

Facility: Oyster CreekTask No: 2090501403/2090504401Task Title: Align the Core Spray System to the Condensate Storage Tank for Emergency OperationsJob Performance Measure No: NRC Plant1 (RO/SRO)K/A Reference: 295030 G2.1.30 (RO 3.7/SRO 4.4)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Date: \_\_\_\_\_

Method of Testing:Simulated Performance     X    

Actual Performance \_\_\_\_\_

Classroom \_\_\_\_\_

Simulator \_\_\_\_\_

Plant     X    ***Read to the Examinee:***

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

## Initial Conditions:

1. The Reactor is shutdown.
2. Reactor water level is being maintained at 160 inches with feedwater.
3. Drywell pressure is 1.1 psig and stable.
4. Torus water level is 140 inches and lowering due to a leak.
5. The Reactor Building is accessible.
6. Core Spray System 1 is operable and available.

Task Standard: Making-up to the Torus from the CST via Core Spray System 1 in accordance with Support Procedure 37.

Required Materials: MB-1 and PA-2235 keys (simulated)

General References: Support Procedure 37 of EMG-3200.02, Primary Containment Control, Rev. 17

Initiating Cue: Line up and add makeup to the torus from the CST via Core Spray System 1 in accordance with Support Procedure 37.

Time Critical Task: No

Validation Time: 40 minutes

**Performance Information**

Denote critical steps with a check mark

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\_\_\_\_\_ Performance Step: 1 JPM Start Time: \_\_\_\_\_

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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Performance Step: 2

Standard: Verifies Prerequisites.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 3 (step 3.2.4.1)

**CUE:** Report that the following steps have been completed:

- System 1 Core Spray Main Pumps and Booster Pumps are stopped (step 3.2.1)
- Core Spray System suction valves V-20-3 and V-20-32 are closed (step 3.2.2)
- Core Spray System 1 Parallel Isolation valves V-20-15 and V-20-40 are closed (step 3.2.3)

Standard: Places the Core Spray pump suction valve breakers in OFF:

- V-20-3 (MCC 1A21A RB 23' SW)
- V-20-32 (MCC 1B21A RB 23' NE)

**CUE:** The breakers for valve V-20-3 and V-20-32 are in the OFF position.

Comment:

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\_\_\_\_\_ ✓ Performance Step: 4 (step 3.2.4.2)

Standard: Using MB-1 key, unlocks and opens the following CST valves:

- V-20-1 (NW corner Room)
- V-20-5 (NW corner Room)
- V-20-34 (NW corner Room)

**CUE:** Valves V-20-1, V-20-5, and V-20-34 are unlocked and open.

**NOTE:** If the Candidate does not have the proper keys, ask where they can be obtained: the Controlled Key Locker in the Shift Manager's Office. (Not required to go get the key)

Comment:

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**Performance Information**

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     ✓ Performance Step: 5      (step 3.2.4.3)

Standard: Calls the Control Room to start Core Spray System 1 main pump NZ01A or NZ01C.

**CUE:** Acknowledge the report. State that Core Spray Pump NZ01A has been started and is running.

Comment:

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     ✓ Performance Step: 6      (step 3.2.6)

Standard: Using the MB-1 key, unlocks and places the breaker for V-20-27 in the ON position (MCC 1A21B RB 23' E).

**CUE:** V-20-27 breaker is ON.

Comment:

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     ✓ Performance Step: 7      (step 3.2.7)

Standard: On RB 51' NW, uses the PA-2235 key to open Torus Test Flow Return valve V-20-27 by placing upper keylock switch to the OPEN position (red light ON).

**CUE:** Valve V-20-27 indicates full open (red light on). (See comment regarding KEYS in Step 4)

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 8

Standard: Calls the Control Room to report that makeup to the Torus is in progress.

**CUE:** (As Reactor Operator) repeat back the operator's report.

Comment:

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Terminating Cue: Making-up to the Torus from the CST via Core Spray System 1 in accordance with Support Procedure 37.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Plant1

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result:     Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUT

Initial Conditions:

1. The Reactor is shutdown.
2. Reactor water level is being maintained at 160 inches with feedwater.
3. Drywell pressure is 1.1 psig and stable.
4. Torus water level is 140 inches and lowering due to a leak.
5. The Reactor Building is accessible.
6. Core Spray System 1 is operable and available.

Task Cue:

Line up and add makeup to the torus from the CST via Core Spray System 1 in accordance with Support Procedure 37.

**THIS JPM IS SIMULATE ONLY. THERE WILL BE NO  
MANIPULATIONS OF PLANT COMPONENTS.**



Facility: Oyster CreekTask No: 2630101003/2630104009Task Title: Shift Battery ChargersJob Performance Measure No: NRC Plant2 (RO/SRO)K/A Reference: 263000 K1.02 (RO 3.2/SRO 3.3)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Method of Testing:Simulated Performance   X   Actual Performance \_\_\_\_\_Classroom \_\_\_\_\_ Simulator \_\_\_\_\_ Plant   X  ***Read to the Examinee:***

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

## Initial Conditions:

1. Static Charger C1 is currently in service supplying DC-C.
2. Electricians need to perform scheduled maintenance on Static Charger C1 while still energized from it's AC source.
3. Static Charger C2 has been verified to be in standby readiness.
4. Isolation Condenser valves V-14-33 and V-14-35 have been declared inoperable and the appropriate Tech Spec LCOs have been entered by the Control Room SRO.

Task Standard: Static Charger C1 is removed from service and Static Charger C2 is in service.

Required Materials: None

General References: Procedure 340.3, 125 Volt DC Distribution System C, Rev. 27

Initiating Cue: Transfer operation from Static Charger C1 to Static Charger C2 IAW  
Procedure 340.3, 125 Volt DC Distribution System C, Section 6.0.

Time Critical Task: No

Validation Time: 16 minutes

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Verifies Prerequisites and reviews Precautions and Limitations.

Comment:

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**Performance Information**

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Performance Step: 3 (step 6.3.3.1)

Standard: Places the DC output breaker for Charger C1 (at charger cabinet) in the OFF position (Labeled "DC POWER").

**CUE:** The DC output breaker for Charger C1 is in the OFF position.

Comment:

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Performance Step: 4 (step 6.3.3.2)

Standard: Places the breaker for Charger C1 on DC-C (in 4160V Room) in the OFF position.

**CUE:** The breaker for Charger C1 on DC-C (in 4160V Room) in the OFF position (Labeled C1 STATIC CHARGER OUTPUT BREAKER).

Comment:

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Performance Step: 5 (step 6.3.4.1)

Standard: Places the breaker for Charger C2 on DC-C (in 4160V Room) in the ON position (Labeled C1 STATIC CHARGER OUTPUT BREAKER).

**CUE:** The breaker for Charger C2 on DC-C (in 4160V Room) is in the ON position.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 6 (step 6.3.4.2)

Standard: Checks Charger C2 voltage against Battery Bus voltage.

