>
---	--	-----------------------------

SAT  UNSAT

<u>Standards</u>	The valves are simulated to be turned in the clockwise direction until the handwheel stops turning
------------------	--

<u>Simulation Cue(s)</u>	The handwheel has stopped turning and the position indicating stem is full in. Another operator will be assigned to independently verify the procedure.
--------------------------	--

Notes/Comments

>>>> END OF EVALUATION <<<<<

STOP TIME \_\_\_\_\_



SIMULATOR, LABORATORY, IN-PLANT SETUP  
(If Required)

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

A LOCA has occurred

1-E-0 has been completed through step 5

**INITIATING CUE**

You are requested to continue performing 1-E-0, at step 6, Verify SI Flow.

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

**R730**

**TASK**

Verify safety injection flow (1-E-0).

**TASK STANDARDS**

Charging suction was aligned to RWST, and SI flow was established to the reactor

**K/A REFERENCE:**

011EA1.13 (4.1/4.2)

**ALTERNATE PATH:**

Boron Injection Tank MOVs fail to open requiring alternate flow path to be used

**TASK COMPLETION TIMES**

Validation Time = 10 minutes  
Actual Time = \_\_\_\_\_ minutes

Start Time = \_\_\_\_\_  
Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                     SATISFACTORY                                     UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**R730**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the Reactor Operator level.

**INITIAL CONDITIONS**

A LOCA has occurred

1-E-0 has been completed through step 5

**INITIATING CUE**

You are requested to continue performing 1-E-0, at step 6, Verify SI Flow.

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

A copy of 1-E-0 signed off through step 5 is available

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

---

1	VERIFY HIGH-HEAD COLD LEG SI FLOW-INDICATED	Procedure Step 1-E-0 step 6 & RNO
---	---	--------------------------------------

	SAT [ ] UNSAT [ ]
--	-------------------

<u>Standards</u>	<ul style="list-style-type: none"><li>• Applicant notes that there is no cold leg SI flow indicated and goes to the RNO to check individual flow transmitters</li><li>• Attachment 6 is initiated by the step 6 RNO or using CAP item 2</li></ul>
------------------	---

<u>Cue(s)</u>	If the applicants states that another person is required to perform attachment 6 then say "You are requested to perform attachment 6"
---------------	---

<u>Notes/Comments</u>
The applicant is expected to initiate attachment 6 using either the step 6 RNO or the Continuous Action Page item 2. It would be critical if the candidate fails to initiate attachment 6 and restore SI flow prior to transitioning from 1-E-0 to another procedure.

2	Manually align charging pump suction from the refueling water storage tank.	Procedure Step <u>1 &amp; 2</u>
---	---	---------------------------------

<b>CRITICAL STEP</b>	SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
----------------------	---

<u>Standards</u>	<ul style="list-style-type: none"> <li>1-CH-MOV-1115B and/or 1115D is opened</li> <li>1-CH-MOV-1115C and/or 1115E is closed</li> </ul>
------------------	--

Notes/Comments
----------------

3	Close at least one normal charging isolation valve.	Procedure Step <u>3</u>
---	---	-------------------------

SAT  UNSAT

<u>Standards</u>	Either 1-CH-MOV-1289A or 1-CH-MOV-1289B is closed
------------------	---

<u>Simulation Cue(s)</u>	1-CH-MOV-1289A or 1-CH-MOV-1289B have green lights lit and red lights not lit
--------------------------	---

Notes/Comments
----------------

4	Close BIT RECIRC valves.	Procedure Step <u>4</u>
---	--------------------------	-------------------------

SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
---

<u>Standards</u>	1-SI-TV-1884A, 1884B, and 1884C are closed
------------------	--

Notes/Comments
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---

5	OPEN AT LEAST ONE BIT OUTLET VALVE - NO. (alt path)	Procedure Step <u>  5  </u>
---	--	-----------------------------

<u>Standards</u>	OPEN push-buttons for 1-SI-MOV-1867C and/or 1867D are depressed
------------------	---

Notes/Comments - BIT Outlet MOVs will not OPEN. RNO action taken (1-SI-MOV-1836 will not open) Operator will obtain key #21 and open <u>EITHER</u> 1-SI-MOV-1869A <u>OR</u> 1-SI-MOV-1869B and proceed to Step 7.
---

---

6	Turn on control power and open 1-SI-MOV-1836 -NO. (alt path)	Procedure Step <u>  5  </u> RNO
---	---	------------------------------------

<u>Standards</u>	OPEN push-button for 1-SI-MOV-1836 is depressed
------------------	---

Notes/Comments - 1-SI-MOV-1836 will not open
--

---

7	Turn on control power and open 1-SI-MOV-1869A or 1869B.	Procedure Step <u>  5  </u> RNO
---	---	------------------------------------

<b>CRITICAL STEP</b>	SAT [ ] UNSAT [ ]
----------------------	-------------------

<u>Standards</u>	<u>EITHER</u> 1-SI-MOV-1869A <u>OR</u> 1-SI-MOV-1869B is opened.
------------------	--

<u>Cue(s)</u>	IF the operator requests that the key be delivered from the WCC then state: <b>You have permission to use the key from the Appendix R/Vital area key box.</b>
---------------	---

Notes/Comments – Operator will obtain key #21 and open <u>EITHER</u> 1-SI-MOV-1869A <u>OR</u> 1-SI-MOV-1869B and proceed to Step 7.
---

8	Verify the charging pumps are running.	Procedure Step <u>7</u>
---	--	-------------------------

SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
------------------------------	--------------------------------

<u>Standards</u>	Operator ensures two pumps are running, if available.
------------------	---

Notes/Comments
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---

9	Verify that high-head safety injection flow to the cold-legs is indicated.	Procedure Step _____
---	--	----------------------

SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
------------------------------	--------------------------------

<u>Standards</u>	Adequate cold-leg safety injection flow is indicated
------------------	--

<u>Cue(s)</u>	Assume that another operator will complete the procedure
---------------	--

Notes/Comments
----------------

>>>> END OF EVALUATION <<<<

STOP TIME \_\_\_\_\_



SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE  
**R730**

**TASK**

Verify safety injection flow (1-E-0).

**CHECKLIST**

- \_\_\_\_\_ Recall IC #1 (100% power)
- \_\_\_\_\_ Enter malfunctions SI 108, 0701, 0702 and RC 04 100% degradation
- \_\_\_\_\_ Enter malfunctions for 1-SI-MOV-1836, 1-SI-MOV-1867C, and 1-SI-MOV-1867D
- \_\_\_\_\_ Go to Run
- \_\_\_\_\_ Perform 1<sup>st</sup> 4 steps of 1-E-0
- \_\_\_\_\_ Place the simulator in FREEZE

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Unit 1 has been tripped, and steady-state conditions of 2,235 psig and approximately 548°F exist

Both motor-driven auxiliary feedwater pumps are unavailable

Turbine-driven auxiliary feedwater pump is running

All main feedwater pumps, heater drain pumps, and condensate pumps have been stopped due to a feed-line break in the turbine building

An operator is standing by in the AFPH with a copy of 1-AP-22.4

**INITIATING CUE**

You are requested to respond to a Loss of Both Motor-Driven AFW pumps in accordance with 1-AP-22.4.

Dominion  
North Anna Power Station  
**JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

R524

**TASK**

Supply feedwater to all three steam generators using the HCV header (1-AP-22.4).

**TASK STANDARDS**

The HCV header has been aligned to feed all SGs from the Terry Turbine and only one RCP is running.

**K/A REFERENCE:**

061-A2.04 (3.4/3.8)

**ALTERNATE PATH:**

N/A

**TASK COMPLETION TIMES**

Validation Time = 15 minutes  
Actual Time = \_\_\_\_\_ minutes

Start Time = \_\_\_\_\_  
Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                     SATISFACTORY                                     UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

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Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**R524**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the Reactor Operator level.

