

Facility: Oyster Creek Task No.: 2020101403Task Title: Start a Reactor Recirculation PumpJob Performance Measure No.: NRC JPM SIM1 (RO/SRO)K/A Reference: 202001 A4.01 (RO/SRO 3.7/3.7)

Examinee: _____ 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 plant shutdown.
2. All Reactor Recirculation Pumps are secured.
3. Section 5.0 of Procedure 301.2, Reactor Recirculation System, has been completed up to and including Step 5.3.6.
4. An EO has been briefed on the evolution, has a copy of the procedure and is in the Recirculation MG Set Room with a radio.
5. All prerequisites to start a Reactor Recirculation Pump have been completed.

Task Standard: Reactor Recirculation Pump B has been started IAW Procedure 301.2 and is being controlled in AUTO.

Required Materials: None.

General References:

1. Procedure 301.2, Reactor Recirculation System, revision 55.

Initiating Cue: Starting at Step 5.3.7 of Procedure 301.2, Reactor Recirculation System, complete the normal startup of Reactor Recirculation Pump B.

Time Critical Task: No.

Validation Time: 33 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment:

SAT/UNSAT

Performance Step: 2

Procedure Step: Verifies Prerequisites and reviews Precautions and Limitations.

Standard: Verifies Prerequisites and reviews Precautions and Limitations.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 3

Procedure Step: 5.3.7.1 and 5.3.7.2

1. Place the MG Set in the Manual Mode.
2. Verify the STRT/NORM pushbutton is selected to NORM.

Standard: 1. Verifies the MG Set B in the Manual Mode.
2. Verify the STRT/NORM pushbutton is selected to NORM.

Comment:

SAT/UNSAT

✓

Performance Step: 4

Procedure Step: 5.3.7.3

Withdraw the scoop tube to the full speed (100%) position by rotating the manual adjustment knob in the clockwise direction until the "V" bar display indicates 100% position.

Standard: Withdraws the scoop tube to the full speed (100%) position by rotating the manual adjustment knob in the clockwise direction until the "V" bar display indicates 100% position.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 5

Procedure Step: 5.3.8

Verify locally the scoop tube position at 100%.

Standard: Verifies locally the scoop tube position at 100%.**Cue:** MG Set B scoop tube position is at the 100% position.**Comment:**

SAT/UNSAT

Performance Step: 6

Procedure Step: 5.3.9

Verify that the associated 4160V bus voltage for the MG set to be started is greater than 4100 volts.

Standard: Verifies that the 4160V bus 1B voltage for the MG set B to be started is greater than 4100 volts.**Comment:**

SAT/UNSAT

Performance Information

✓

Performance Step: 7

Procedure Step: 5.3.10

Start the MG Set B by momentarily placing the pump DRIVE MOTOR control switch in the START position.

Standard: Starts the MG Set B by momentarily placing the pump DRIVE MOTOR control switch in the START position (red light ON, green light OFF; motor amps rises then falls).

Cue: If asked as the EO, report a good start on the MG Set B motor.

Comment:

SAT/UNSAT

Performance Step: 8

Procedure Step: 5.3.10.1

Open the dampers for the MG Set being placed in service.

- DM-56-95
- DM-56-96

Standard: Directs the EO to open the dampers for the MG Set B.

Cue: Report that dampers DM-56-95 and DM-56-96 are open.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 9

Procedure Step: 5.3.11.1

Confirms proper MG Set fluid coupler temperature as follows:

Confirm fluid temperature is greater than 60 °F on IA 55 Recorder on point 21.

Standard: Confirms fluid temperature is greater than 60 °F on IA 55 Recorder on point 21.

Cue: MG Set B fluid temperature should be > 60 °F. If it isn't, state that the MG Set B fluid temperature is greater than 60 °F.

Comment:

SAT/UNSAT

✓

Performance Step: 10

Cue: When asked to use the MG Set B DRIVE MOTOR switch for the startup, direct use of the MG Set B DRIVE MOTOR switch.

Procedure Step: 5.3.12

Start the recirculation pump sequence by pressing the STRT/NORM pushbutton and as directed by the US, place and hold the DRIVE MOTOR control switch in START.

Standard: Starts the recirculation pump sequence by pressing the STRT/NORM pushbutton and places and holds the DRIVE MOTOR control switch in START.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 11

Procedure Step: 5.3.13

Verify the field breaker closes and the pump start sequence is activated as the scoop tube passes through the 40% to 30% range.

Standard: Verifies the field breaker closes and the pump start sequence is activated as the scoop tube passes through the 40% to 30% range (Generator amps, kilovolts and MG Set Motor amps rise when scoop tube is about 25% to 30%).

Cue/Note: The field breaker closes at about 25% to 30%. If noted by the Candidate, tell him to continue.

Comment:

SAT/UNSAT

Performance Step: 12

Procedure Step: 5.3.13.1

Release the DRIVE MOTOR control switch after generator amps have stabilized.

Standard: Releases the DRIVE MOTOR control switch after generator amps have stabilized.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 13

Procedure Step: 5.3.13.2

When the scoop tube reaches the low speed position (no further movement observed as indicated on the "V" display), then depress the STRT/NORM pushbutton on the speed control unit to reactivate the manual adjustment knob.

Standard: When the scoop tube reaches the low speed position (no further movement observed as indicated on the "V" display), then depresses the STRT/NORM pushbutton on the speed control unit to reactivate the manual adjustment knob.

Comment:

SAT/UNSAT

Performance Step: 14

Procedure Step: 5.3.13.3

Adjust the setpoint to 11.5 Hz if required, using the manual adjustment knob on the individual MG Set speed controller.

Standard: Adjusts the setpoint to 11.5 Hz if required, using the manual adjustment knob on the individual MG Set speed controller.
Presses CHNG DISP until the setpoint (S) is selected. Verifies that the setpoint displays 11.5. No adjustments are required.

Comment:

SAT/UNSAT

Performance Information

Note: Step 5.3.13.4 is NA.

✓

Performance Step: 15

Procedure Step: 5.3.13.4

Open the pump discharge valve.

Standard: Opens the pump discharge valve, V-37-21, by placing the DISCHARGE control switch to OPEN (red light ON, green light OFF).

Comment:

SAT/UNSAT

✓

Performance Step: 16

Procedure Step: 5.3.15.1

- Adjust the setpoint speed ("S" display) on the Master Recirc Speed Controller to match the speed ("P" display) of the pump which is in service.
- Place the individual MG Set speed controller in automatic.

Note/Cue: The "P" display on the individual B pump controller will display 10.5 and the "S" on the Master Controller will display 11.5. The Master Controller is already at minimum and cannot be adjusted down to match the 10.5 display on the individual controller.

Cue: The B MG Set Speed Controller indicates 11.5.

Standard:

- Adjust the setpoint speed ("S" display) on the Master Recirc Speed Controller to match the speed ("P" display) of the Recirc Pump B. No adjustments are required. (Not critical step)
- Place the individual MG Set speed controller in automatic by pressing the AUTO/MAN pushbutton on the MG Set B speed controller. (Critical step)

Cue: Another Operator will complete the procedure.