**CUE:** Charger C2 output voltage is 2 volts LESS THAN Battery Bus voltage.

Standard: Adjusts the charger output voltage (float) in the direction to raise charger voltage to match or be slightly above bus voltage.

**CUE:** Charger voltage is now EQUAL TO bus voltage.

Comment:

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✓\_\_\_\_\_ Performance Step: 7 (step 6.3.4.3)

Standard: Places the DC output breaker for Charger C2 (at charger cabinet) in the ON position.

**CUE:** The DC output breaker for Charger C2 (at charger cabinet) in the ON position (Labeled "DC POWER").

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 8 (step 6.3.5)

Standard: Checks Battery Bus voltage to maintain DC System voltage 130.2 - 135 volts.

**CUE:** DC Battery Bus voltage indicates 133 volts (no adjustments are required).

Comment:

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\_\_\_\_\_ Performance Step: 9 (steps 6.3.6, 6.3.7, and 6.3.8)

Standard: Calls the Control Room to report Static Charger C2 is supplying DC-C.  
Requests they declare V-14-33 and V-14-35 operable and exit the applicable  
Tech Specs.

**CUE:** (As the Control Room) V-14-33 and V-14-35 have been declared operable; Tech  
Spec 3.7.D.1, 3.8.C and 3.8.E have been exited.

Comment:

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Terminating Cue: Static Charger C1 has been removed from service and Static Charger  
C2 has been placed into service.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Plant2

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_



STUDENT HANDOUT

Initial Conditions:

1. Static Charger C1 is currently in service supplying DC-C.
2. Electricians need to perform scheduled maintenance on Static Charger C1 while still energized from it's AC source.
3. Static Charger C2 has been verified to be in standby readiness.
4. Isolation Condenser valves V-14-33 and V-14-35 have been declared inoperable and the appropriate Tech Spec LCOs have been entered by the Control Room SRO.

Task Cue:

Transfer operation from Static Charger C1 to Static Charger C2 IAW Procedure 340.3, 125 Volt DC Distribution System C, Section 6.0.

**THIS JPM IS SIMULATE ONLY. THERE WILL BE NO  
MANIPULATIONS OF PLANT COMPONENTS.**

Facility: Oyster CreekTask No: 2860401402/2070501401/2070504401Task Title: Lineup Fire Protection to the Isolation CondensersJob Performance Measure No: NRC Plant3 (RO/SRO)K/A Reference: 286000 G2.4.35 (RO 3.3/SRO 3.5)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Testing:**Simulated Performance   X  

Actual Performance \_\_\_\_\_

Classroom \_\_\_\_\_ Simulator \_\_\_\_\_ Plant   X  ***Read to the Examinee:***

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

**Initial Conditions:**

1. The Reactor is scrammed and isolated.
2. Condensate transfer pump 'A' is out of service.
3. Condensate transfer pump 'B' has failed.
4. Isolation Condenser 'A' has initiated from the standby readiness condition.
5. The Fire Water System is operable and available.

Task Standard: Fire Protection System lined up to Isolation Condenser 'A'

Required Materials: Fire Protection key (simulated)

General References: Procedure 307, Isolation Condenser System, Rev. 92

Initiating Cue: Lineup the Fire Protection System to makeup to Isolation Condenser 'A' in accordance with Procedure 307, Isolation Condenser System, Section 7.0. Notify the Control Room when the line-up is complete.

Time Critical Task: No

Validation Time: 16 minutes

Note: Some simulated valve manipulations occur in a contaminated area. The Candidate is NOT to reach across the contamination barrier.

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provide repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Verify Prerequisites and reviews Precautions and Limitations.

**CUE:** All prerequisites have been met,

Comment:

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**Performance Information**

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Performance Step: 3 (step 7.3.2.1)

Standard: Closes Isolation Condenser Supply Isolation Valve V-11-41 on Reactor Building 23' elevation East.

**CUE:** Valve V-11-41 is closed.

Comment:

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Performance Step: 4 (step 7.3.2.2)

Standard: Closes Makeup to Isolation Condenser Telltale Drain Valve V-11-63 on Reactor Building 23' elevation East.

**CUE:** Valve V-11-63 is closed.

Comment:

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Performance Step: 5 (step 7.3.2.3)

Standard: Using the Fire Protection key, unlocks and opens Fire Protection to Isolation Condenser Cross-Tie Isolation Valve V-9-2099 on Reactor Building 23' elevation East.

**CUE:** Valve V-9-2099 is unlocked and open. Note: If the Candidate does not have the key to unlock this valve, ask where the appropriate key can be obtained: the key can be obtained from the Controlled Key Locker in the Shift Manager's Office (NOT required to go back for the key).

**Performance Information**

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Comment:

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Performance Step: 6 (step 7.3.2.4)

Standard: Opens Fire Protection to Isolation Condenser Makeup Valve V-11-49 on Reactor Building 23' elevation East.

**CUE:** Valve V-11-49 is open.

**NOTE:** This completes the in-plant lineup for CST to Isolation Condenser 'A'. The Candidate should report in this step or next, that the in-plant lineup is complete.

Comment:

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Performance Step: 8 (step 7.3.2.5)

Standard: Requests Control Room record initial isolation condenser shell level.

**CUE:** Shell water level will be recorded.

Comment:

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Terminating Cue: Fire Protection System is lined up to Isolation Condenser 'A'

JPM Start Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Plant3

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUTInitial Conditions:

1. The Reactor is scrammed and isolated.
2. Condensate transfer pump 'A' is out of service.
3. Condensate transfer pump 'B' has failed.
4. Isolation Condenser 'A' has initiated from the standby readiness condition.
5. The Fire Water System is operable and available.

Task Cue:

Lineup the Fire Protection System to makeup to Isolation Condenser 'A' in accordance with Procedure 307, Isolation Condenser System, Section 7.0. Notify the Control Room when the line-up is complete.

**THIS JPM IS SIMULATE ONLY. THERE WILL BE NO  
MANIPULATIONS OF PLANT COMPONENTS.**



Facility: Oyster CreekTask No: 2020601002Task Title: Respond to Power Oscillations (Recirc. Flow Oscillations) (Alternate Path)Job Performance Measure No: NRC Sim1 (RO/SRO)K/A Reference: 202002 A2.04 (RO 3.0/SRO 3.2)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Method of Testing:Simulated Performance \_\_\_\_\_ Actual Performance  X Classroom \_\_\_\_\_ Simulator  X  Plant \_\_\_\_\_***Read to the Examinee:***

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

## Initial Conditions:

1. The Reactor is at 90% power.

Task Standard: The 'A' Recirculation Pump has been tripped. The 'A' Recirculation Pump suction valve has been closed and Electricians have been notified to close the 'A' Recirculation Pump discharge valve IAW ABN-2.

Required Materials: None

General References: ABN-2, Recirculation System Failures, Rev. 6

Initiating Cue: Power oscillations have been observed and attributed to fluctuations in reactor recirculation flow. Complete the applicable section of ABN-2, Recirculation System Failures.