**INITIAL CONDITIONS**

Unit 1 has been tripped, and steady-state conditions of 2,235 psig and approximately 548°F exist

Both motor-driven auxiliary feedwater pumps are unavailable

Turbine-driven auxiliary feedwater pump is running

All main feedwater pumps, heater drain pumps, and condensate pumps have been stopped due to a feed-line break in the turbine building

An operator is standing by in the AFPH with a copy of 1-AP-22.4

**INITIATING CUE**

You are requested to respond to a Loss of Both Motor-Driven AFW pumps in accordance with 1-AP-22.4.

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

---

1	Determine if the Main Feedwater System is in service.	Procedure Step <u>  1  </u>
---	---	-----------------------------

SAT [ ] UNSAT [ ]

<u>Standards</u>	Main feed pumps are verified stopped, or initial conditions are reviewed
------------------	--

<u>Simulation Cue(s)</u>	Main feedwater pumps have been stopped
--------------------------	--

Notes/Comments
----------------

---

2	Stop all but one reactor coolant pump.	Procedure Step RNO 1.a
---	--	---------------------------

<b>Critical Step</b>	SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
----------------------	---

<u>Standards</u>	Exactly two reactor coolant pump control switches are placed in AUTO-AFTER-STOP
------------------	---

Notes/Comments
----------------

---

3	Place spray valve(s) for any idle RCP(s) in manual and close.	Procedure Step RNO 1.a
---	---	---------------------------

SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
---

<u>Standards</u>	Spray valve(s) for idle RCP(s) are placed in manual and verified closed
------------------	---

<u>Simulation Cue(s)</u>	After placed in manual: 1-RC-PCV-1455A(B) has red light lit for MANUAL and demand is zero
--------------------------	--

Notes/Comments
----------------

---

4	Initiate attempts to restore main feedwater.	Procedure Step RNO 1.b
---	--	---------------------------

SAT  UNSAT

<u>Standards</u>	Operator states that he would inform unit supervisor of need to restore main feedwater
------------------	--

<u>Performance Cue(s)</u>	Assume that another operator will perform this step
---------------------------	---

<u>Simulation Cue(s)</u>	Assume that another operator will perform this step
--------------------------	---

Notes/Comments
----------------

---

5	Verify that the turbine-driven auxiliary feedwater pump is running.	Procedure Step <u>2</u>
---	---	-------------------------

SAT  UNSAT

<u>Standards</u>	Verifies that 1-FW-P-2 is running
------------------	-----------------------------------

<u>Simulation Cue(s)</u>	Turbine-driven auxiliary feedwater pump trip valves have red lights LIT and green light NOT lit. Flow is indicated.
--------------------------	---

Notes/Comments
----------------



---

6	Verify that emergency condensate storage tank level is greater than 40%.	Procedure Step <u>3</u>
---	--	-------------------------

SAT  UNSAT

<u>Standards</u>	Operator checks ECST indicators are > 40%
------------------	---

<u>Simulation Cue(s)</u>	Emergency condensate storage tank level is 90%
--------------------------	--

Notes/Comments

---

7	Perform attachment 5 to align HCV header for feeding all SGs.	Procedure Step <u>4</u>
---	---	-------------------------

SAT  UNSAT

<u>Standards</u>	Operator checks with SRO for header to align
------------------	--

<u>Performance Cue(s)</u>	The SRO directs that the HCV header be used
---------------------------	---

Notes/Comments

---

8	Open the auxiliary feedwater HCV header to "A" steam generator 1-FW-HCV-100A.	Procedure Step <u>Att. 5 step 1</u>
---	---	--

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>NOTE TO THE EVALUATOR</u>	OPERATOR MAY NOT NEED TO OPEN 1-FW-HCV-100A DUE TO HAVING SUFFICIENT LEVEL IN THE "A" SG. MAY ALSO OPEN AND THEN RECLOSE THE VALVE.
------------------------------	---

<u>Standards</u>	Potentiometer for 1-FW-HCV-100A is turned in the clockwise direction
------------------	--

Notes/Comments	At some point in the JPM, this valve must be opened – sequence is not critical.
----------------	---

---

9	Open the auxiliary feedwater HCV header to "B" steam generator 1-FW-HCV-100B.	Procedure Step <u>Att. 5 step 1</u>
---	---	--

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	Potentiometer for 1-FW-HCV-100B is turned in the clockwise direction
------------------	--

Notes/Comments	At some point in the JPM, this valve must be opened – sequence is not critical.
----------------	---

---

10	Open the auxiliary feedwater HCV header to "C" steam generator 1-FW-HCV-100C.	Procedure Step <u>Att. 5 step 1</u>
----	---	--

SAT  UNSAT

<u>Standards</u>	Potentiometer for 1-FW-HCV-100C verified at 100%
------------------	--

Notes/Comments
This valve should already be fully open (full clockwise position).

---

11	Close the auxiliary feedwater MOV header to "B" steam generator 1-FW-MOV-100B.	Procedure Step <u>Att. 5 step 2</u>
----	--	--

<u>Standards</u>	Control switch for 1-FW-MOV-100B is placed in CLOSE and held there until valve indicates closed
------------------	---

<u>Simulation Cue(s)</u>	1-FW-MOV-100B has red light LIT and green light NOT lit  After switch has been held in CLOSE for some period of time: 1-FW-MOV-100B has green light LIT and red light NOT lit
--------------------------	---

Notes/Comments

---

12	Request the safeguards operator to unlock and close the discharge valve for 1-FW-P-3A to the HCV header, 1-FW-172.	Procedure Step Att. 5 step 3.a
----	--	-----------------------------------

SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
------------------------------	--------------------------------

<u>Standards</u>	Operator in AFW pump house is contacted to perform step
------------------	---

<u>Simulation Cue(s)</u>	1-FW-172 is closed
--------------------------	--------------------

Notes/Comments: Candidate may instruct Safeguards operator to perform all of step 3.
---

13	Request the safeguards operator to unlock and open the following valves. <ul style="list-style-type: none"> <li>• Turbine-driven auxiliary feedwater pump to the steam generator HCV header outlet isolation valve 1-FW-155</li> <li>• Auxiliary feedwater "A" HCV 1-FW-HCV-100A outlet isolation valve 1-FW-64</li> <li>• Auxiliary feedwater "B" HCV 1-FW-HCV-100B outlet isolation valve 1-FW-96</li> </ul>	Procedure Step <u>Att. 5 step 3.b</u>
----	--	--

<b>Critical Step</b>	SAT [ ] UNSAT [ ]
----------------------	-------------------

<u>Standards</u>	Safeguards operator is requested to unlock and open 1-FW-155, 64, and 96
------------------	--

<u>Simulation Cue(s)</u>	1-FW-155, 1-FW-64, and 1-FW-96 are open
--------------------------	---

<u>Notes/Comments</u> There will be a 2 minute delay until manual valves are repositioned. Safeguards operator will call to inform candidate that step 3 is complete.
--

14	Slowly close the turbine-driven auxiliary feedwater pump to "A" steam generator valve 1-FW-MOV-100D.	Procedure Step Att. 5 step 4
----	--	---------------------------------

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>NOTE TO THE EVALUATOR</u>	OPERATOR MAY HAVE CLOSED THIS VALVE EARLIER TO CONTROL STEAM GENERATOR LEVEL
------------------------------	--

<u>Standards</u>	Control switch for 1-FW-MOV-100D is placed in CLOSE
------------------	---

<u>Simulation Cue(s)</u>	1-FW-MOV-100D has red light LIT and green light NOT lit  After switch has been held in CLOSE for some period of time: 1-FW-MOV-100D has green light LIT and red light NOT lit
--------------------------	---

Notes/Comments	
----------------	--

15	Notify control room that Attachment 5 is complete and return to 1-AP-22.4, step in effect.	Procedure Step Att. 5 step 5
----	--	---------------------------------

SAT [] UNSAT []
-----------------

<u>Standards</u>	Operator returns to step 5 of procedure
------------------	---

<u>Performance Cue(s)</u>	Assume another operator will continue with 1-AP-22.4
---------------------------	--

<u>Simulation Cue(s)</u>	Assume another operator will continue with 1-AP-22.4
--------------------------	--

Notes/Comments	
----------------	--

>>>> END OF EVALUATION <<<<<

**STOP TIME** \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE  
**R524**

**TASK**

Supply feedwater to all three steam generators using the HCV header (1-AP-22.4).