Comment:

Performance Information

SAT/UNSAT

JPM Stop Time: _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to IC-36 (shutdown IC at about 150 °F temperature)
 - a. Trip all recirc pumps
 - b. Close the discharge valves on Pump A, B, and C
 - c. Place all individual recirc controllers in manual
 - d. Place the Master Recirc Flow Controller at minimum (11.5 hz)
 - e. Turn ROD POWER off
2. Have a copy of the procedure with the Precautions & Limitations section, and Section 5 completed up to and including step 5.3.6.

STUDENT HANDOUTInitial Conditions:

1. The plant is shutdown.
2. All Reactor Recirculation Pumps are secured.
3. Section 5.0 of Procedure 301.2, Reactor Recirculation System, has been completed up to and including Step 5.3.6.
4. An EO has been briefed on the evolution, has a copy of the procedure and is in the Recirculation MG Set Room with a radio.
5. All prerequisites to start a Reactor Recirculation Pump have been completed.

Task Cue:

Starting at Step 5.3.7 of Procedure 301.2, Reactor Recirculation System, complete the normal startup of Reactor Recirculation Pump B.

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- 5.2.10 Changing the temperature of a MG set exciter winding causes an erroneous MG set speed signal change which results in a Rx recirc. flow change. Minimize the magnitude and rate of temperature changes in the MG set room. Monitor Rx recirc. flow during evolutions which change the MG set room temperature.
- 5.2.11 Minimize the time that reactor recirculation pumps are operated with the discharge valve closed. Vibration levels significantly increase during this mode and any extended operation should be avoided.
- 5.2.12 Individual Recirculation Pump flows may be monitored on the Plant Process Computer as the digital accuracy allows finer indication than on the 3F panel flow indicators.
- 5.2.13 During outages, placing a Recirculation Pump in service prior to the RPV Head being landed has the potential to cause CRUD burst and elevated activity levels on the refuel floor.
- 5.2.14 If a Recirculation Loop has been out of service more than a shift consult with Chemistry Department on placing a second RWCU Pump in service before returning a Recirculation Loop to service.
- 5.2.15 With the SDC System **not** isolated and all the SDC Pumps off, starting a RCP may cause Dose Rates in the SDC Room to change due to a redistribution of corrosion products.
- 5.2.16 Ideally, the Recirc Pump seals should be operated as little as possible at low pressures. This is because at low pressures, the seals have a greater probability of coming into contact with one another and thereby causing damage to the faces. At pressures lower than 30 psig, the seal closing force can collapse the fluid film causing the seal faces to touch. Therefore, the length of time the recirc pumps are operated at low reactor pressures (<30 psi) should be minimized to ensure optimum seal performance.

5.3 Startup Instructions

- 5.3.1 **COMPLETE** the applicable portions of the Recirculation Pump Electrical lineup in accordance with Attachment 301.2-3. []
- 5.3.2 **DIRECT** an Equipment Operator to the MG-Set Room to perform the following actions prior to starting a recirc pump MG-Set. []

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- 5.3.2.1 **VERIFY** proper oil levels in the MG-Set motor and the *Pneumatic Drive Control* unit at their respective site glasses. []
- 5.3.2.2 **VERIFY** the following switch positions on the *Pneumatic Drive Control* unit.
- Handlock lever in the AUTO position. []
 - Positioner supply valve in the AUTO-OPEN position, (V-6-3563 OPEN if starting 'C' MG-Set) []
 - Bypass valve in the AUTO-CLOSED position. []
- 5.3.2.3 **VERIFY** that the hand auto switch is in the AUTO position on the Oil Vapor Removal unit. []
- 5.3.2.4 **VERIFY** that the supply air pressure is approximately 20 psig on gages listed below:
- Gages on regulator for MG-set supply air pressure:
- "A" MG-set downstream of V-6-3367 []
 - "B" MG-set downstream of V-6-3368 []
 - "C" MG-set downstream of V-6-3368 []
 - "D" MG-set downstream of V-6-3370 []
 - "E" MG-set downstream of V-6-3371 []
- 5.3.2.5 IF US permits,
- THEN **CLOSE** the MG-Set Oil Cooler Outlet Valves.
- V-5-88, MG Set A Oil Cooler Outlet []
 - V-5-89, MG Set B Oil Cooler Outlet []
 - V-5-90, MG Set C Oil Cooler Outlet []
 - V-5-91, MG Set D Oil Cooler Outlet []
 - V-5-92, MG Set E Oil Cooler Outlet []

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NOTE

Contact Engineering if additional guidance is required in determining the need to vent the seal cavity.

- 5.3.3 **IF** maintenance has been performed on a recirculation pump, or the reactor has been depressurized and air or voiding in the seal cavity is suspected (i.e.; loss of seal cooling, rapid depressurization, etc.),

THEN NOTIFY the I&C Department to vent the seal cavity in accordance with Attachment 301.2-4. []

NOTE

While operating a recirculation pump without Reactor Building Closed Cooling Water in accordance with Section 12, the CCW FLOW LO alarm will be locked-in.

- 5.3.4 **VERIFY** that the CCW FLOW LO alarm at Panel 3F for the respective pump is clear. []

- 5.3.5 **IF** reactor coolant temperature is less than 200°F,

THEN REDUCE the speed of all operating recirc. pumps to less than 30 Hz. []

- 5.3.6 **LINEUP** the recirculation loop valves for the pump being started as follows:

5.3.6.1 **OPEN** the pump discharge bypass valve. []

5.3.6.2 **OPEN** the pump suction valve. []

5.3.6.3 **CLOSE** the pump discharge valve. []

- 5.3.7 **PERFORM** the following at the individual MG-Set Speed Controller for the pump to be started: []

5.3.7.1 **PLACE** the MG set in the MANUAL mode.

5.3.7.2 **VERIFY** the STRT/NORM pushbutton is selected to NORM.

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5.3.7.3 **WITHDRAW** the scoop tube to the full speed (100%) position by rotating the manual adjustment knob in the clockwise direction until the "V" bar display indicates 100% position.

5.3.8 **VERIFY** locally (Recirc MG Set Room) the scoop tube position at 100% (hand operating level in the full up position). []

5.3.9 **VERIFY** that the associated 4160V bus voltage for the MG set to be started is greater than 4100 volts. []

5.3.10 **START** the MG set by momentarily placing the pump DRIVE MOTOR control switch in the START position. []

5.3.10.1 **OPEN** dampers for MG-Set being placed in-service:

- 'A' MG-Set Dampers

DM-56-93 []

DM-56-94 []

- 'B' MG-Set Dampers

DM-56-95 []

DM-56-96 []

- 'C' MG-Set Dampers

DM-56-97 []

DM-56-98 []

- 'D' MG-Set Dampers

DM-56-99 []

DM-56-100 []

- 'E' MG-Set Dampers

DM-56-101 []

DM-56-102 []

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5.3.11 **CONFIRM** proper MG-Set fluid coupler temperature as follows:

5.3.11.1 IF an expedited MG-Set start is necessary to avoid an undesirable operational restriction (e.g.; plant shutdown)

OR

IF the Recirculation pump start is to occur with the reactor shutdown (all rods inserted),

THEN **PERFORM** the following:

1. **CONFIRM** fluid temperature is greater than 60°F on the IA 55 recorder.