Time Critical Task: No

Validation Time: 21 minutes

## Simulator Setup:

1. IC65
2. Reduce power to approximately 90% with recirc. flow
3. Fail Recirc. Pump A discharge valve OPEN: VLV-NSS006 to MECH SIEZE
4. Recirc. Pump A flow oscillations: MAL-RFC005A to 100%
5. Place the recirc. controller in 'V'

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Recognizes flow/speed fluctuations on the 'A' Recirculation Pump (Panel 3F).

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 3 (step 3.3.2.A)

Standard: At Panel 3F, depresses the AUTO/MAN pushbutton to transfer 'A' Recirculation Pump speed control to MANUAL.

NOTE: speed control is NOT regained.

Comment:

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Performance Step: 4 (step 3.3.2.D.1)

Standard: Determines APRM oscillations are > 4.6% (Panel 4F) and generator load fluctuations are > 30 MWe (Panel 8F/9F).

At Panel 3F, places the 'A' Recirculation Pump Drive Motor Control switch to STOP.

**FLOOR CUE:** APRM fluctuations are 5% peak to peak AND generator load fluctuations are 40 MWe peak to peak (if not physically present).

Comment:

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\_\_\_\_\_ Performance Step: 5 (step 3.3.2.D.2)

Standard: Refers to Step 3.1.2 of ABN-2 for a single recirculation pump trip when five loops were operating.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 6 (step 3.1.2.A)

Standard: At Panel 3F, confirms 'A' Recirc. Pump discharge bypass valve is open (red light ON; green light OFF).

Comment:

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\_\_\_\_\_ Performance Step: 7 (step 3.1.2.B)

Standard: At Panel 3F, places 'A' Recirculation Pump discharge valve control switch to CLOSE. Notifies SRO of valve failure.

NOTE: The 'A' Recirculation Pump discharge valve will not close.

Comment:

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\_\_\_\_\_✓\_\_\_\_\_ Performance Step: 8 (step 3.1.2.D.1)

Standard: At Panel 3F, places 'A' Recirculation Pump suction valve control switch to CLOSE (red light OFF; green light ON).

Comment:

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**Performance Information**

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Performance Step: 9 (step 3.1.2.D.2)

Standard: Refers to Attachment ABN-2-1; directs electrician to MCC 1A21A to close Recirc. Pump A discharge valve NG03A.

Comment:

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Terminating Cue: The 'A' Recirculation Pump has been tripped. The 'A' Recirculation Pump suction valve has been closed and Electricians have been notified to close the 'A' Recirculation Pump discharge valve IAW ABN-2.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim1

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_



STUDENT HANDOUT

Initial Conditions:

1. The Reactor is at 90% power.

Task Cue:

Power oscillations have been observed and attributed to fluctuations in reactor recirculation flow. Complete the applicable section of ABN-2, Recirculation System Failures.

Facility: Oyster CreekTask No: 2040101412Task Title: Place a Second RWCU Pump in ServiceJob Performance Measure No: NRC Sim2 (RO/SRO)K/A Reference: 204000 A4.01 (RO 3.1/SRO 3.0)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Method of Testing:Simulated Performance \_\_\_\_\_ Actual Performance XClassroom \_\_\_\_\_ Simulator X Plant \_\_\_\_\_***Read to the Examinee:***

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

## Initial Conditions:

1. The Reactor is at 95% power.
2. Reactor water level, power, and pressure are constant.
3. Reactor Water Cleanup Recirculation Pump "A" is in service with filter ND05A.
4. Chemistry samples show sulfates are out-of-spec high requiring two RWCU pump operation.
5. RBCCW is valved-in to the 'B' Cleanup Recirculation Pump.
6. An Equipment Operator is in the field and has been briefed on the evolution and has a copy of the procedure.

Task Standard: The second Cleanup Recirculation Pump is in service with system flow approximately 700 gpm.

Required Materials: None

General References: Procedure 303, Reactor Cleanup Demineralizer System, Rev. 95

Initiating Cue: Place a second reactor water cleanup pump in service IAW Procedure 303, Section 22.0, and establish approximately 700 GPM system flow. Step 22.3.1 has already been performed. When the second Cleanup Recirculation Pump is in service, another Operator will complete steps 22.3.14 through 22.3.17.

Time Critical Task: No

Validation Time: 27 minutes

Simulator Setup:

1. IC-65, with power reduced to 95% power, with recirculation flow.
2. Cleanup Pump 'A' is in service.
3. LOA-RCU022 (for valve V-16-36 Pump A min. flow) and LOA-RCU023 (for valve V-16-37 Pump B min. flow valve) to "1" to open the cleanup pumps min. flow valves.
4. LOA-RCU022 and LOA-RCU023 to "0" to close the cleanup pumps min. flow valves.
5. Adjust (raise) RBCCW to the NHRX HX (on drawing RBC02, change RBCCW flow through the NRHX to about 0.6 valve opening, when given the BOOTH CUE)

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Verifies Prerequisites; Review Precautions and Limitations.

Comment:

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\_\_\_\_\_ Performance Step: 3 (step 22.3.2)

Standard: Places placards on Panel 3F for heat balance adjustment and on Letdown Flow Controller to not exceed 760 GPM flow.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 4 (step 22.3.3)

Standard: Confirms 'B' cleanup pump discharge valve (V-16-50) is closed (red light OFF; green light ON).

Comment:

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\_\_\_\_\_ ✓ Performance Step: 5 (step 22.3.4)

Standard: Directs equipment operator to open minimum flow valves V-16-36 & V-16-37 (using the local toggle switches).

NOTE: Activate LOA-RCU022 and LOA-RCU023 to "1" (OPEN). (Monitor and adjust RBCCW flow to CU system as required on screen RBC02 to about 0.6 RBCCW flow through the NRHX.)

**BOOTH CUE:** As the EO, report that both minimum flow valves V-16-36 and V-16-37 are open.

Comment:

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**Performance Information**

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    ✓     Performance Step: 6 (step 22.3.5)

Standard: Makes plant announcement for the pump start (not required for critical task).

At Panel 3F, places the 'B' Cleanup Recirculation Pump control switch to START (red light ON; green light OFF)

Comment:

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    ✓     Performance Step: 7 (22.3.6)

Standard: Slowly opens 'B' Cleanup Recirculation Pump discharge valve V-16-50 until a small increase in pump discharge pressure is noted on Panel 3F. To throttle this valve, place the valve to OPEN, then to the neutral position to hold the valve in place.

Comment:

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           Performance Step: 8 (step 22.3.7)

Standard: Slowly opens FCV-ND-16 to maintain original pump discharge pressure.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 9 (step 22.3.8)

Standard: Adjusts PCV-ND11 to maintain system pressure at approximately 90 psig.