**CHECKLIST**

- \_\_\_\_\_ Recall IC #332
- \_\_\_\_\_ Place 1-FW-P-3A in PTL, rack out the breaker, and place sticker on switch
- \_\_\_\_\_ Close 1-FW-172 using ExtremeView
- \_\_\_\_\_ Enter malfunction FW2302; Delay time = 60, Trigger = 1
- \_\_\_\_\_ Enter malfunction FW1301, Delay time = 0, Severity = 50, Trigger = 1
- \_\_\_\_\_ Place the following on triggers:
  - FW\_155, Delay time = 10, Ramp = 20, Trigger 2
  - FW\_64, Delay time = 30, Ramp = 20, Trigger 2
  - FW\_96, Delay time = 50, Ramp = 20, Trigger 2
- \_\_\_\_\_ Go to RUN, insert Trigger 1, manually trip reactor and turbine, and close the reheater FCVs
- \_\_\_\_\_ Place the following pumps in PULL-TO-LOCK: condensate pumps and main feedwater pumps
- \_\_\_\_\_ Establish RCS pressure and temperature per initial conditions and place the simulator in freeze
- \_\_\_\_\_ When called to do local lineup, insert Trigger 2  
(Can report that 1-FW-172 is closed and tagged, if necessary)
- \_\_\_\_\_ Once the triggers time out, report that attachment 5 step 3 lineup is complete



**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Unit is stable at 100% power.

**INITIATING CUE**

You are requested to respond to plant conditions.

Dominion  
North Anna Power Station  
**JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

R724

**TASK**

Respond to a loss of reactor coolant pump seal cooling (1-AP-33.2).

**TASK STANDARDS**

Reactor manually tripped, "C" RCP stopped, seal return isolated, and 1-RC-PCV-1455B is placed in manual and closed.

**K/A REFERENCE:**

015-AA1.07 (3.5/3.4)

**ALTERNATE PATH:**

1-CH-MOV-1381 fails to close requiring use of alternate MOV to isolate

**TASK COMPLETION TIMES**

Validation Time = 10 minutes  
Actual Time = \_\_\_\_\_ minutes

Start Time = \_\_\_\_\_  
Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                     SATISFACTORY                                     UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**R724**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the reactor operator level.

**INITIAL CONDITIONS**

Unit is stable at 100% power.

### **INITIATING CUE**

You are requested to respond to plant conditions.

### **EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s)).

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s)).

### **TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

---

1	Operator responds to annunciators 1C-C4 and 1C-G6 illuminating. The operator will diagnose the event in accordance with the annunciator response and enter 1-AP-33.2, Loss of RCP Seal Cooling.	AR 1C-C4 AR 1C-G6
---	---	----------------------

SAT [ ] UNSAT [ ]

<u>Standards</u>	Operator verifies that 1-CC-FI-116C and 1-CH-FI-1124 both indicate 0 gpm. Based on loss of seal cooling to the 'C' RCP, operator enters 1-AP-33.2
------------------	---

Simulation Cue(s) \_\_\_\_\_

Notes/Comments

---

2	Verify that the affected reactor coolant pump(s) stopped.	Procedure Step <u>1 of 1-AP-33.2</u>
---	---	---

SAT [ ] UNSAT [ ]

<u>Standards</u>	Operator verifies that all RCPs are running and applies RNO step to trip the reactor.
------------------	---

Simulation Cue(s) All reactor coolant pumps are currently running.

Notes/Comments

3	Go to 1-E-0 while continuing with this procedure.	Procedure Step 1 RNO a of 1-AP-33.2 RNO
---	---	---

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	Reactor trip switches on benchboard 1-1 and/or 1-2 momentarily placed in the TRIP position
------------------	--

<u>Simulation Cue(s)</u>	Reactor trip breakers have green lights LIT and red lights NOT lit.
--------------------------	---

Notes/Comments
----------------

4	Verify reactor tripped.	Procedure Step 1 of 1-E-0
---	-------------------------	------------------------------

SAT [] UNSAT []
-----------------

<u>Standards</u>	Operator verifies reactor is tripped (RTBs open, rod bottom lights on, flux decreasing).
------------------	--

Notes/Comments
----------------

5	Verify turbine trip	Procedure Step 2 of 1-E-0
---	---------------------	------------------------------

<u>Standards</u>	Operator verifies turbine stop valves closed, resets Reheater FCVs, and verifies G-12 open (30 sec TD).
------------------	---

Notes/Comments
----------------

---

6	Verify both ac emergency busses energized – yes.	Procedure Step 3 of 1-E-0
---	--	------------------------------

SAT  UNSAT

<u>Standards</u>	Verifies 1H and 1J busses both energized by observing volt meters on 1H and 1J EDG control panels.
------------------	--

Notes/Comments

---

7	Check if SI is actuated	Procedure Step 4 of 1-E-0
---	-------------------------	------------------------------

SAT  UNSAT

<u>Standards</u>	<ul style="list-style-type: none"> <li>• Checks low head pumps running- NO.</li> <li>• Any first out annunciator lit – NO.</li> </ul>
------------------	---

<u>Performance Cue(s)</u>	Additional crew members will continue with 1-E-0. The Unit Supervisor directs you to continue performance of 1-AP-33.2.
---------------------------	---

<u>Simulation Cue(s)</u>	Additional crew members will continue with 1-E-0. The Unit Supervisor directs you to continue performance of 1-AP-33.2.
--------------------------	---

Notes/Comments

---

8	Stop the affected reactor coolant pump(s).	Procedure Step <u>1.RNO b of 1-AP-33.2</u>
---	--	---

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	Control switch for reactor coolant pump 1C is placed in AUTO-AFTER-STOP or PULL-TO-LOCK.
------------------	--

<u>Simulation Cue(s)</u>	Reactor coolant pump 1C indicates stopped.
--------------------------	--

Notes/Comments
----------------

---

9	Close the affected reactor coolant pump's spray valve.	Procedure Step <u>1.RNO c of 1-AP-33.2</u>
---	--	---

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	Controller for 1-RC-PCV-1455B is placed in MANUAL and the lower push-button is momentarily depressed until the controller output indicates zero.
------------------	--

Notes/Comments
----------------



---

10	Check "A" or "B" RCP affected - NO	Procedure Step <u>2 of 1-AP-33.2</u>
----	------------------------------------	---

<u>Standards</u>	Operator proceeds to step 3.
------------------	------------------------------

Notes/Comments
----------------

---

11	Verify RCP seal cooling isolated – Check "C" RCP affected	Procedure Step <u>3.a of 1-AP-33.2</u>
----	---	---

<u>Standards</u>	Operator checks "C" RCP affected
------------------	----------------------------------

Notes/Comments
----------------

---

12	Close 1-CH-MOV-1381 - NO. ( <b>alternate path step – valve open and cannot be closed</b> )	Procedure Step 3.b of 1-AP-33.2
----	--	------------------------------------