Points on the IA 55 recorder for MG set fluid temperature:

- "A" MG set PT 20 []
- "B" MG set PT 21 []
- "C" MG set PT 22 []
- "D" MG set PT 23 []
- "E" MG set PT 24 []

2. **PROCEED** to Step 5.3.12

5.3.11.2 IF a normal MG-Set start is planned,

THEN **OPERATE** the MG-Set with the scoop tube at 100% until the low temperature alarm associated with that MG set clears from recorder IA 55. []

5.3.11.3 **ACKNOWLEDGE** temperature recorder IA 55 alarm as follows:

1. **OPEN** Key Panel cover []
2. **PRESS** ?FUNC? key []
3. **PRESS** softkey associated with ?Alarm ACK? option to release alarm indication and output relay []
4. **CLOSE** Key Panel cover []

5.3.11.4 **VERIFY** the warm light illuminates []

5.3.12

NOTE

Speed control using the manual adjustment knob is lost when the STRT/NORM pushbutton is selected to the STRT position.

CAUTION

Minimize the time that reactor recirculation pumps are operated with the discharge valve closed. Vibration levels significantly increase during this mode and any extended operation should be avoided.

START the recirculation pump sequence by pressing the STRT/NORM pushbutton

[]

AND

as directed by the US, **PLACE** and **HOLD** the DRIVE MOTOR Control switch in START.

[]

5.3.13 **VERIFY** that the field breaker closes and the pump start sequence is activated as the scoop tube passes through the 40% to 30% range.

[]

5.3.13.1 IF used,

THEN **RELEASE** the DRIVE MOTOR Control switch after generator amps have stabilized.

[]

5.3.13.2 WHEN the scoop tube reaches the low speed position (**no** further movement observed as indicated on the "V" display),

THEN **DEPRESS** the STRT/NORM push button on the speed control unit to reactivate the manual adjustment knob.

[]

Title

Reactor Recirculation System

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55

5.3.13.3 IF **no** other pumps are in service,
THEN **ADJUST** the set point to 11.5 Hz (if
required) using the manual adjustment
knob on the individual MG-Set Speed
Controller. []

5.3.13.4

CAUTION

Recirc pump speed is limited based on
reactor water temperature in accordance
with Section 5.2.

IF other pumps are in service,
THEN **ADJUST** the speed of the pump which is
being placed into service to match the
differential pressure of the operating
pumps in order to prevent reverse flow. []

5.3.14 **OPEN** the pump discharge valve. []

5.3.15 WHEN the speed for the pump being placed into service is
equal to the speed of the other operating pumps or is
at the desired speed,

THEN **PLACE** the individual MG-Set Speed Controller in
automatic operation as follows: []

5.3.15.1 IF only one pump is in service (initial startup),

THEN **PERFORM** the following:

- **ADJUST** the setpoint speed ("S" Display)
on the Master Recirc Controller to match
the speed ("P" Display) of the pump which
is in service. []

- **PLACE** the individual MG-Set Speed
Controller in AUTOMATIC. []

Title

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5.3.15.2 IF another pump is in service (automatic control),

THEN **PERFORM** the following:

- **OBSERVE** recirc pump speed limits of Section 5.2. []
- **INCREASE** the speed of the pump which is being placed into service to be slightly greater than the pump which is already in service. []
- **PLACE** the individual MG-Set Speed Controller in AUTOMATIC. []

5.3.16 **CONFIRM** all relay flags are reset on local panels. []

5.3.17 **MAINTAIN** MG-Set Oil Cooler outlet temperature 120-135° F as indicated by local instrumentation in MG-Set Room. []

CAUTION

Position valves with small opening or closing increments to prevent drastic changes in MG-Set lube oil temperature. Drastic changes in lube oil temperature could effect Recirc pump speed and Reactor Reactivity.

5.3.17.1 WHEN MG-Set Oil Cooler outlet temperature approaches 130°F,

THEN **PERFORM** the following:

1. **NOTIFY** US. []
2. Carefully **POSITION** the following TBCCW valves to change MG-Set Oil Cooler Outlet Temperature:
 - V-5-88, MG Set A Oil Cooler Outlet []
 - V-5-89, MG Set B Oil Cooler Outlet []
 - V-5-90, MG Set C Oil Cooler Outlet []
 - V-5-91, MG Set D Oil Cooler Outlet []
 - V-5-92, MG Set E Oil Cooler Outlet []

5.3.18 **PLACE** additional recirculation pumps in service in accordance with steps 5.3.1 through 5.3.17. []

Facility: Oyster Creek Task No.: 2090201003Task Title: Perform Core Spray Surveillance with faulted Core Spray Pump (Alternate Path)Job Performance Measure No.: NRC JPM SIM2 (RO/SRO)K/A Reference: 20900-1 A4.01 (RO/SRO 3.8/3.6)

Examinee: _____ 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 plant is at rated power.
2. Core Spray Main Pump NZ01C is tagged out of service due to an oil leak.
3. Core Spray Pump Operability Test, 610.4.002, is in progress and is complete up to and including Step 6.4.
4. The testing is a normal surveillance for pumps NZ01A and NZ03A only.
5. An Equipment Operator has been briefed on the evolution, and is standing-by with the procedure and a radio on RB 51'.

Task Standard: The Core Spray Booster Pump is manually tripped after the Core Spray Pump trips.

Required Materials: None.

General References:

1. Procedure 610.4.002, Core Spray Pump Operability Test, revision 48.

Initiating Cue: Continue with surveillance test 610.4.002, Core Spray Pump Operability Test, beginning at Step 6.5.

Time Critical Task: No.

Validation Time: 9 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

Performance Step: 2

Procedure Step: Reviews Precautions and Limitations.

Standard: Reviews Precautions and Limitations.

Comment: _____

SAT/UNSAT _____

Performance Information

✓

Performance Step: 3

Procedure Step: 6.5

Start Core Spray MAIN PUMP (control switch on 1F/2F) for Core Spray Main Pump NZ01A.

Standard: Places Core Spray MAIN PUMP NZ01A control switch to START (red light ON, green light OFF, MAIN PUMPS AMPS NZ01A rises, PUMP DISCH PRESS MAINS rises).

Comment:

SAT/UNSAT

Performance Step: 4

Procedure Step: 6.5.1

Record Core Spray PUMP DISCH PRESS – MAINS PIT-RV03A (1F/2F) > 150 psig.

Standard: Record Core Spray PUMP DISCH PRESS – MAINS PIT-RV03A (1F/2F) > 150 psig.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 5

Procedure Step: 6.6

If Core Spray PUMP DISCH PRESS – MAINS PIT-RV03A is > 100 psig, then start a Core Spray Booster Pump from the control switch on 1F/2F.

Standard: Verifies PUMP DISCH PRESS – MAINS PIT-RV03A is > 100 psig, then starts Core Spray Booster Pump NZ03A by placing BOOSTER PUMP NZ03A control switch to START (red light ON, green light OFF, PUMP DISCH PRESS – BOOSTERS rises).