Comment:

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\_\_\_\_\_ Performance Step: 10 (step 22.3.9/22.3.10)

Standard: Directs Equipment Operator to monitor:

- Demineralizer strainer dP
- Demineralizer dP
- Filter dP

**FLOOR CUE:** As the Field Equipment Operator, Report:

- Demineralizer strainer dP is 7 psid
- Demineralizer dP is 8 psid
- Filter dP is 18 psid

Comment:

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\_\_\_\_\_ ✓ \_\_\_\_\_ Performance Step: 11 (step 22.3.11)

Standard: Continues to open the pump discharge valve while adjusting pressure and flow, until the discharge valve is full open (red light ON; green light OFF).

Comment:

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**Performance Information**

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    ✓     Performance Step: 12 (step 22.3.12)

Standard: Increases flow with FCV ND-16 until flow is approximately 700 gpm, but does not exceed 760 gpm.

Comment:

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    ✓     Performance Step: 13 (step 22.3.13)

Standard: When flow exceeds 500 gpm, directs Equipment Operator to close minimum flow valves V-16-36 & V-16-37 using the local toggle switches.

**NOTE:** Activate LOA-RCU022 and LOA-RCU023 to "0" (CLOSED). (Monitor and adjust RBCCW flow to CU system as required.)

**BOOTH CUE:** As the EO, report that both minimum flow valves V-16-36 and V-16-37 are closed.

**FLOOR CUE:** The candidate may request non-regeneration temperature: Report 95° F.

Comment:

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Terminating Cue: The second Cleanup Recirculation Pump is in service with system flow approximately 700 gpm.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim2

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

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STUDENT HANDOUTInitial Conditions:

1. The Reactor is at 95% power.
2. Reactor water level, power, and pressure are constant.
3. Reactor Water Cleanup Recirculation Pump "A" is in service with filter ND05A.
4. Chemistry samples show sulfates are out-of-spec high requiring two RWCU pump operation.
5. RBCCW is valved-in to the 'B' Cleanup Recirculation Pump.
6. An Equipment Operator is in the field and has been briefed on the evolution and has a copy of the procedure.

Task Cue:

Place a second reactor water cleanup pump in service IAW Procedure 303, Section 22.0, and establish approximately 700 GPM system flow. Step 22.3.1 has already been performed. When the second Cleanup Recirculation Pump is in service, another Operator will complete steps 22.3.14 through 22.3.17.

Facility: Oyster CreekTask No: 2090101005Task Title: Shutdown Core Spray After Inadvertent Initiation (Alternate Path)Job Performance Measure No: NRC Sim3 (RO/SRO)K/A Reference: 209001 A4.01 (RO 3.8/SRO 3.6)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Testing:**Simulated Performance \_\_\_\_\_ Actual Performance  X Classroom \_\_\_\_\_ Simulator  X  Plant \_\_\_\_\_***Read to the Examinee:***

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

**Initial Conditions:**

1. The Reactor is at 100% power.
2. Reactor water level, power, and pressure are in the normal bands and are constant.
3. Low-Low Reactor Water Level Instrument RE02A has failed downscale.
4. Core Spray Systems 1 and 2 have initiated.
5. All other systems are operating properly.
6. The US has determined that adequate core cooling is assured.

Task Standard: Core Spray System I has been shutdown following automatic initiation.

Required Materials: None

General References: Procedure 308, Emergency Core Cooling System Operation, Rev.

76

Initiating Cue: Secure Core Spray System 1 IAW Procedure 308, Section 5.0. Another Operator will secure Core Spray System 2.

Time Critical Task: No

Validation Time: 20 minutes

Simulator Setup:

1. IC-65
2. Fail RPV water level transmitter RE02A low (MAL-NSS007H to "85")
3. Fail control switch for Core Spray Booster Pump NZ03A in START (BKR-CSS001 to MECH SIEZE AFTER the core spray system is running)
4. To trip the Core Spray Booster Bump NZ03A breaker locally: BKR-CSS001 to TRIP

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Verify Prerequisites; Review Precautions and Limitations.

Comment:

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**Performance Information**

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    ✓     Performance Step: 4 (step 5.3.2.1)

Standard: Overrides start logic for Core Spray Systems 1 and 2 by depressing RE02A OVERRIDE pushbutton located on the logic mimic on Panel 1F/2F. Observes amber OVERRIDE light is lit and the CH A ACTUATED light extinguishes.

Resets Core Spray start logic by depressing all ACTUATED pushbuttons located on the logic mimic on Panel 1F/2F.

Comment:

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           Performance Step: 5 (step 5.3.3)

Standard: At Panel 1F/2F, confirms Core Spray System I Parallel Isolation Valves V-20-15 and V-20-40 are closed by observing green CLOSED indicating lights illuminated and red OPEN indicating lights extinguished.

Comment:

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Performance Information

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\_\_\_\_\_✓\_\_\_\_\_ Performance Step: 6 (step 5.3.4)

NOTE: Core Spray System 1 Booster Pump NZ03A does not trip remotely.

Standard: At Panel 1F/2F, secures Core Spray System 1 Booster Pump NZ03A by placing its control switch to the STOP position. Observes the pump remains running based on no change in pump indications (red light ON; green light OFF; and discharge pressure unchanged)

Directs the Equipment Operator to trip Core Spray Booster Pump NZ03A by opening its breaker at USS 1A2 located in the 480V Room.

**BOOTH CUE:** As EO, acknowledge order to trip Core Spray Booster Pump NZ03A. Input BKR-CSS001 to TRIP, and then report the breaker is tripped for Core Spray Booster Pump NZ03A.

Standard: Determines pump is tripped by observing pump status lights (red light OFF, green light ON) and pump discharge pressure and amps decrease.

Comment:

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\_\_\_\_\_✓\_\_\_\_\_ Performance Step: 7 (step 5.3.5)

Standard: At Panel 1F/2F, secures Core Spray System 1 Main Pump NZ01A by placing its control switch to the STOP position. (red light OFF; green light ON; lowering pump discharge pressure and amps).

Comment:



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Performance Information

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\_\_\_\_\_ Performance Step: 8 (step 5.3.6/5.3.7)

Standard: Confirms the System is filled and vented.  
Verify Core Spray System 1 is in Standby Readiness.

**FLOOR CUE:** Another Operator will verify the Core Spray System I is filled and vented,  
and that the Core Spray System I is in Standby Readiness.

Comment:

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Terminating Cue: Core Spray System I has been shutdown following automatic initiation.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim3

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUT

Initial Conditions:

1. The Reactor is at 100% power.
2. Reactor water level, power, and pressure are in the normal bands and are constant.
3. Low-Low Reactor Water Level Instrument RE02A has failed downscale.
4. Core Spray Systems 1 and 2 have initiated.
5. All other systems are operating properly.
6. The US has determined that adequate core cooling is assured.

Task Cue:

Secure Core Spray System 1 IAW Procedure 308, Section 5.0. Another Operator will secure Core Spray System 2.