SAT  UNSAT

<u>Standards</u>	Operator recognizes that 1-CH-MOV-1381 is still open (after momentarily depressing close pushbutton) and applies RNO to close 1-CH-MOV-1380.
------------------	--

<u>Simulation Cue(s)</u>	Reactor coolant pump seal water return valve, 1-CH-MOV-1381, is open.
--------------------------	---

<u>Notes/Comments</u>	Valve is open and will not close requiring operator to take action and close alternative valve 1-CH-MOV-1380.
-----------------------	---

---

13	Close reactor coolant pump seal water return valve 1-CH-MOV-1380. ( <b>alternate path step</b> )	Procedure Step 3.b RNO of 1-AP-33.2
----	--	--

<b>Critical Step</b>	SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
----------------------	---

<u>Standards</u>	Close push-button for reactor coolant pump seal water return valve, 1-CH-MOV-1380, is momentarily depressed.
------------------	--

<u>Simulation Cue(s)</u>	Reactor coolant pump seal water return valve, 1-CH-MOV-1380, is closed.
--------------------------	---

<u>Notes/Comments</u>	
-----------------------	--

---

14	Affected RCP Seal injection isolation valve is CLOSED	Procedure Step 3.c of 1-AP-33.2
----	---	------------------------------------

<u>Standards</u>	
------------------	--

<u>Simulation Cue(s)</u>	Assume another operator will continue with this procedure.
--------------------------	--

<u>Notes/Comments</u>
-----------------------

**END OF EVALUATION**

**STOP TIME** \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE  
**R724**

**TASK**

Respond to a loss of reactor coolant pump seal cooling (1-AP-33.2).

**CHECKLIST**

- Recall IC #333
- Do Simspray and check recorders

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Unit is stable at 100% power

Annunciator window 1-AR-9 (1J-D8) ACCUM 1A-1B-1C HI-LO PRESS is illuminated

Pressure in safety injection accumulator 1-SI-TK-1C is < 600 psig

The nitrogen system is not aligned to supply the PORV N<sub>2</sub> accumulators

Equipment status has been reviewed and supports the performance of this procedure

The outside operator has verified an adequate source of nitrogen is available and has started the nitrogen system pump

**INITIATING CUE**

You are requested to increase pressure in safety injection accumulator 1-SI-TK-1C to between 630 and 640 psig in accordance with 1-OP-7.3, "Filling, Draining, Pressurizing, and Venting SI Accumulators."

Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION

OPERATOR PROGRAM

R589

**TASK**

Pressurize a safety injection accumulator (1-OP-7.3).

**TASK STANDARDS**

Specified accumulator was pressurized with nitrogen and lineup secured.

Task was performed as directed by the procedure referenced in the task statement within parentheses (one of the underlined procedures if several are cited)

**K/A REFERENCE:**

006A4.07 (4.4/4.4)

**ALTERNATE PATH:**

N/A

**TASK COMPLETION TIMES**

Validation Time = 15

Actual Time = \_\_\_\_\_ minutes

Start Time = \_\_\_\_\_

Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                     SATISFACTORY                                     UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**R589**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the Reactor Operator level.

**NOTE – Pre-brief required prior to entering the simulator.**

**INITIAL CONDITIONS**

Unit is stable at 100% power

Annunciator window 1-AR-9 (1J-D8) ACCUM 1A-1B-1C HI-LO PRESS is illuminated

Pressure in safety injection accumulator 1-SI-TK-1C is < 600 psig

The nitrogen system is not aligned to supply the PORV N<sub>2</sub> accumulators

Equipment status has been reviewed and supports the performance of this procedure

The outside operator has verified an adequate source of nitrogen is available and has started the nitrogen system pump

**INITIATING CUE**

You are requested to increase pressure in safety injection accumulator 1-SI-TK-1C to between 630 and 640 psig in accordance with 1-OP-7.3, "Filling, Draining, Pressurizing, and Venting SI Accumulators."

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_



---

1	Verify that initial conditions are satisfied.	Procedure Step <u>5.4.1</u>
---	---	-----------------------------

SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
------------------------------	--------------------------------

<u>Standards</u>	Initial conditions are verified to be satisfied
------------------	---

<u>Performance Cue(s)</u>	If asked: RWST boron concentration is 2700 ppm
---------------------------	--

<u>Simulation Cue(s)</u>	If asked: RWST boron concentration is 2700 ppm
--------------------------	--

Notes/Comments
----------------

---

2	Review precautions and limitations.	Procedure Step <u>5.4.2</u>
---	-------------------------------------	-----------------------------

SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
------------------------------	--------------------------------

<u>Standards</u>	Precautions and limitations have been reviewed
------------------	--

Notes/Comments
----------------

---

3	Place 1-SI-HIC-100 at zero percent output.	Procedure Step <u>5.4.3</u>
---	--	-----------------------------

SAT <input type="checkbox"/>	UNSAT <input type="checkbox"/>
------------------------------	--------------------------------

<u>Standards</u>	1-SI-HIC-100 output is decreased to zero
------------------	--

Notes/Comments
----------------

4	Open 1-SI-TV-100.	Procedure Step <u>5.4.4</u>
---	-------------------	-----------------------------

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>NOTE TO THE EVALUATOR</u>	<b>Must press open buttons on both panels simultaneously for 1-SI-TV-100 to open</b>
------------------------------	--

<u>Standards</u>	1-SI-TV-100 is opened
------------------	-----------------------

<u>Performance Cue(s)</u>	If asked: The outsidest operator reports the nitrogen system pump is running.
---------------------------	---

<u>Simulation Cue(s)</u>	If asked: The outsidest operator reports the nitrogen system pump is running.  <b>Must press open buttons on both panels for 1-SI-TV-100</b>
--------------------------	--

Notes/Comments
----------------

---

5	Slowly increase the output of 1-SI-HIC-100 to pressurize the accumulator supply header	Procedure Step <u>5.4.5</u>
---	--	-----------------------------

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	Output on 1-SI-HIC-100 is raised above 0%
------------------	---

<u>Performance Cue(s)</u>	If asked: The outsidest operator reports the nitrogen system pump is running. If asked: US desires 100% output on 1-SI-HIC-100
---------------------------	---

<u>Simulation Cue(s)</u>	If asked: The outsidest operator reports the nitrogen system pump is running. If asked: US desires 100% output on 1-SI-HIC-100
--------------------------	---

Notes/Comments
----------------

---

6	Open N2 valve for the desired accumulator - 1-SI-HCV-1853C.	Procedure Step <u>5.4.6</u>
---	---	-----------------------------

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	1-SI-HCV-1853C is opened and pressure in 1-SI-TK-1C is increasing
------------------	---

<u>Simulation Cue(s)</u>	
--------------------------	--

Notes/Comments
----------------

7	<p>When the desired pressure has been reached, then do the following:</p> <ul style="list-style-type: none"> <li>• Close 1-SI-HCV-1853C, the nitrogen supply valve to accumulator 1-SI-TK-1C.</li> <li>• Close nitrogen supply trip valve 1-SI-TV-100.</li> <li>• Increase the output of 1-SI-HIC-100 to 100%.</li> </ul>	Procedure Step <u>5.4.7</u>
---	---	-----------------------------

<b>Critical Step</b>	SAT [] UNSAT []
----------------------	-----------------

<u>Standards</u>	1-SI-HCV-1853C is closed
<u>Standards</u>	Pressure in 1-SI-TK-1C has stopped increasing

<u>Performance Cue(s)</u>	<p><b>After accumulator pressure has been verified to be increasing:</b>          Use pen to indicate that pressure is between 630 and 640 psig on both "C" accumulator pressure indicators.</p> <p>(If asked: PCS indication is 635 psig)</p> <p>If needed: US requires you to return the accumulator nitrogen lineup to normal</p>
---------------------------	--

Notes/Comments
----------------

>>>> END OF EVALUATION <<<<<

STOP TIME \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE  
**R589**

**TASK**

Pressurize a safety injection accumulator (1-OP-7.3).