Comment:

SAT/UNSAT

Performance Step: 6

Procedure Step: 6.6.1

Verify alarm SYSTEM 1 LOW PERMISSIVE (B2e) annunciates (if reactor press < 300 psig).

Standard: Recognizes reactor pressure is > 300 psig and that SYSTEM 1 LOW PERMISSIVE (B2e) will not annunciate.

Comment:

SAT/UNSAT

Performance Information

Note: In the following step, when core spray flow reaches 4000 gpm, the Core Spray Main Pump NZ01A will trip. This initiates the Alternate Path.

✓

Performance Step: 7

Procedure Step: 6.7

Open V-20-27 and establish Core Spray flow by taking the keylock switch to OPEN (51' NW).

Standard: Directs the EO over the radio to open V-20-27 and establish Core Spray flow by taking the keylock switch to OPEN. (Red light ON, green light OFF)

On the pump trip, verifies MAIN PUMP NZ01A red light OFF, green light ON, MAIN PUMPS AMPS NZ01A at 0.

Booth Cue: Acknowledge the report. Insert Remote LOA-CSS016 from 0% to 100%.

Note: **When Core Spray System I flow exceeds 4000 GPM, Core Spray Main Pump NZ01A will trip. Annunciator B4e will alarm.**

The candidate may refer to the alarm response B4e.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 8

Procedure Step:

Trips Core Spray Booster Pump NZ03A.

Standard: Trips Core Spray Booster Pump NZ03A by placing CORE SPRAY 1 BOOSTER PUMP NZ03A control switch to STOP (red light OFF; green light ON; PUMP DISCH PRESS BOOSTERS falls to 0).

Comment: _____

_____**SAT/UNSAT** _____**JPM Stop Time:** _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to full power IC (IC-65) or similar
2. Insert Remote LOA-CSS017 to FALSE
 - a. This will rack-in the breaker for Core Spray System I Test Valve, V-20-27
3. Insert the following:
 - a. Conditional Trigger pp_fitrv26a_1v.gt.4000 on Trigger 1
 - b. Malfunction MAL-CSS002a on Trigger 1
 - i. These two items will trip Core Spray Main NZ01A when Core Spray System I flow exceeds 4000 GPM
4. Have a surveillance test completed up to step 6.4 (610.4.002).
5. Place a tag on Core spray Main Pump NZ01C.

STUDENT HANDOUTInitial Conditions:

1. The plant is at rated power.
2. Core Spray Main Pump NZ01C is tagged out of service due to an oil leak.
3. Core Spray Pump Operability Test, 610.4.002, is in progress and is complete up to and including Step 6.4.
4. The testing is a normal surveillance for pumps NZ01A and NZ03A only.
5. An Equipment Operator has been briefed on the evolution, and is standing-by with the procedure and a radio on RB 51'.

Task Cue:

Continue with surveillance test 610.4.002, Core Spray Pump Operability Test, beginning at Step 6.5.

Facility: Oyster Creek Task No.: 2120201303Task Title: Perform Anticipatory Scram Turbine Stop Valve Closure test
with RPS Actuation (Alternate Path)Job Performance Measure No.: NRC JPM SIM3 (RO/SRO)K/A Reference: 241000 K3.01 (RO/SRO 4.1/4.1)

Examinee: _____ 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 plant is steady at 90% power with no other testing in-progress.
2. All prerequisites have been verified.
3. The procedure is complete up to step 6.2.

Task Standard: The Candidate recognizes a ½ scram when Turbine Stop Valve #2 is tested and places the MAIN STOP VALVE TEST SELECT switch in OFF, resets the ½ scram, notifies the Shift Manager, and exits the test.

Required Materials: None.

General References:

1. Procedure 619.4.002, Anticipatory Scram Turbine Stop Valve Closure Test (>45% Load), revision 18.

Initiating Cue: Perform Procedure 619.4.002, Anticipatory Scram Turbine Stop Valve Closure Test (>45% Load), starting at Step 6.3.

Time Critical Task: No.

Validation Time: 11 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.**JPM Start Time:** _____

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

Comment: _____

SAT/UNSAT

Performance Step: 2

Procedure Step: Reviews Precautions and Limitations.

Standard: Reviews Precautions and Limitations.

Comment: _____

SAT/UNSAT

Performance Information

NOTE: Procedure step 6.3 requires no actions or verifications by the candidate and is not listed as a Performance Step here.

✓

Performance Step: 3

Procedure Step: 6.4

Place the Main Stop Valve Test Select switch in No. 3 position.

Standard: Places the MAIN STOP VALVE TEST SELECT switch in No. 3 position.

Comment:

SAT/UNSAT

✓

Performance Step: 4

Procedure Step: 6.5

Momentarily press pushbutton Main Stop Valve Test.

Standard: Momentarily press MAIN STOP VALVE TEST pushbutton.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 5

Procedure Step: 6.5.1

Verify No. 3 Stop Valve closed.

Standard: Verifies No. 3 Stop Valve closed (MAIN STOP VALVE POSITION No. 3 pointer points to C). The Candidate may also verify position indication lights on Panel 7F.

Comment:

SAT/UNSAT

Performance Step: 6

Procedure Step: 6.5.2

Verify the following:

- Relay 1K12 energized
- Relay 2K11 energized
- Relay 1K52 energized
- Relay 2K51 energized

Standard: Verifies the following relays energized: 1K12, 2K11, 1K52, and 2K51.

Cue: Relays 1K12, 2K11, 1K52, and 2K51 are energized.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 7

Procedure Step: 6.7

Place the Main Stop Valve Test Select switch in No. 2 position.

Standard: Places the MAIN STOP VALVE TEST SELECT switch in No. 2 position.

Comment: _____

SAT/UNSAT

Performance Step: 8

Procedure Step: 6.7.1

Verify No. 3 Stop Valve opens.

Standard: Verifies No. 3 Stop Valve opens (MAIN STOP VALVE POSITION No. 3 pointer points to O). The Candidate may also verify position indication lights on Panel 7F.

Comment: _____

SAT/UNSAT

Performance Information

Performance Step: 9

Procedure Step: 6.7.2

Verify all Stop valves open.

Standard: Verifies all Stop valves open (all MAIN STOP VALVE POSITION No. 1, 2, 3, 4 pointers point to O). The Candidate may also verify position indication lights on Panel 7F.

Comment:

SAT/UNSAT

NOTE: The following step will result in an unexpected ½ scram. This initiates the Alternate Path.

✓

Performance Step: 10

Procedure Step: 6.8

Momentarily press pushbutton Main Stop Valve Test.

Standard: Momentarily presses MAIN STOP VALVE TEST pushbutton.

Note: This will result in a ½ scram condition. When recognized by the candidate, provide the cue below.

Cue: Relay 1K11 is de-energized.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 11

Procedure Step: 6.6.1

Immediately open No. 2 Stop Valve by placing the Main Stop Valve Test Select switch in OFF.