Facility: Oyster CreekTask No: 2120501402Task Title: Bypass RPS Scram Logic TripsJob Performance Measure No: NRC Sim4 (RO/SRO)K/A Reference: 295037 EA1.01 (RO 4.6/SRO 4.6)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

Method of Testing:Simulated Performance \_\_\_\_\_ Actual Performance  X Classroom \_\_\_\_\_ Simulator  X  Plant \_\_\_\_\_***Read to the Examinee:***

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

## Initial Conditions:

1. The reactor was manually scrammed while at power.
2. A partial failure to scram has occurred.

Task Standard: The RPS trips have been bypassed, a manual scram inserted, and all control rods are fully inserted.

Required Materials: 4 EOP Bypass Plugs

## General References:

1. EMG-3200-01B, RPV Control – With ATWS. Rev. 14
2. Support Procedure 21, Alternate Insertion of Control Rods, Rev. 14

Initiating Cue: Reset the scram and manually scram the reactor, IAW Support Procedure 21.

Time Critical Task: No

Validation Time: 15 minutes

Simulator Setup:

1. IC-65
2. Insert hydraulic lock on control rods (partial): MAL-CRD021A at 100%
3. Manually scram the reactor
4. Manually initiate ARI
4. Following the scram, place Mode switch in Shutdown
4. After RPV water level recovers, trip 2 FW pumps

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provide repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2 (step 3.2 of Support Procedure 21)

Standard: Identifies a hydraulic ATWS (Group scram solenoids are DE-ENERGIZED; individual scram lights for each control rod is ON)

Comment:

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\_\_\_\_\_ Performance Step: 3 (step 5.1.1)

Standard: At Panel 4F, starts the standby CRD pump by placing its control switch to START (red light ON; green light OFF).

Comment:

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**Performance Information**

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Performance Step: 4 (step 5.1.2)

Standard: Bypasses ARI by placing the ARI Normal/Bypass Switch in the BYPASS position in the rear of Panel 8R.

Comment:

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Performance Step: 5 (step 5.1.3)

Standard: Resets ARI by depressing the ARI Manual reset pushbutton on Panel 4F.

Comment:

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Performance Step: 6 (step 5.1.4)

Standard: 1) Obtains four (4) bypass plugs from the EOP toolbox.  
2) Opens EOP BYPASS PLUGS panel in the rear of Panel 6R.  
    • Inserts a bypass plug in position BP5.  
    • Inserts a bypass plug in position BP6.  
3) Opens EOP BYPASS PLUGS panel in the rear of Panel 7R.  
    • Inserts a bypass plug in position BP5.  
    • Inserts a bypass plug in position BP6.

Comment:

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**Performance Information**

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    ✓     Performance Step: 7 (step 5.1.5)

Standard: At Panel 4F, places the SDV HI LVL BYPASS switch to the BYPASS position.

Comment:

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    ✓     Performance Step: 8 (step 5.1.6)

Standard: Resets the scram by depressing the Scram Reset pushbutton on Panel 4F.

**SIM BOOTH NOTE:** Delete the hydraulic fail-to-scram **after** the scram is reset.

Comment:

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           Performance Step: 9 (step 5.1.7)

Standard: At Panel 4F, confirms the SDV vent and drain valves indicate open.

Comment:

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**Performance Information**

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Performance Step: 10

Standard: When the SDV LEVEL HI-HI alarms clear (H-1-b/H-2-b), depresses both manual scram pushbuttons at Panel 4F. Verifies all control rods inserted and notifies SRO of all control rods inserted (not required for critical task).

NOTE: All control rods will insert.

Comment:

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Terminating Cue: The RPS trips have been bypassed, a manual scram inserted, and all control rods are fully inserted.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim4

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUT

Initial Conditions:

1. The reactor was manually scrammed while at power.
2. A partial failure to scram has occurred.

Task Cue:

Reset the scram and manually scram the reactor, IAW Support Procedure 21.

Facility: Oyster CreekTask No: 2000501435Task Title: Prepare the Torus for Venting for Pressure ControlJob Performance Measure No: NRC Sim5 (RO/SRO)K/A Reference: 295024 EA1.19 (RO 3.3/SRO 3.4)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Testing:**Simulated Performance \_\_\_\_\_ Actual Performance  X Classroom \_\_\_\_\_ Simulator  X  Plant \_\_\_\_\_***Read to the Examinee:***

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

**Initial Conditions:**

1. The reactor scrammed due to a LOCA.
2. The mode switch is in SHUTDOWN.
3. For the purpose of this JPM, Drywell pressure is 28 psig.
4. Torus venting has been directed by the EOPs.

Task Standard: Preparations for venting the Torus are complete IAW Section 2.0 of Support Procedure 32.

Required Materials: 1 EOP Bypass Plug

**General References:**

1. EMG-3200-02, Primary Containment Control, Rev. 17
2. Support Procedure 32, Venting the Torus for Primary Containment High Pressure, Rev. 17

Initiating Cue: Prepare the torus for venting due to high Primary Containment pressure IAW Support Procedure 32, Section 2.0.

Time Critical Task: No

Validation Time: 20 minutes

Simulator Setup:

1. IC-65
2. Even though DW pressure of 28 psig will be simulated in this JPM, it is still necessary to have DW pressure above 3 psig to auto start SGTS (MAL-NSS005D to 1%)
3. Place Mode switch in Shutdown

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provide repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2 (step 2.1)

Standard: At Panel 1F/2F, verifies Torus water level is below 348 inches.

Comment:

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**Performance Information**

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    ✓     Performance Step: 3 (step 2.2)

Standard: Evacuates the Reactor Building by performing the following:

- Sounds the Reactor Building Evacuation Alarm by placing the switch to REACTOR BLDG EVAC.
- Announces: "Primary containment venting will commence in approximately 5 minutes. All personnel evacuate the Reactor Building immediately. Stand clear of the stack and the Reactor Building fan pad" on the PAGING phone.

Comment:

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    ✓     Performance Step: 4 (step 2.3)

Standard: Selects a SGTS train at Panel 11R and places its control switch in the HAND position (exhaust fan starts: red light ON, green light OFF; fan inlet and outlet valves open: red light ON, green light OFF; orifice valve closes: green light ON, red light OFF)

NOTE: One SGTS train should already be running. The candidate may select the SGTS train that is already running, but still must place the control switch for that train in HAND.

Comment:

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**Performance Information**

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\_\_\_\_\_✓\_\_\_\_\_ Performance Step: 5 (step 2.4)

Standard: Closes SGTS Crosstie at Panel 11R placing the SGTS crosstie valve V-28-48 in the CLOSED position (green light ON; red light OFF).

Comment:

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\_\_\_\_\_ Performance Step: 6 (step 2.5)

Standard: Confirms RB Supply Fans secured at Panel 11R (RB Supply Fans Off: green light ON, red light OFF)

Comment:

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\_\_\_\_\_ Performance Step: 7 (step 2.6)

Standard: Confirm RB Exhaust Fans secured at Panel 11R (RB Exhaust Fans Off: green light ON, red light OFF)

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 8 (step 2.7)

Standard: At Panel 4F, verifies the Mode Switch is NOT in RUN.