**CHECKLIST**

- \_\_\_\_\_ Recall 100% power IC #334
- \_\_\_\_\_ Slowly reduce pressure in "C" accumulator using tanksnstuff until J-D8 is illuminated (~1178 LM)
- \_\_\_\_\_ Place simulator in freeze

Dominion  
North Anna Power Station

LICENSED OPERATOR REQUALIFICATION PROGRAM

JOB PERFORMANCE MEASURE

**INITIAL CONDITIONS**

The unit is at 100% power

**INITIATING CUE**

You are requested to respond to plant conditions.

Dominion  
North Anna Power Station

LICENSED OPERATOR REQUALIFICATION PROGRAM

JOB PERFORMANCE MEASURE

**R675 / 13341**

**TASK**

Respond to a failure of main generator voltage regulator high (1-AP-26).

**TASK STANDARDS**

Voltage regulator was turned off, reactor was manually tripped, and both G12 and the Exciter Field Breaker were manually opened.

**K/A REFERENCE:**

077AA1.03 (3.8/3.7)

**ALTERNATE-PATH TOPIC**

BASE ADJUST switch fails to operate requiring unit trip  
G12 Breaker does not open automatically

**TASK COMPLETION TIMES**

Validation Time = 4 minutes

Actual Time = \_\_\_\_\_ minutes

Start Time = \_\_\_\_\_

Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating

SATISFACTORY

UNSATISFACTORY

Candidate (Print)

\_\_\_\_\_

Evaluator (Print)

\_\_\_\_\_

Evaluator's Signature /  
Date

\_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

LICENSED OPERATOR REQUALIFICATION PROGRAM

JOB PERFORMANCE MEASURE

**R675 / 13341**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**INITIAL CONDITIONS**

The unit is at 100% power

**INITIATING CUE**

You are requested to respond to plant conditions.

**EVALUATION METHOD**

Perform if conducted in the simulator or in the electrical laboratory (use Performance Cue(s))

Simulate if conducted in the station (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_



---

1	Operator refers to the following annunciators and determines that entry into 1-AP-26 (immediate operator actions) is required.	Procedure Step 1
---	--	------------------

SAT [] UNSAT []

<u>Standards</u>	Operator enters 1-AP-26 to perform immediate operator actions.
------------------	--

<u>Simulation Cue(s)</u>	Annunciators received for voltage regulator failure.
--------------------------	--

<u>Notes/Comments</u>	
-----------------------	--

---

2	Check the status of the main generator.	Procedure Step 1
---	---	------------------

SAT [] UNSAT []

<u>Standards</u>	Main generator output voltage and MVARs are verified increasing, and generator MW is verified stable
------------------	--

<u>Simulation Cue(s)</u>	Main generator voltage is slowly going up
--------------------------	---

<u>Simulation Cue(s)</u>	Megawatts are stable
--------------------------	----------------------

<u>Simulation Cue(s)</u>	MVARs are slowly going to the outside
--------------------------	---------------------------------------

<u>Notes/Comments</u>	
-----------------------	--

---

3	Turn the voltage regulator switch to OFF.	Procedure Step <u>2</u>
---	---	-------------------------

SAT [] UNSAT []

<u>Standards</u>	Voltage regulator control switch is placed in OFF
------------------	---

<u>Simulation Cue(s)</u>	Main generator output voltage is stable at 22.5 KV, reactive load is 230 MVARs IN (or use pen to show)
--------------------------	--

<u>Notes/Comments</u>	Will cause damage to main generator components if no action taken.
-----------------------	--

---

4	Adjust the main generator's output voltage into the normal range using the base adjust switch.	Procedure Step <u>3</u>
---	--	-------------------------

SAT [] UNSAT []

<u>Standards</u>	Base adjust switch is placed in the RAISE position and reactive load is verified to remain greater than 200 MVARs IN ( <b>alt path – MVARs cannot be raised above 200 MVARs IN</b> )
------------------	--

<u>Simulation Cue(s)</u>	Before adjustment: Reactive load is 230 MVARs IN After adjustment: Reactive load has remained 230 MVARs IN
--------------------------	---

<u>Notes/Comments</u>	
-----------------------	--

5	Go to 1-E-0	Procedure Step 3 RNO a of 1-AP-26
---	-------------	--------------------------------------

<b>Critical Step</b>	SAT [ ] UNSAT [ ]
----------------------	-------------------

<u>Standards</u>	Reactor trip switches on benchboard 1-1 and/or 1-2 momentarily placed in the TRIP position
------------------	--

<u>Simulation Cue(s)</u>	Reactor trip breakers have green lights LIT and red lights NOT lit.
--------------------------	---

Notes/Comments
----------------

6	Verify reactor tripped.	Procedure Step 1 of 1-E-0
---	-------------------------	------------------------------

SAT [ ] UNSAT [ ]
-------------------

<u>Standards</u>	Operator verifies reactor is tripped (RTBs open, rod bottom lights on, flux decreasing).
------------------	--

Notes/Comments
----------------

7	Verify turbine trip	Procedure Step 2 of 1-E-0
---	---------------------	------------------------------

<b>Critical Step</b>	SAT [ ] UNSAT [ ]
----------------------	-------------------

<u>Standards</u>	Operator verifies turbine stop valves closed, resets Reheater FCVs, and manually opens both the G12 and Exciter Field Breaker.
------------------	--

Notes/Comments
G12 breaker will not open after 30 seconds. 1-E-0 Step 2.a RNO will require the operator to manually open G12 <u>AND</u> the Exciter Field Breaker.

8	Verify both ac emergency busses energized – yes.	Procedure Step 3 of 1-E-0
---	--	------------------------------

SAT  UNSAT

<u>Standards</u>	Verifies 1H and 1J busses both energized by observing volt meters on 1H and 1J EDG control panels.
------------------	--

Notes/Comments

9	Check if SI is actuated	Procedure Step 4 of 1-E-0
---	-------------------------	------------------------------

SAT  UNSAT

<u>Standards</u>	<ul style="list-style-type: none"> <li>• Checks low head pumps running- NO.</li> <li>• Any first out annunciator lit – NO.</li> </ul>
------------------	---

<u>Performance Cue(s)</u>	Additional crew members will continue with 1-E-0. The Unit Supervisor directs you to continue performance of 1-AP-33.2.
---------------------------	---

<u>Simulation Cue(s)</u>	Additional crew members will continue with 1-E-0. The Unit Supervisor directs you to continue performance of 1-AP-33.2.
--------------------------	---

Notes/Comments

>>>> END OF EVALUATION <<<<

STOP TIME \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE

**R675 / 13341**

**NORMAL TASK**

Respond to a failure of main generator voltage regulator high (1-AP-26).

**ALTERNATE-PATH TOPIC**

BASE ADJUST switch fails to operate  
G12 fails to automatically open

**CHECKLIST**

\_\_\_\_\_ Recall IC (100% power) (IC 335)

\_\_\_\_\_ Place simulator in RUN

\_\_\_\_\_ Do the following to ensure reactive load decreases to greater than 200 MVARs IN when voltage regulator is placed in OFF (ensures step 3 is critical):

Lower voltage using voltage regulator until reactive load is 150 MVARs IN

Meter override (GM): Generator MVAR = 0.3, Ramp = 5, Trigger = 2

Set up Trigger 2 on trigger screen as VOLT\_REG\_OFF ==1

\_\_\_\_\_ Switch override: V\_REG\_BAS1\_OFF = ON, V\_REG\_BAS1\_RAISE = OFF,  
V\_REG\_BAS@\_LOWER = OFF

\_\_\_\_\_ Enter malfunction EL09, trigger = 1, delay time = 0, ramp = 70, severity = 35

\_\_\_\_\_ Enter malfunction g12fail\_ovrrelay = true

NOTE: Tested to be sure reactor would not trip if operator did not do actions. Will cause damage to main generator components if no action taken.