Standard: Immediately opens No. 2 Stop Valve by placing the MAIN STOP VALVE TEST SELECT switch in OFF.**Booth:** When TSV indicates full open, DELETE MAL RLY-RPS021A.**Comment:**

SAT/UNSAT

✓

Performance Step: 12

Procedure Step: 6.6.2

Reset the half-scram.

Note/Cue: The candidate will ask for concurrent verification for resetting the ½ scram. State that you will perform the concurrent verification and agree with what ever action the candidate takes.**Standard:** Resets the half-scram by pressing the SCRAM SYSTEM RESET pushbutton (RPS 1 SCRAM SOLENOIDS ON).**Comment:**

SAT/UNSAT

Performance Information

Performance Step: 13

Procedure Step: 6.6.3

Notify the Shift Manager.

Standard: Notifies the Shift Manager.**Cue:** Acknowledge the report.Comment:

SAT/UNSAT

Performance Step: 14

Procedure Step: 6.6.4

Exit this procedure.

Standard: Exits this procedure**Cue:** Acknowledge the report.Comment:

SAT/UNSAT

JPM Stop Time: _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to full power IC-65 and reduce recirculation flow to <90% power.
(about 40 hz)
2. Insert Trigger: on Trigger 1, insert the following:
 - hwx31d047r.lt.0.50
3. Insert malfunction RLY-RPS021A on Trigger 1. When Stop Valve #2 goes closed, this will de-energize relay 1K11.
4. Verify all Turbine Stop Valve selsyns indicate OPEN on Panel 14R.
5. Have a copy of the procedure completed up to and including step 6.2.
(619.4.002).
6. When Stop Valve #2 is re-opened, delete RLY-RPS021A.

STUDENT HANDOUTInitial Conditions:

1. The plant is steady at 90% power with no other testing in-progress.
2. All prerequisites have been verified.
3. The procedure is complete up to step 6.2.

Task Cue:

Perform Procedure 619.4.002, Anticipatory Scram Turbine Stop Valve Closure Test (>45% Load), starting at Step 6.3.

Facility: Oyster Creek Task No.: 2070101003Task Title: Control reactor Pressure using the Isolation Condenser Tube Side ventsJob Performance Measure No.: NRC JPM SIM4 (RO/SRO)K/A Reference: 207000 K1.02 (RO/SRO 4.0/4.2)

Examinee: _____ 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 plant scrammed from low power and the RPV Control – No ATWS EOP has been entered.
2. The MSIVs are closed.
3. The Isolation Condensers are not required to be isolated.
4. The main condenser is intact.
5. *There is no offsite radioactivity release in-progress.*

Task Standard: Isolation Condenser A and B vent valves are open for RPV pressure control.

Required Materials: None.

General References:

1. EMG-SP15, Alternate Pressure Control Systems IC Tube Side Vents, revision 0.

Initiating Cue: Place **BOTH** Isolation Condenser A and B tube side vents in-service, IAW EMG-SP15, Alternate Pressure Control Systems IC Tube Side Vents, to lower RPV pressure.

Time Critical Task: No.

Validation Time: 4 minutes

Performance Information

Denote critical steps with a check mark ✓

NOTE: The initial conditions provided in the CUE DO NOT reflect the actual simulator setup for this JPM.

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

Performance Step: 2

Procedure Step: 2.1

Verifies:

- Isolation Condensers are not required to be isolated.
- Main Condenser is intact.

Offsite radioactivity release rate is expected to remain below the release rate, which requires an Unusual Event.

Note: These conditions are provided in the initiating cue.

Standard: Verifies:

- Isolation Condensers are not required to be isolated.
- Main Condenser is intact.
- Offsite radioactivity release rate is expected to remain below the release rate, which requires an Unusual Event.

Comment: _____

SAT/UNSAT _____

Performance Information

✓

Performance Step: 3

Procedure Step: 2.2, 2.2.1, 2.2.2

Open the EOP BYPASS PLUGS panel inside of Panel 10XF.
Remove the bypass plug from position BP2 and insert a bypass
plug into position BP1.

Standard: Opens the EOP BYPASS PLUGS panel inside of Panel 10XF.
Removes the bypass plug from position BP2 and inserts the
bypass plug into position BP1.

Comment:

SAT/UNSAT

✓

Performance Step: 4

Procedure Step: 2.2.3, 2.2.4

Remove the bypass plug from position BP4 and insert a bypass
plug into position BP3.

Standard: Removes the bypass plug from position BP4 and insert the
bypass plug into position BP3.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 5

Procedure Step: 3.1

Verify that RPV water level is below 180 in.

Standard: Verifies RPV water level is below 180 in.Comment:

SAT/UNSAT

Performance Step: 6

Procedure Step: 3.2

Confirm open the following Isolation Condenser Steam Inlet
Valves for the Isolation Condensers to be used (Panel 1F/2F).

Isolation Condenser A

- V-14-30
- V-14-31

Isolation Condenser B

- V-14-32
- V-14-33

Standard: Confirm open the following Isolation Condenser Steam Inlet
Valves for the Isolation Condensers to be used (Panel 1F/2F).

Isolation Condenser A

- V-14-30 (red light ON, green light OFF)
- V-14-31 (red light ON, green light OFF)

Isolation Condenser B

- V-14-32 (red light ON, green light OFF)
- V-14-33 (red light ON, green light OFF)

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 7

Procedure Step: 3.3

Open the following Isolation Condenser Vents for the Isolation
Condensers to be used:

Isolation Condenser A

- V-14-5/V-14-20

Isolation Condenser B

- V-14-1/V-14-19

Standard:

Opens the following Isolation Condenser Vents for the Isolation
Condensers to be used:

Isolation Condenser A

- V-14-5/V-14-20 by placing ISOL COND VENT V-14-5 and
V-14-20 switch to the right (red lights ON, green lights
OFF)

Isolation Condenser B

- V-14-1/V-14-19 by placing ISOL COND VENT V-14-1 and
V-14-19 switch to the right (red lights ON, green lights
OFF)

Comment:

SAT/UNSAT

Performance Information

Performance Step: 8

Procedure Step: 3.4

Control reactor pressure as directed by the Unit Supervisor by cycling the tube side vents designated in step 3.3.

NOTE: This vent line is a 3/4" line and can take appreciable time to show a noticeable reduction in RPV pressure.

Cue: RPV pressure is slowly lowering.

Standard: Monitors reactor pressure.

Comment:

SAT/UNSAT**JPM Stop Time:** _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to full power IC-65.
2. Have a blank copy of EMG-SP15 ready.

STUDENT HANDOUT

Assume the following Initial Conditions and Indications. **These indications may not match actual plant conditions.**

1. The plant scrammed from low power and the RPV Control – No ATWS EOP has been entered.
2. The MSIVs are closed.
3. The Isolation Condensers are not required to be isolated.
4. The main condenser is intact.
5. There is no offsite radioactivity release in-progress.

Task Cue:

Place **BOTH** Isolation Condenser A and B tube side vents in-service, IAW EMG-SP15, Alternate Pressure Control Systems IC Tube Side Vents, to lower RPV pressure.