Comment:

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Performance Step: 9 (step 2.8)

Standard: Obtains one (1) bypass plug from the EOP toolbox in the Control Room.

Comment:

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Performance Step: 10 (step 2.9.1)

Standard: Opens EOP BYPASS PLUGS panel at the rear of Panel 10XF, and inserts bypass plug into position BP5.

Comment:

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**Performance Information**

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Performance Step: 11 (step 2.10)

Standard: Opens EOP BYPASS PLUGS panel at the rear of Panel 11R, removes bypass plug from position BP4 and inserts bypass plug into position BP1.

Comment:

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Performance Step: 12 (step 2.11)

Standard: At Panel 11F, places the TORUS/ DRYWELL ISOLATION VALVE BYPASS PERMISSIVE keylock switch in the TORUS position.

NOTE: This switch is not labeled, but does have the following annotation above the keylock switch: "Ensure Air Sample Taken Before Purging Drywell or Torus".

Comment:

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Performance Step: 13 (step 2.12)

Standard: At Panel 11F, places the TORUS/DW VENT AND PURGE ISOL VLVS HI RAD BYP keylock switches for Channels 1 and 2 in the BYPASS position.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 14 (step 2.13)

Standard: Reports to the SRO that the Torus venting preparations are complete.

**FLOOR CUE:** Acknowledge the report.

Comment:

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Terminating Cue: Preparations for venting the Torus are complete IAW Section 2.0 of Support Procedure 32.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim5

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUT

Initial Conditions:

1. The reactor scrammed due to a LOCA.
2. The mode switch is in SHUTDOWN.
3. For the purposes of this JPM, Drywell pressure is 28 psig.
4. Torus venting has been directed by the EOPs.

Task Cue:

Prepare the torus for venting due to high Primary Containment pressure IAW Support Procedure 32, Section 2.0.

Facility: Oyster CreekTask No: 2640201003Task Title: Perform the Emergency Diesel Generator Load Test (Alternate Path)Job Performance Measure No: NRC Sim6 (RO/SRO)K/A Reference: 264000 A4.04 (RO 3.7/SRO 3.7)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Testing:**Simulated Performance \_\_\_\_\_ Actual Performance XClassroom \_\_\_\_\_ Simulator X Plant \_\_\_\_\_***Read to the Examinee:***

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

**Initial Conditions:**

1. The Reactor is at 100% power, with all systems normally aligned.
2. All items listed in Prerequisite Section 3.0 of Procedure 636.4.003, Diesel Generator #1 Load Test, have been verified.
3. Steps 6.1 through 6.5 of Procedure 636.4.003 have been completed.
4. The System Dispatcher has been contacted and grid conditions are stable.
5. An EO has been briefed, has a copy of the procedure and is stationed at EDG #1 with a radio.

Task Standard: Following startup/loading of EDG1 for surveillance, EDG1 has been shutdown by the Candidate.

Required Materials: Prepared copy of procedure 636.4.003 (up through step 6.5).

**General References:**

1. Procedure 636.4.003, Diesel Generator #1 Load test, Rev. 74

Initiating Cue: Beginning with step 6.6, perform Diesel Generator #1 Load Test IAW Procedure 636.4.003 for scheduled surveillance.

Time Critical Task: No

Validation Time: 22 minutes

Simulator Setup:

1. IC-65
2. Annunciator T3b, EDG1 ENG TEMP HI: ANN-T-6b to ON during the EDG run (step 12)
3. Setup EDG on the PPC



**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provide repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Verifies Prerequisites, review Precautions and Limitations.

**NOTE/FLOOR CUE:** All prerequisites have been verified, as outlined in the Initial Conditions.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 3 (step 6.6)

Standard: Confirms EDG lineup: At Panel 8F/9F:

- UNIT START and UNIT IDLE lights are extinguished
- All EDG 1 alarms in their normal state (no alarms)
- The EDG 1 MODE SELECTOR switch is in the PEAKING position

Comment:

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\_\_\_\_\_ Performance Step: 4 (step 6.7)

Standard: Verifies an Equipment Operator at EDG 1 prior to starting EDG 1.

**BOOTH CUE:** As the Equipment Operator, report that you are at EDG 1 standing-by.

**NOTE:** The next procedure step (step 6.8) is only a caution/note.

Comment:

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\_\_\_\_\_✓\_\_\_\_\_ Performance Step: 5 (step 6.9)

Standard: To start the EDG At Panel 8F/9F, momentarily places EDG 1 NORMAL START switch to the START position.

NOTE: EDG will idle for approximately 90 seconds then accelerate to 900 RPM. EDG will then automatically synchronize, the breaker will close, and it will automatically achieve rated load (2750 KW).

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**Performance Information**

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Comment:

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\_\_\_\_\_ Performance Step: 6 (step 6.10)

Standard: Verifies EDG start at Panel 8F/9F, by observing UNIT START and UNIT IDLING lights illuminate.

Comment:

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\_\_\_\_\_ Performance Step: 7 (step 6.11)

Standard: Verifies proper creepy crank operation with the EO.

**BOOTH CUE:** As the Equipment Operator, report proper creepy crank operation.

Comment:

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\_\_\_\_\_ Performance Step: 8 (step 6.12)

Standard: Verifies EDG 1 automatically comes up to speed, automatically synchronizes with the line, EDG 1 load breaker closes (red light ON, green light OFF) and begins to pickup load (DG KW, KVAR, Amps rise on Panel 8F/9F)

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**Performance Information**

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Comment:

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\_\_\_\_\_ Performance Step: 9 (step 6.13)

Standard: Observes EDG load rises automatically to approximately 2750 KW and records the initial full load achieved (acceptable range is 2600-2800 KW).

**FLOOR CUE:** EDG1 KW loading indicates 2850 KW

Comment:

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\_\_\_\_\_ ✓ \_\_\_\_\_ Performance Step: 10 (step 6.14.1 / 6.14.2)

Standard: 1) Places EDG 1 MODE SELECTOR switch to TRANSFER position.  
2) Adjusts load to 2750 KW using the EDG1 GOVERNOR CONTROL switch to LOWER.

**FLOOR CUE:** (AFTER a small adjustment) EDG1 KW loading indicates 2700 KW

**Note:** Procedure steps 6.15 and 6.16 are not applicable.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 11 (step 6.17)

Standard: Records time that load level of 2600-2800 KW was attained.

Comment:

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\_\_\_\_\_ Performance Step: 12 (step 6.18)

Standard: Adjusts KVAR load by adjusting the VOLTAGE/KVAR CONTROL switch to obtain approximately +1000 KVAR (lagging) (acceptable range is +200 to +2000 KVAR lagging).

NOTE: KVAR load should be within the acceptable range of +200 to +2000. The Candidate may/may not adjust from within this range to attain +1000 KVAR.

Comment:

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Performance Step: 13

NOTE: Input ANN-T-6-b, EDG1 ENG TEMP HI, at this time.