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Reactor is at 98% power.

Daily feedwater flow calorimetric heat balance is required to be performed

Unit-1 PCS is operable

All Nuclear Instruments (NIs) are operable

1-PT-24.1, CALORIMETRIC HEAT BALANCE (COMPUTER CALCULATION), has been completed up to Step 6.2.2.

**INITIATING CUE**

You are requested to adjust the power-range NIs in accordance with 1-PT-24.1.

Dominion  
North Anna Power Station  
**JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

**R710**

**TASK**

Adjust the power-range NIs (1-PT-24.1).

**TASK STANDARDS**

Task was performed as directed by the procedure referenced in the task statement within parentheses (one of the underlined procedures if several are cited)

**K/A REFERENCE:**

015A1.01 (3.5/3.8)

**ALTERNATE PATH:**

Control rods step uncontrollably when placed in auto requiring operator action

**TASK COMPLETION TIMES**

Validation Time = 20 minutes                      Start Time = \_\_\_\_\_  
Actual Time = \_\_\_\_\_ minutes                      Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                       SATISFACTORY                                       UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

\_\_\_\_\_  
\_\_\_\_\_

Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**R710**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the Reactor Operator level.

**NOTE – Pre-brief required prior to entering the simulator.**

**INITIAL CONDITIONS**

Reactor is at 98% power.

Daily feedwater flow calorimetric heat balance is required to be performed

Unit-1 PCS is operable

All Nuclear Instruments (NIs) are operable



1-PT-24.1, CALORIMETRIC HEAT BALANCE (COMPUTER CALCULATION), has been completed up to Step 6.2.2.

**INITIATING CUE**

You are requested to adjust the power-range NIs in accordance with 1-PT-24.1.

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

---

1	IF the Power Range NI channels are within 2 percent of the Power, Calorimetric (U0980) AND the SRO has directed that adjustments be made, THEN adjust the channels as directed using Attachment 3.	Procedure Step <u>6.2.3</u>
---	--	-----------------------------

SAT  UNSAT

<u>Performance Cue(s)</u>	N-44 adjustment is desired
---------------------------	----------------------------

Notes/Comments
----------------

---

2	Review steps 1-9 of attachment 3	Procedure Step <u>Att 3: 1 - 9</u>
---	----------------------------------	---------------------------------------

SAT  UNSAT

<u>Standards</u>	Steps 1 through 9 are reviewed
------------------	--------------------------------

Notes/Comments Steps 1-6 of Attachment 3 are instructions on how to perform the attachment. Steps 7-9 will be marked "N/A" due to the conditions of the JPM
--

---

3	Verify that no trip signals are present on the NI power-range channels.	Procedure Step Att 3: 10
---	---	-----------------------------

SAT [ ] UNSAT [ ]

<u>Standards</u>	NIs and/or status lights are checked to verify no trip signals
------------------	--

Notes/Comments Step 11 will be N/A as noted in initial JPM conditions
--

---

4	IF adjusting Channel N44, THEN place the following equipment in MANUAL control: • Bypass Feedwater Regulating Valves • Rod Control System	Procedure Step Att 3: 12
---	---	-----------------------------

**CRITICAL STEP** SAT [ ] UNSAT [ ]

<u>Standards</u>	Bypass feedwater regulating valves are verified in manual and the Rod Control System is placed in MANUAL
------------------	--

Notes/Comments
----------------

---

5	Check present NI readings have not changed significantly (Approximately 0.5 %) from the "As Found" NI readings on Attachment 2.	Procedure Step <u>Att 3: 13.1 &amp; 13.2</u>
---	---	---

SAT [ ] UNSAT [ ]

<u>Standards</u>	NIs are verified within 0.5% of the as-found indications
------------------	--

Notes/Comments Step 13.2 is N/A Operator may choose to establish a trend graph.
---

---

6	IF sufficient adjustments can be made, THEN individually adjust the gain potentiometer on the front panel of each Power Range NI channel to within 2 percent of the Power, Calorimetric (U0980).	Procedure Step <u>Att 3: 13.3</u>
---	--	--------------------------------------

**CRITICAL STEP** SAT [ ] UNSAT [ ]

<u>Standards</u>	Gain potentiometer for N-44 is increased to match the calorimetric within 2% of the Power Calorimetric (U0980)
------------------	--

Notes/Comments Step 13.4 and step 14 are N/A
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7	IF Channel N44 was adjusted, THEN wait at least 1 minute before returning the equipment listed in Step 12 to AUTO control.	Procedure Step Att 3: 15
---	--	-----------------------------

SAT  UNSAT

<u>Standards</u>	Rod Control System is placed in AUTO
------------------	--------------------------------------

<u>Performance Cue(s)</u>	If asked: It is desired to place rod control in AUTO
---------------------------	--

Notes/Comments <b>Alt path – Rods will insert when rod control switch is placed in AUTO requiring entry into 1-AP-1.1</b>
--

---

8	Put Control Rod Bank Selector switch to MANUAL	Procedure Step AP-1.1: 1
---	--	-----------------------------

SAT  UNSAT

<u>Standards</u>	Rod Control System is placed in MANUAL
------------------	--

Notes/Comments
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9	Verify Rod motion – STOPPED - NO	Procedure Step AP-1.1: 2
---	----------------------------------	-----------------------------

SAT  UNSAT

<u>Standards</u>	Rods motion is noted to not be stopped and the operator transitions to 1-E-0
------------------	--

Notes/Comments
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10	Perform Immediate Actions of 1-E-0	Procedure Step 1-E-0
----	------------------------------------	-------------------------

<b>CRITICAL STEP</b>	SAT [] UNSAT []
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<u>Standards</u>	Reactor trip switches on benchboard 1-1 and/or 1-2 are momentarily placed in the TRIP position
------------------	--

<u>Performance Cue(s)</u>	Assume that another operator is continuing with E-0
---------------------------	---

Notes/Comments
----------------

>>>> END OF EVALUATION <<<<<

STOP TIME \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

Recall IC #336

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

Unit 1 is at 100%.

Flooding has occurred in the turbine building.

TURB BLD FLOOD ALARM TROUBLE annunciator (1D-G7) has just alarmed.

Circulating Water System rupture has been reported on Unit 1.

Liquid waste discharge is aligned to the Unit 1 discharge tunnel.

**INITIATING CUE**

You are requested to respond to circulating water flooding in the turbine building in accordance with 0-AP-39.1, Turbine Building Flooding.



**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

**13355**

**TASK**

Respond to turbine building flooding with Circulating water pump fails to trip (0-AP-39.1).

**TASK STANDARDS**

All waterbox inlets were closed, 15G10 was defeated, 15G1 was opened, all waterbox outlets were closed, and 1-LW-PCV-115 was placed in HAND.

**K/A REFERENCE:**

075A2.03 (2.5/2.7)

**ALTERNATE PATH:**

Waterbox inlet MOVs fail to close requiring additional actions in response to failure

**TASK COMPLETION TIMES**

Validation Time = 10 minutes

Start Time = \_\_\_\_\_

Actual Time = \_\_\_\_\_ minutes

Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                                     SATISFACTORY                                     UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

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Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**13355**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the reactor operator level

**INITIAL CONDITIONS**

Unit 1 is at 100%.

Flooding has occurred in the turbine building.

TURB BLD FLOOD ALARM TROUBLE annunciator (1D-G7) has just alarmed.

Circulating Water System rupture has been reported on Unit 1.