Facility: Oyster Creek Task No.: 2230101508Task Title: Vent the Primary Containment to Maintain pressure Below
3 psig (Alternate Path)Job Performance Measure No.: NRC JPM SIM5 (RO/SRO)K/A Reference: 223001 K1.09 (RO/SRO 3.4/3.6)

Examinee: _____ 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 plant is at rated power.
2. A partial loss of Drywell cooling has occurred.
3. The Primary Containment Control EOP has been entered.

Task Standard: The Primary Containment is being vented via the Drywell through the Standby Gas Treatment System 2.

Required Materials: None.

General References:

1. EMG-SP31, Venting the Primary Containment to Maintain Pressure Below 3.0 PSIG, revision 0.

Initiating Cue: Vent the Primary Containment through Standby Gas Treatment System 2 IAW EMG-SP31, Venting the Primary Containment to Maintain Pressure Below 3.0 PSIG. Venting the Torus is preferred.

Time Critical Task: No.

Validation Time: 8 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment:

SAT/UNSAT

✓

Performance Step: 2

Procedure Step: 3.2.1

Select a SGTS Train for operation by placing the STANDBY GAS SELECT switch in position SYSTEM 1 or SYSTEM 2 (panel 11R).

Standard: Selects SGTS Train 2 for operation by placing the STANDBY GAS SELECT switch in the SYS 2 position.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 3

Procedure Step: 3.2.2

Place the fan control switch for the train selected in the HAND position (panel 11R).

Standard: Places the STANDBY GAS 2 EXHAUST FAN 1-9 control switch to the HAND position (red light ON, green light OFF).

Cue: This action will initiate control room annunciators. Tell the Candidate that *another Operator will attend to these alarms.*

Comment:

SAT/UNSAT

✓

Performance Step: 4

Procedure Step: 3.2.3

Close the SGTS CROSSTIE V-28-48 (Panel 11R).

Standard: Closes the SGTS CROSSTIE V-28-48 by placing the SGTS CROSSTIE V-28-48 switch to the CLOSE position (red light OFF, green light ON).

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 5

Procedure Step: 3.2.4.a

Perform the following actions in rapid succession: Secure operating Reactor Building Supply Fans by placing the respective control switches in OFF position (Panel 11R).

Standard: Perform the following actions in rapid succession: Secures the operating Reactor Building Supply Fans by placing SUPPLY FAN 1-12 switch in the OFF position (red light OFF, green light ON), and SUPPLY FAN 1-14 in the OFF position (red light OFF, green light ON).

Cue: This action will initiate control room annunciators. Tell the Candidate that another Operator will attend to these alarms.

Comment:

SAT/UNSAT

✓

Performance Step: 6

Procedure Step: 3.2.4.b

Perform the following actions in rapid succession: Immediately secure Exhaust Fan EF 1-5 (or EFR 1-6) by placing control switch in STOP position (Panel 11R).

Standard: Perform the following actions in rapid succession: Immediately secures Exhaust Fan EF 1-5 by placing the REACTOR BUILDING EXHAUST FAN 1-5 control switch in STOP position (red light OFF, green light ON).

Cue: This action will initiate control room annunciators. Tell the Candidate that another Operator will attend to these alarms.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 7

Procedure Step: 3.2.5

Close V-28-21 and V-28-22 by placing EXH VALVES TO MAIN EXHAUST control switch in CLOSE position (Panel 11R).

Standard: Closes V-28-21 and V-28-22 by placing EXH VALVES TO MAIN EXHAUST control switch in CLOSE position (red lights OFF, green lights ON).

Comment:

SAT/UNSAT

Performance Step: 8

Procedure Step: 3.2.6

Close V-28-43 and V-28-42 by placing the MAIN SUPPLY HEADER VALVES TO DW control switch in CLOSE position (Panel 11R).

Standard: Verifies the MAIN SUPPLY HEADER VALVES TO DW V-28-43 and V-28-42 control switch is in the CLOSE position (red lights OFF, green lights ON).

Comment:

SAT/UNSAT

Performance Information

Note: The Torus Vent Valve, V-28-18, will NOT open as expected in the following step. This initiates the Alternate Path.

✓

Performance Step: 9

Procedure Step: 3.2.7.a.1

Open Torus Vent valve V-28-18 (Panel 11F)

Standard: Opens the Torus Vent valve V-28-18 by placing the TORUS VENT EXHAUST VALVE control switch to the right (red light OFF, green light ON). Reports that the Torus Vent valve, V-28-18 fails to open, and may ask for further direction.

Note/Cue: Torus Vent valve, V-28-18, will fail to open. (the Torus cannot be vented)

If the Candidate asks for direction, direct the Candidate to continue to vent the Primary Containment IAW EMG-SP31.

Comment:

SAT/UNSAT

Performance Step: 10

Procedure Step: 3.2.7.b.1

Verify that the Torus cannot be vented.

Standard: Verifies that the Torus cannot be vented.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 11

Procedure Step: 3.2.7.b.2

Inform the Unit Supervisor.

Standard: Informs the Unit Supervisor.**Cue:** Acknowledge the report.**Comment:**

SAT/UNSAT

✓

Performance Step: 12

Procedure Step: 3.2.7.b.3

Open the Drywell Vent valve V-23-21 (Panel 12XR).

Standard: Opens the Drywell Vent valve V-23-21 by placing the DRYWELL VENT VALVE V-23-21 control switch to OPEN (red light ON, green light OFF).**Comment:**

SAT/UNSAT

Performance Information

✓

Performance Step: 13

Procedure Step: 3.2.7.b.4

Open the Drywell Vent Valve V-23-22 (Panel 12XR).

Standard: Opens the Drywell Vent Valve V-23-22 by placing the DRYWELL VENT VALVE V-23-22 control switch to OPEN (red light ON, green light OFF).

Note: The Candidate may monitor Primary Containment pressure at this point.

Cue: Primary Containment pressure is lowering slowly.

Comment:

SAT/UNSAT

JPM Stop Time: _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to rated power IC-65.
2. Insert malfunction VLV-CNA016 to FAIL AS IS (closed). This will prevent valve V-28-18 from opening.
3. Have a blank copy of EMG-SP31 ready.

STUDENT HANDOUTInitial Conditions:

1. The plant is at rated power.
2. A partial loss of Drywell cooling has occurred.
3. The Primary Containment Control EOP has been entered.

Task Cue:

Vent the Primary Containment through Standby Gas Treatment System 2 IAW EMG-SP31, Venting the Primary Containment to Maintain Pressure Below 3.0 PSIG. Venting the Torus is preferred.

Facility: Oyster Creek Task No.: 2620101002Task Title: Transfer Busses 1A and 1B to the Startup Transformers
(Alternate Path)Job Performance Measure No.: NRC JPM SIM6 (RO/SRO)K/A Reference: 262001 K4.02 (RO/SRO 2.9/3.3)

Examinee: _____ 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 plant was at power when a manual scram has become imminent.
2. Recirculation flow has been reduced to 8.5×10^4 gpm.
3. The System Dispatcher has been notified.

Task Standard: Busses 1A and 1B has been manually transferred from the Auxiliary Transformer to the Startup Transformers and breaker 1B has been manually opened.

Required Materials: None.