Standard: Responds to annunciator T6b: EDG1 ENG TEMP HI

- 1) May direct the Equipment Operator to verify proper louver operation.
- 2) Trips the EDG by placing the NORMAL START switch to the STOP position (KW, KVAR, amps lower; EDG1 breaker opens [red light OFF, green light ON]).

**BOOTH CUE:** (As the Equipment Operator) The EDG1 louvers are full open.

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**Performance Information**

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Comment:

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Terminating Cue: Following startup/loading of EDG1 for surveillance, EDG1 has been shutdown by the Candidate.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim6

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUT

Initial Conditions:

1. The Reactor is at 100% power, all systems normally aligned.
2. All items listed in Prerequisite Section 3.0 of Procedure 636.4.003, Diesel Generator #1 Load Test, have been verified.
3. Steps 6.1 through 6.5 of Procedure 636.4.003 have been completed.
4. The System Dispatcher has been contacted and grid conditions are stable.
5. An EO has been briefed, has a copy of the procedure and is stationed at EDG 1 with a radio.

Task Cue:

Beginning with step 6.6, perform Diesel Generator #1 Load Test IAW Procedure 636.4.003 for scheduled surveillance.



Facility: Oyster CreekTask No: 2180401001Task Title: Perform EMRV Operability Test w/ Stuck Open EMRV (Alternate Path)Job Performance Measure No: NRC Sim7 (RO/SRO)K/A Reference: 239002 A2.03 (RO 4.1/SRO 4.2)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Testing:**Simulated Performance \_\_\_\_\_ Actual Performance  X Classroom \_\_\_\_\_ Simulator  X  Plant \_\_\_\_\_***Read to the Examinee:***

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

**Initial Conditions:**

1. A reactor startup is in progress.
2. Reactor power is less than 5%.
3. Reactor water level, power, and pressure are constant.
4. RPV water level control is in manual, and will be controlled by another Operator.
5. EMRV Operability Testing is required for valve NR-108A only.
6. Procedure steps 6.1 through 6.24 of 602.4.003, Electromatic Relief Valve Operability Test, have been completed for EMRV NR-108A.

Task Standard: The EMRV has been closed when the NR-108A EMRV Normal/Disable keylock switch has been placed in DISABLE.

**Required Materials:**

1. Stopwatch
2. Prepared copy of 602.4.003 (completed up through step 6.24)

**General References:**

1. 602.4.003, Electromatic Relief Valve Operability Test, Rev. 29
2. ABN-40, Stuck Open EMRV, Rev. 2

Initiating Cue: Complete procedure 602.4.003, Electromatic Relief Valve Operability Test for EMRV NR-108A, beginning at step 6.25.

Time Critical Task: No

Validation Time: 23 minutes

**Simulator Setup:**

1. Low power IC (about 5% power, but is not required)
2. FW Control in manual
3. Select EMRV NR018A for tail-piece indication on 1F/2F
4. EMRV 108A control switch stuck in the MAN position (open) AFTER the valve is opened: SWI-ADS001C to ON

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provide repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Reviews Precautions and Limitations.

Comment:

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**Performance Information**

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\_\_\_\_\_ ✓ \_\_\_\_\_ Performance Step: 3 (step 6.25)

**FLOOR CUE:** Tell the Candidate that you will record the valve stroke times for him.

Standard: At Panel 1F/2F, places the control switch for EMRV NR-108A in the MAN position and starts the stopwatch (red light ON; green light OFF).

Comment:

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\_\_\_\_\_ Performance Step: 4 (step 6.26)

Standard: When annunciator SV/EMRV NOT CLOSED (B-4-g) alarms, stop the stopwatch; records time on Attachment 602.4.003-1 (See CUE in Step 4).

At Panel 1F/2F, verifies:

- Red light is lit and green light is extinguished for EMRV NR-108A.
- Acoustic valve monitor is in the “valve open” region.
- Annunciator EMRV OPEN (B-3-g) is in alarm.

**NOTE:** After the EMRV is manually opened, insert malfunction SWI-ADS001C to ON (this prevents the valve from being manually closed).

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 5 (step 6.27)

**NOTE:** The EMRV will NOT close at this time and remains open.

Standard: At Panel 1F/2F, 5 seconds after opening NR-108A, places its control switch in the AUTO position and starts the stopwatch.

Reports/recognizes EMRV will not close (red light ON, green light OFF; acoustic monitor still shows in the Valve Open Region (red); annunciators still in alarm), and enters ABN-40, Stuck Open EMRV.

Comment:

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\_\_\_\_\_ Performance Step: 6 (step 3.1 of ABN-40)

Standard: Verifies EMRV open (by any of the following): red light ON, acoustic monitor shows valve open (red region), EMRV discharge temperature high.

CUE: If requested to verify EMRV tailpiece temperature on RB 23', report the temperature is about 320° F.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 7 (step 3.2)

Standard: Verifies Feedwater Control in Manual

CUE: Another Operator has confirmed Manual Control on the Master Controller and will be controlling feedwater.

Comment:

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\_\_\_\_\_ Performance Step: 8 (step 3.2.3/3.2.4)

Standard: At Panel 1F/2F, places EMRV NR-108A control switch in the OFF position; recognizes EMRV is still open (acoustic monitor still in the RED area; valve red light still ON; annunciators still lit; tailpiece temperature still high).

Comment:

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\_\_\_\_\_ Performance Step: 9 (step 3.2.5/3.2.6)

Standard: At Panel 1F/2F, cycles EMRV NR-108A control switch from OFF to MAN to OFF another 3-5 times in an attempt to close the EMRV; recognizes EMRV is still open (acoustic monitor still in the RED area; valve red light still ON; annunciators still lit; tailpiece temperature still high).

Comment:

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Performance Information

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✓ Performance Step: 10 (step 3.2.7)

NOTE: When the Normal/Disable keylock switch is placed in DISABLE, red/green position indication lights for the valve are lost on Panel 1F/2F.

Standard: In the rear of Panel 1F/2F, places NR-108A EMRV Normal/Disable keylock switch in DISABLE. Verifies EMRV closes (acoustic monitor in the Valve Closed Region (white); tailpiece temperature lowering).

Reports that the EMRV is closed (not required for critical task).

**FLOOR CUE:** Acknowledge the report.

**Note:** This action will close the EMRV.

Comment:

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Terminating Cue: The EMRV has been closed when the NR-108A EMRV Normal/Disable keylock switch has been placed in DISABLE.

JPM Stop Time: \_\_\_\_\_

Validation of Completion

Job Performance Measure No. NRC Sim7

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_



STUDENT HANDOUT

Initial Conditions:

1. A reactor startup is in progress.
2. Reactor power is less than 5%.
3. Reactor water level, power, and pressure are constant.
4. RPV water level control is in manual, and will be controlled by another Operator.
5. EMRV Operability Testing is required for valve NR-108A only.
6. Procedure steps 6.1 through 6.24 of 602.4.003, Electromatic Relief Valve Operability Test, have been completed for EMRV NR-108A.