Liquid waste discharge is aligned to the Unit 1 discharge tunnel.

**INITIATING CUE**

You are requested to respond to circulating water flooding in the turbine building in accordance with 0-AP-39.1, Turbine Building Flooding.

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

---

**Note: Operator will read the following procedure caution and note:**

**CAUTION:** Auxiliary Building flooding could carry over into the Turbine Building through the Service Water Tunnel into the Turbine Building Valve Pit.

**NOTE:** If a Reactor trip occurs, then, in order to recover the plant from the flooding, this procedure should be performed in conjunction with Emergency Operating Procedures.

1	Identify source of the flooding	Procedure Step 1 of 0-AP-39.1
---	---------------------------------	----------------------------------

SAT [ ] UNSAT [ ]

<u>Standards</u>	Operator initials step and continues with Step 2. (source, Unit 1 Circ Water, was provided by initial conditions)
------------------	--

Notes/Comments
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---

2	Determine if reactor should be tripped - YES. (based on initial conditions provided – circ water system rupture)	Procedure Step 2.a, b, &c of 0-AP-39.1
---	---	---

SAT  UNSAT

<u>Standards</u>	Reactor trip switch on benchboard 1-1 and or 1-2 momentarily placed in TRIP. Reheater Reset pushbutton momentarily depressed.
------------------	--

<u>Performance Cue(s)</u>	<b>After immediate operator actions are done:</b> The remaining crew members will perform 1-E-0, you are directed to continue performance of 0-AP-39.1
---------------------------	--

Notes/Comments
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3	Check if Bearing Cooling System status is abnormal - NO.	Procedure Step 3 of 0-AP-39.1
---	--	----------------------------------

SAT  UNSAT

<u>Standards</u>	Operator goes to RNO column and continues with Step 4.
------------------	--

Notes/Comments
This step is intended to initiate additional actions IF the leak were in the bearing cooling (BC) system, based on the initial conditions of the JPM the leak is in the Circ Water System. The candidate may elect to check items such as BC system annunciators, basin level, makeup valve position, etc. to satisfy themselves, but these actions are not required based on the initial conditions provided.

---

**Note: Operator will read the following procedure note:**

- NOTE:**
- If a G-Bus is de-energized because of a CW system rupture, then a reduced Bearing Lube flow condition could result on the opposite unit. The de-energized bus should be re-energized as soon as possible.
  - When the waterbox inlet box valves start to close, then the CW pumps for the affected unit should trip.

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4	Check CW system abnormal - YES.	Procedure Step <u>4a of 0-AP-39.1</u>
---	---------------------------------	--

SAT  UNSAT

<u>Standards</u>	Operator continues to substep 4b based on initial conditions provided.
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Notes/Comments
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5	Place all Unit 1 circulating water motor-operated valve interlock defeat switches in NORMAL.	Procedure Step <u>4.b.1 of 0-AP-39.1</u>
---	--	---

SAT  UNSAT

<u>Standards</u>	Circulating water motor-operated valve switches are verified to be in NORMAL
------------------	--

Notes/Comments
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6	Close the following water box inlet motor-operated valves. <ul style="list-style-type: none"> <li>• 1-CW-MOV-101A</li> <li>• 1-CW-MOV-101B</li> <li>• 1-CW-MOV-101C</li> <li>• 1-CW-MOV-101D</li> </ul>	Procedure Step <u>4.b.2 of 0-AP-39.1</u>
---	---	---

<u>NOTE TO THE EVALUATOR</u>	1-CW-MOV-101C and 1-CW-MOV101D cannot be closed but will close once the pumps have tripped. (1-CW MOV-102C and 1-CW MOV-102D will also not close if attempted but will close on subsequent steps) <b>There is no RNO for this step.</b>
------------------------------	---

<u>Standards</u>	CLOSE push-button is depressed for the following motor-operated valves <ul style="list-style-type: none"> <li>• 1-CW-MOV-101A</li> <li>• 1-CW-MOV-101B</li> <li>• 1-CW-MOV-101C</li> <li>• 1-CW-MOV-101D</li> </ul>
------------------	---

Notes/Comments
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7	Verify that the Unit1 Circulating Water pumps are tripped - NO. <b>(Alternate path step)</b>	Procedure Step <u>4.b.3 of 0-AP-39.1</u>
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SAT  UNSAT

<u>Standards</u>	Operator determines that Unit 1 CW pumps are <b>NOT</b> tripped (by observing breaker indication on Circ Water panel) and implements step 4.b.3) RNO
------------------	--

Notes/Comments

8	De-energize the unit-1 "G" bus.	Procedure Step <u>4.b.3 RNO a,b,&amp;c of 0-AP-39.1</u>
---	---------------------------------	--

<b>Critical Step</b>	SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
----------------------	---

<u>Standards</u>	1) 15G10 transfer switch is placed in DEFEAT. 2) 15G10 status checked as open. 3) 15G1 is opened. <b>ONLY elements 1&amp;3 are critical since 15G10 is already open (normal alignment)</b>
------------------	---

Notes/Comments:  
 1-CW-MOV-101C & D  
 will start to close when 15G1 is opened.

9	Place the unit-1 circulating water pumps in PULL-TO-LOCK.	Procedure Step 4.b.3. RNO d of 0-AP-39.1
---	---	---

SAT  UNSAT

<u>Standards</u>	Operator places all four (4) CW pump switches in PTL
------------------	--

Notes/Comments

10	Verify that all circulating water pump breakers are open.	Procedure Step 4.b.3 RNO e of 0-AP-39.1
----	---	--

SAT  UNSAT

<u>Standards</u>	Operator verifies CW pump breakers open <u>prior</u> to placing switches in pull-to-lock, or locally, or using PCS.
------------------	---

Notes/Comments  
Control room breaker light indication was available when the previous step was performed (placing pump breakers in pull-to-lock).

11	Re-energize the unit-1 "G" bus..	Procedure Step 4.b.3. RNO f of 0-AP-39.1
----	----------------------------------	---

SAT  UNSAT

<u>Standards</u>	Operator acknowledges that another operator will re-energize the bus.
------------------	---

<u>Performance Cue(s)</u>	Another operator will re-energize the bus
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Notes/Comments



12	Close the following water box outlet motor-operated valves. <ul style="list-style-type: none"> <li>• 1-CW-MOV-102A</li> <li>• 1-CW-MOV-102B</li> <li>• 1-CW-MOV-102C</li> <li>• 1-CW-MOV-102D</li> </ul>	Procedure Step <u>4.b.4 of 0-AP-39.1</u>
----	--	---

<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	CLOSE push-button is momentarily depressed for the following motor-operated valves <ul style="list-style-type: none"> <li>• 1-CW-MOV-102A</li> <li>• 1-CW-MOV-102B</li> <li>• 1-CW-MOV-102C</li> <li>• 1-CW-MOV-102D</li> </ul>
------------------	---

Notes/Comments <b>Operator will most likely be waiting on inlet valves to stroke fully closed</b>
--

13	Request the turbine building operator to secure the unit-1 High-capacity Steam Generator Blowdown System.	Procedure Step <u>4.b.5 of 0-AP-39.1</u>
----	---	---

SAT  UNSAT

<u>Standards</u>	Operator calls Turbine bldg. operator to secure HCBP per the OP
------------------	---

Notes/Comments	When requested, Booth operator will acknowledge operators direction and call back and report action is complete
----------------	---

14	Check if liquid waste releases can be continued -NO.	Procedure Step <u>4.b.6 RNO of 0-AP-39.1</u>
----	--	---

<b>Critical Step</b>	SAT <input type="checkbox"/> UNSAT <input type="checkbox"/>
----------------------	---

<u>Standards</u>	Operator determines that LW releases <b>cannot</b> be continued. (Loss of the CW pump violates the Liquid QW).
------------------	--

<u>Performance Cue(s)</u>	
---------------------------	--

Notes/Comments	If operator calls HP, booth operator will respond that the release permit requires 3 CW pumps to be running on the tunnel that LW is discharging to.
----------------	--

15	Check if liquid waste releases can be continued -NO.	Procedure Step 4.b.6 RNO of 0-AP- 39.1
----	--	--

<b>Critical Step</b>	SAT [ ] UNSAT [ ]
----------------------	-------------------

<u>Standards</u>	Operator places 1-LW-PCV-115 in HAND and verifies it is closed (status of LW aligned to Unit 1 tunnel provided by initial conditions).
------------------	--

<u>Performance Cue(s)</u>	<b>Another operator will complete 0-AP-39.1. This completes JPM.</b>
---------------------------	--

Notes/Comments	If operator calls HP, booth operator will respond that the release permit requires 3 CW pumps to be running on the tunnel that LW is discharging to.
----------------	--

**END OF EVALUATION**

**STOP TIME** \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE  
**13355**

**TASK**

Respond to turbine building flooding with Circulating water pump fails to trip (0-AP-39.1).