General References:

1. ABN-1, Reactor Scram, revision 7

Initiating Cue: Transfer Busses 1A and 1B to the Startup Transformers IAW ABN-1, Reactor Scram, Attachment ABN-1-4.

Time Critical Task: No.

Validation Time: 6 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

✓

Performance Step: 2

Procedure Step: 1

Insert key into the Synchroscope switch for Startup Breaker S1A.

Standard: Inserts key into the SYNCHROSCOPE switch for STARTUP BREAKER S1A.

Comment: _____

SAT/UNSAT _____

Performance Information

✓

Performance Step: 3

Procedure Step: 2

Place Synchroscope key to the ON position.

Standard: Places SYNCHROSCOPE key to the ON position. Incoming and Running show > 4000 Volts and Synchroscope indicates 12:00 o'clock position.

Comment:

SAT/UNSAT

✓

Performance Step: 4

Procedure Step: 3

Place Startup breaker S1A control switch to the CLOSE position.

Standard: Places STARTUP BREAKER S1A control switch to the CLOSE position (red light ON, green light OFF).

Cue: If the Bus OV alarms comes in, report that another Operator will investigate.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 5

Procedure Step: 4

Verify Startup Breaker S1A closed by the associated RED light illuminated.

Standard: Verifies STARTUP BREAKER S1A closed by the associated RED light illuminated (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Step: 6

Procedure Step: 5

Verify Main Breaker 1A trips by the associated green OPEN light illuminated.

Standard: Verifies MAIN BREAKER 1A trips by the associated green OPEN light illuminated (red light OFF, green light ON).Comment:

SAT/UNSAT

Performance Information

Performance Step: 7

Procedure Step: 6

Place Main Breaker 1A control switch to the TRIP position to match the mechanical indication to the light indication and to clear the alarm.

Standard: Places MAIN BREAKER 1A control switch to the TRIP position (green flag).

Comment:

SAT/UNSAT

Performance Step: 8

Procedure Step: 7

Place Synchroscope switch for Startup Breaker S1A to the OFF position.

Standard: Places SYNCHROSCOPE switch for Startup Breaker S1A to the OFF position.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 9

Procedure Step: 1

Insert key into the Synchroscope switch for Startup Breaker S1B.

Standard:Inserts key into the SYNCHROSCOPE switch for STARTUP
BREAKER S1B.

Comment:

SAT/UNSAT

✓

Performance Step: 10

Procedure Step: 2

Place Synchroscope key to the ON position.

Standard:

Places SYNCHROSCOPE key to the ON position.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 11

Procedure Step: 3

Place Startup breaker S1B control switch to the CLOSE position.

Standard: Places STARTUP BREAKER S1B control switch to the CLOSE position (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Step: 12

Procedure Step: 4

Verify Startup Breaker S1B closed by the associated RED light illuminated.

Standard: Verifies STARTUP BREAKER S1B closed by the associated RED light illuminated (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Information

Note: Breaker 1B will NOT open as expected in the following step. This initiates the Alternate Path.

✓

Performance Step: 13

Procedure Step: 5

Verify Main Breaker 1B trips by the associated green OPEN light illuminated.

Note: Main Breaker 1B will not automatically open.

Standard: Verifies MAIN BREAKER 1B trips by the associated green OPEN light illuminated (red light OFF, green light ON).

Recognizes that Main Breaker 1B did not open and opens it by taking the MAIN BREAKER 1B control switch to the TRIP position (red light OFF, green light ON). The Candidate may report the breaker failure at this time (not critical).

Comment:

SAT/UNSAT

Performance Step: 14

Procedure Step: 6

Place Main Breaker 1B control switch to the TRIP position to match the mechanical indication to the light indication and to clear the alarm.

Standard: This was accomplished in the previous step.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 15

Procedure Step: 7

Place Synchroscope switch for Startup Breaker S1B to the OFF position.

Standard: Places SYNCHROSCOPE switch for Startup Breaker S1B to the OFF position.Comment:

SAT/UNSAT**JPM Stop Time:** _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to full power IC-65
2. Insert Malfunction BKR-EDS023B to FAIL AUTO TRIP
3. Have a blank copy of Attachment ABN-1-4 ready.

STUDENT HANDOUTInitial Conditions:

1. The plant was at power when a manual scram has become imminent.
2. Recirculation flow has been reduced to 8.5×10^4 gpm.
3. The System Dispatcher has been notified.

Task Cue:

Transfer Busses 1A and 1B to the Startup Transformers IAW ABN-1, Reactor Scram, Attachment ABN-1-4.

Facility: Oyster Creek Task No.: 2150201401Task Title: Perform an APRM Gain AdjustmentJob Performance Measure No.: NRC JPM SIM7 (RO/SRO)K/A Reference: 215005 A4.03 (RO/SRO 3.2/3.3)

Examinee: _____ 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. Reactor Recirculation flow was just adjusted to attain 100% reactor power a short while ago.
2. Reactor power has been steady for the last 5 minutes.
3. Procedure 403 allows bypassing APRM 1.
4. The procedure revision, prerequisites and precautions and limitations have been verified by the Unit Supervisor.

Task Standard: APRM 1 gain has been adjusted such that APRM 1 indicates 100% \pm 1%.

Required Materials: Small screwdriver.

General References:

1. 202.1, Power Operations, revision 110

Initiating Cue: Perform an APRM Gain Adjustment on APRM 1 IAW Attachment 202.1-9.

Time Critical Task: No.

Validation Time: 4 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

Performance Step: 2

Procedure Step: 1.0

Verify with the US procedure revision, prerequisites and precautions and limitations.

Standard: Verifies with the US procedure revision, prerequisites and precautions and limitations.

Cue: This was given in the initial conditions.

Comment: _____

SAT/UNSAT _____

Performance Information

Performance Step: 3

Procedure Step: 2.1

Allow reactor power to stabilize for at least 2 minutes.

Standard: Allows reactor power to stabilize for at least 2 minutes.**Cue:** This was given in the initial conditions.Comment:

SAT/UNSAT

✓

Performance Step: 4

Procedure Step: 2.2

If allowed by 403, bypass APRM 1.

Standard: Places the APRM BYPASS joystick in the CH 1 position.Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 5

Procedure Step: 2.3

Pull out the APRM 1 drawer.

Standard: Pulls out the APRM 1 drawer.Comment:

SAT/UNSAT

✓

Performance Step: 6

Procedure Step: 2.4

Turn the gain adjustment pot with a small screwdriver (R10 on calibration and feedback unit) clockwise to raise gain or counterclockwise to lower gain while monitoring APRM output on the selected drawer.

Standard: Inserts small screwdriver and turns CW or CCW to change APRM power indication.Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 7

Procedure Step: 2.5

When output on APRM 1 drawer matches required APRM setting within 1%, then stop gain adjustment.

Standard: When output on APRM 1 drawer matches required APRM setting within 1%, then stops gain adjustment. With reactor power at 100%, APRM 1 should indicate $100\% \pm 1\%$.

Comment:

SAT/UNSAT

NOTE: The candidate may close the APRM Drawer at this time since this is the normal configuration (see Step 9).