Task Cue:

Complete procedure 602.4.003, Electromatic Relief Valve Operability Test for EMRV NR-108A, beginning at step 6.25.

Facility: Oyster CreekTask No: 2180401001Task Title: Perform EMRV Operability Test w/ Stuck Open EMRV (Alternate Path)Job Performance Measure No: NRC Sim7 (RO/SRO)K/A Reference: 239002 A2.03 (RO 4.1/SRO 4.2)

Examinee: \_\_\_\_\_

NRC Examiner: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_

**Method of Testing:**Simulated Performance \_\_\_\_\_ Actual Performance  X Classroom \_\_\_\_\_ Simulator  X  Plant \_\_\_\_\_***Read to the Examinee:***

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

**Initial Conditions:**

1. A reactor startup is in progress.
2. Reactor power is less than 5%.
3. Reactor water level, power, and pressure are constant.
4. RPV water level control is in manual, and will be controlled by another Operator.
5. EMRV Operability Testing is required for valve NR-108A only.
6. Procedure steps 6.1 through 6.24 of 602.4.003, Electromatic Relief Valve Operability Test, have been completed for EMRV NR-108A.

Task Standard: The EMRV has been closed when the NR-108A EMRV Normal/Disable keylock switch has been placed in DISABLE.

**Required Materials:**

1. Stopwatch
2. Prepared copy of 602.4.003 (completed up through step 6.24)

**General References:**

1. 602.4.003, Electromatic Relief Valve Operability Test, Rev. 29
2. ABN-40, Stuck Open EMRV, Rev. 2

Initiating Cue: Complete procedure 602.4.003, Electromatic Relief Valve Operability Test for EMRV NR-108A, beginning at step 6.25.

Time Critical Task: No

Validation Time: 23 minutes

**Simulator Setup:**

1. Low power IC (about 5% power, but is not required)
2. FW Control in manual
3. Select EMRV NR018A for tail-piece indication on 1F/2F
4. EMRV 108A control switch stuck in the MAN position (open) AFTER the valve is opened: SWI-ADS001C to ON

**Performance Information**

**Denote critical steps with a check mark**

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\_\_\_\_\_ Performance Step: 1

JPM Start Time: \_\_\_\_\_

Standard: Provide repeat back of initiating cue. *Evaluator acknowledges repeat back.*

Comment:

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\_\_\_\_\_ Performance Step: 2

Standard: Reviews Precautions and Limitations.

Comment:

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**Performance Information**

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\_\_\_\_\_ ✓ \_\_\_\_\_ Performance Step: 3 (step 6.25)

**FLOOR CUE:** Tell the Candidate that you will record the valve stroke times for him.

Standard: At Panel 1F/2F, places the control switch for EMRV NR-108A in the MAN position and starts the stopwatch (red light ON; green light OFF).

Comment:

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\_\_\_\_\_ Performance Step: 4 (step 6.26)

Standard: When annunciator SV/EMRV NOT CLOSED (B-4-g) alarms, stop the stopwatch; records time on Attachment 602.4.003-1 (See CUE in Step 4).

At Panel 1F/2F, verifies:

- Red light is lit and green light is extinguished for EMRV NR-108A.
- Acoustic valve monitor is in the “valve open” region.
- Annunciator EMRV OPEN (B-3-g) is in alarm.

**NOTE:** After the EMRV is manually opened, insert malfunction SWI-ADS001C to ON (this prevents the valve from being manually closed).

Comment:

---

---

---

**Performance Information**

---

\_\_\_\_\_ Performance Step: 5 (step 6.27)

**NOTE:** The EMRV will NOT close at this time and remains open.

Standard: At Panel 1F/2F, 5 seconds after opening NR-108A, places its control switch in the AUTO position and starts the stopwatch.

Reports/recognizes EMRV will not close (red light ON, green light OFF; acoustic monitor still shows in the Valve Open Region (red); annunciators still in alarm), and enters ABN-40, Stuck Open EMRV.

Comment:

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\_\_\_\_\_ Performance Step: 6 (step 3.1 of ABN-40)

Standard: Verifies EMRV open (by any of the following): red light ON, acoustic monitor shows valve open (red region), EMRV discharge temperature high.

CUE: If requested to verify EMRV tailpiece temperature on RB 23', report the temperature is about 320° F.

Comment:

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**Performance Information**

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\_\_\_\_\_ Performance Step: 7 (step 3.2)

Standard: Verifies Feedwater Control in Manual

CUE: Another Operator has confirmed Manual Control on the Master Controller and will be controlling feedwater.

Comment:

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\_\_\_\_\_ Performance Step: 8 (step 3.2.3/3.2.4)

Standard: At Panel 1F/2F, places EMRV NR-108A control switch in the OFF position; recognizes EMRV is still open (acoustic monitor still in the RED area; valve red light still ON; annunciators still lit; tailpiece temperature still high).

Comment:

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\_\_\_\_\_ Performance Step: 9 (step 3.2.5/3.2.6)

Standard: At Panel 1F/2F, cycles EMRV NR-108A control switch from OFF to MAN to OFF another 3-5 times in an attempt to close the EMRV; recognizes EMRV is still open (acoustic monitor still in the RED area; valve red light still ON; annunciators still lit; tailpiece temperature still high).

Comment:

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Performance Information

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✓ Performance Step: 10 (step 3.2.7)

NOTE: When the Normal/Disable keylock switch is placed in DISABLE, red/green position indication lights for the valve are lost on Panel 1F/2F.

Standard: In the rear of Panel 1F/2F, places NR-108A EMRV Normal/Disable keylock switch in DISABLE. Verifies EMRV closes (acoustic monitor in the Valve Closed Region (white); tailpiece temperature lowering).

Reports that the EMRV is closed (not required for critical task).

**FLOOR CUE:** Acknowledge the report.

**Note:** This action will close the EMRV.

Comment:

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Terminating Cue: The EMRV has been closed when the NR-108A EMRV Normal/Disable keylock switch has been placed in DISABLE.

JPM Stop Time: \_\_\_\_\_



Validation of Completion

Job Performance Measure No. NRC Sim7

Examinee's Name: \_\_\_\_\_

Examiner's Name: \_\_\_\_\_

Date Performed: \_\_\_\_\_

Facility Evaluator: \_\_\_\_\_

Number of Attempts: \_\_\_\_\_

Time to Complete: \_\_\_\_\_

Question:

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

Response:

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

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: \_\_\_\_\_

STUDENT HANDOUT

Initial Conditions:

1. A reactor startup is in progress.
2. Reactor power is less than 5%.
3. Reactor water level, power, and pressure are constant.
4. RPV water level control is in manual, and will be controlled by another Operator.
5. EMRV Operability Testing is required for valve NR-108A only.
6. Procedure steps 6.1 through 6.24 of 602.4.003, Electromatic Relief Valve Operability Test, have been completed for EMRV NR-108A.

Task Cue:

Complete procedure 602.4.003, Electromatic Relief Valve Operability Test for EMRV NR-108A, beginning at step 6.25.