**CHECKLIST**

\_\_\_\_\_ Recall IC # 337 (100% power)

\_\_\_\_\_ Do simspray and check recorders

Step 4.b.5) → when called acknowledge as turbine operator to secure high capacity blowdown in accordance with 1-OP-32.3

**If** called as outsidest operator report that all 4 Unit 1 CW pump breakers are verified open locally

**If** called as HP report that the release permit requires 3 CW pumps running.

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION  
  
OPERATOR PROGRAM**

**INITIAL CONDITIONS**

The "A" waste gas decay tank (WGDT) is on holdup and is ready for release

The "A" WGDT has been sampled and a release permit has been issued by Health Physics

The tagout has been cleared on "A" WGDT

Purging or venting either unit's reactor head, pressurizer, or PRT is not in progress

The Nitrogen Gas System is operable.

All charts have been marked, and the procedure has been completed up to step 5.3.11

**INITIATING CUE**

You are requested to place waste gas decay tank 1-GW-TK-1A on bleed from the backboards using 0-OP-23.2 Section 5.3, "Placing 1-GW-TK-1A on Bleed".

**Dominion  
North Anna Power Station  
JOB PERFORMANCE MEASURE EVALUATION**

**OPERATOR PROGRAM**

**R717**

**TASK**

Place a waste gas decay tank on bleed from the backboards (0-OP-23.2).

**TASK STANDARDS**

"A" Waste Gas Decay Tank is discharging per 0-OP-23.2

**K/A REFERENCE:**

071A4.27 (3.0/2.7)

**ALTERNATE PATH:**

N/A

**TASK COMPLETION TIMES**

Validation Time = 15 minutes                      Start Time = \_\_\_\_\_  
Actual Time = \_\_\_\_\_ minutes                      Stop Time = \_\_\_\_\_

**PERFORMANCE EVALUATION**

Rating                       SATISFACTORY                       UNSATISFACTORY

Candidate (Print) \_\_\_\_\_

Evaluator (Print) \_\_\_\_\_

Evaluator's Signature /  
Date \_\_\_\_\_

**EVALUATOR'S COMMENTS**

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Dominion  
North Anna Power Station

JOB PERFORMANCE MEASURE  
(Evaluation)

OPERATOR PROGRAM

**R717**

**READ THE APPLICABLE INSTRUCTIONS TO THE CANDIDATE**

**Instructions for Simulator JPMs**

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**Instructions for In-Plant JPMs**

I will explain the initial conditions, and state the task to be performed. All steps, including any required communications, shall be simulated for this JPM. Under no circumstances are you to operate any plant equipment. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

**PREREQUISITES**

The trainee has completed the applicable course knowledge training at the Reactor Operator level.

**NOTE – Pre-brief required prior to entering the simulator.**

**INITIAL CONDITIONS**

The "A" waste gas decay tank (WGDT) is on holdup and is ready for release

The "A" WGDT has been sampled and a release permit has been issued by Health Physics

The tagout has been cleared on "A" WGDT

Purging or venting either unit's reactor head, pressurizer, or PRT is not in progress

The Nitrogen Gas System is operable.

All charts have been marked, and the procedure has been completed up to step 5.3.11

**INITIATING CUE**

You are requested to place waste gas decay tank 1-GW-TK-1A on bleed from the backboards using 0-OP-23.2 Section 5.3, "Placing 1-GW-TK-1A on Bleed".

**EVALUATION METHOD**

Perform if conducted in the simulator or in a laboratory (use Performance Cue(s))

Simulate if conducted in the station or on a dead simulator (use Simulation Cue(s))

**TOOLS AND EQUIPMENT**

None

**PERFORMANCE STEPS**

**START TIME** \_\_\_\_\_

---

1	Notify Health Physics that the decay tank release is starting.	Procedure Step 5.3.11.a
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SAT [ ] UNSAT [ ]

<u>Standards</u>	Operator notifies the Health Physics Department
------------------	---

Notes/Comments
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2	Ensure 1-GW-FCV-101 controller is at 0% demand.	Procedure Step 5.3.11.b
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SAT  UNSAT

<u>Standards</u>	Operator ensures the demand output of the flow controller associated with 1-GW-FCV-101 is 0%
------------------	--

Notes/Comments

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3	Open decay tank outlet valve 1-GW-FCV-101, and adjust the controller to obtain the desired flow.	Procedure Step 5.3.11.c & d
---	--	--------------------------------

**Critical Step** SAT  UNSAT

<u>Standards</u>	MODULATE push-button for 1-GW-FCV-101 is depressed
------------------	--

<u>Standards</u>	Controller for 1-GW-FCV-101 is adjusted to establish a flow rate that does not exceed the maximum flow rate of 2 scfm for a sustained period of time with no adjustments.
------------------	---

<u>Performance Cue(s)</u>	Concur with PEER CHECKS required by procedure
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Simulation Cue(s)

Notes/Comments

4	Place 1-GW-FCV-101 in AUTO, and check proper operation.	Procedure Step <u>5.3.11.e</u>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Standards</u>	Operator places the controller associated with 1-GW-FCV-101 in AUTO and checks for proper operation
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<u>Performance Cue(s)</u>	Concur with PEER CHECKS required by procedure
---------------------------	---

Notes/Comments
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5	Securing lineup of the Waste Gas Decay Tank.	Procedure Step <u>5.3.12</u>
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<b>Critical Step</b>	SAT [] UNSAT []
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<u>Performance Cue(s)</u>	<b><i>“The SRO has determined that it is desired to secure the Waste Gas Decay Tank release at this time.”</i></b>
---------------------------	--

<u>Standards</u>	Operator calls the local operator to close 1-GW-16 and 1-GW-15.
------------------	---

<u>Performance Cue(s)</u>	Local Operator reports that 1-GW-16 and 1-GW-15 have been closed.
---------------------------	---

<u>Standards</u>	Operator verifies that 1-GW-PI-103 indicates 0 psi, and places 1-GW-FCV-101 controller to Manual and reduces output to 0%
------------------	---

<u>Standards</u>	Operator depressed the CLOSED pushbutton for 1-GW-FCV-101, and checks that 1-GW-FCV-101 is closed.
------------------	--

Notes/Comments
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>>>> END OF EVALUATION <<<<

STOP TIME \_\_\_\_\_

SIMULATOR, LABORATORY, IN--PLANT SETUP  
(If Required)

SIMULATOR SETUP

JOB PERFORMANCE MEASURE  
**R717**

**TASK**

Place a waste gas decay tank on bleed from the backboards (0-OP-23.2).

**CHECKLIST**

Set up "A" WGDT level so that it requires discharge