✓

Performance Step: 8

Procedure Step: 2.6

Un-bypasses APRM 1.

Standard: Places the APRM BYPASS joystick used earlier to the center position.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 9

Procedure Step: 2.7

If another APRM channel in the same drawer requires adjustment, then perform the APRM adjustment IAW steps 2.2 through 2.6 and push in the selected drawer when all APRM adjustments are complete.

Standard: Determines that no other APRM adjustments are required and pushes in the APRM 1 drawer.

Comment: _____

SAT/UNSAT

JPM Stop Time: _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Reset to full power IC-65.
2. Change APRM 1 gain so that the APRM reads < 98%.
3. Have a blank copy of Attachment 202.1-9 ready.

STUDENT HANDOUTInitial Conditions:

1. Reactor Recirculation flow was just adjusted to attain 100% reactor power a short while ago.
2. Reactor power has been steady for the last 5 minutes.
3. Procedure 403 allows bypassing APRM 1.
4. The procedure revision, prerequisites, and precautions and limitations have been verified by the Unit Supervisor.

Task Cue:

Perform an APRM Gain Adjustment on APRM 1 IAW Attachment 202.1-9.

Facility: Oyster Creek Task No.: 2880101403Task Title: Swap Control Room Ventilation Fans (Alternate Path)Job Performance Measure No.: NRC JPM SIM8 (RO)K/A Reference: 290003 A4.02 (RO 2.8)

Examinee: _____ 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 B Control Room Ventilation Fan is currently in service and needs to be removed from service for maintenance.
2. All prerequisites have been verified to perform the procedure, including TBCCW and Instrument, Service and Breathing Air Systems.
3. An EO has been briefed on the evolution, has a copy of the procedure and a radio and is ready to support the evolution.
4. The procedure has been completed up to and including step 10.4.5.

Task Standard: The Control Room Ventilation Fans have been swapped from B to A, and the A Ventilation System has been placed in the PART RECIRC emergency mode.

Required Materials: None.

General References:

1. Procedure 331.1, Control Room and Old Cable Spreading Room Heating, Ventilation and Air Conditioning System, revision 23.

Initiating Cue: Swap Control Room Ventilation System Fans IAW Procedure 331.1, Control Room and Old Cable Spreading Room Heating, Ventilation and Air Conditioning System, starting at step 10.4.6.

Time Critical Task: No.

Validation Time: 15 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

Performance Step: 2

Procedure Step: Reviews Precautions and Limitations.

Standard: Reviews Precautions and Limitations.

Comment: _____

SAT/UNSAT _____

Performance Information

✓

Performance Step: 3

Procedure Step: 10.4.6

Stop B Control Room HVAC by placing FN-826-008B System Initiation switch to OFF (Panel 9XR).

Standard: Places the CONTROL ROOM HVAC B SYSTEM INITIATION control switch to OFF (red light OFF, green light ON).Comment:

SAT/UNSAT

Performance Step: 4

Procedure Step: 10.4.7

Verify FN-826-008B, Supply Fan stopped.

Standard: Verifies CONTROL ROOM HVAC B Supply Fan OFF (red light OFF, green light ON).Comment:

SAT/UNSAT

Performance Information

Performance Step: 5

Procedure Step: 10.4.8

Verify Isolation Dampers are closed.

- DM-826-039 (Panel 9XR)
- DM-826-040 (Panel 9XR)

Standard: Verifies Isolation Dampers are closed.

- DM-826-039 (Panel 9XR) (red light OFF, green light ON)
- DM-826-040 (Panel 9XR) (red light OFF, green light ON)

Comment:

SAT/UNSAT

Performance Step: 6

Procedure Step: 10.4.9

Momentarily place the A Control Room HVAC System Bypass switch in RESET (Panel 11R).

Standard: Momentarily places the CONTROL ROOM HVAC A SYSTEM BYPASS switch in RESET.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 7

Procedure Step: 10.4.10

Place mode selector for System A to the desired position (Panel 11R).

Cue: If the Candidate asks which mode to be in, state "normal mode".**Standard:** Confirms the CONTROL ROOM HVAC A SYSTEM MODE switch is in NORM.Comment:

SAT/UNSAT

✓

Performance Step: 8

Procedure Step: 10.4.11

Start "A" Control Room HVAC by placing FN-826-008A System Initiation switch to ON (Panel 11R).

Standard: Places the CONTROL ROOM HVAC A SYSTEM INITIATION switch to ON (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Information

Performance Step: 9

Procedure Step: 10.4.12

Verify Isolation Dampers are open.

- DM-826-042 (Panel 11R)
- DM-826-043 (Panel 11R)

Standard: Verifies Isolation Dampers are open.

- DM-826-042 (Panel 11R) (red light ON, green light OFF)
- DM-826-043 (Panel 11R) (red light ON, green light OFF)

Comment:

SAT/UNSAT

Performance Step: 10

Procedure Step: 10.4.13

Verify FN 826-008A, Supply Fan is running.

Standard: Verifies CONTROL ROOM HVAC A Supply Fan ON (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Information

Performance Step: 11

Procedure Step: 10.4.14

Close the following refrigeration compressor circuit breakers on the side of the air conditioning unit I-826-001A as required (based on heat load):

- Breaker 1
- Breaker 2
- Breaker 3

Note/Cue: The Candidate may ask how many breakers to close: close those breakers which were opened earlier.

Standard: Directs the EO to close the following refrigeration compressor circuit breakers on the side of the air conditioning unit I-826-001A which were opened earlier:

- Breaker 1
- Breaker 2
- Breaker 3

Comment: _____

SAT/UNSAT _____

Performance Information

Performance Step: 12

Procedure Step: 10.4.15

Standard: Start FN-826-009, Kitchen and Toilet Fan as needed by placing its five-minute timer control switch in START.

Note/Cue 1: This is not modeled in the simulator. The kitchen fan timer is in start.

Comment:

SAT/UNSAT

NOTE: The following steps presents an Alternate Path for the Candidate.

Performance Step: 13

Note: If the Candidate does not respond to the front panel alarm while at the back panel, provide the cue below.

Cue: Respond to the control room alarm.

Procedure Step: Provides repeat back of initiating cue.

Standard: Provides repeat back of initiating cue. *Evaluator acknowledges the repeat back. When the Candidate locates the alarm response procedure RAP-10F1k, then provide a copy of the alarm response to the Candidate.*

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 14

Procedure Step: RAP-10F1k

Check area radiation monitors to determine area of high radiation (Panel 2R).

Standard: Checks area radiation monitors to determine area of high radiation (Panel 2R). Determines that area radiation monitor R010-A1 is above the high alarm setpoint.

Comment:

SAT/UNSAT

Performance Step: 15

Procedure Step: RAP-10F1k

Confirm high radiation condition at radiation monitors:

- R14C-1, R014C-3 through R014C-7
- R014B-7, R014B-9
- R014C-9, R015C-10

Standard: Confirm high radiation condition at radiation monitors:

- R14C-1, R014C-3 through R014C-7
- R014B-7, R014B-9
- R014C-9, R015C-10

Confirms that no high radiation at these monitors exists

Comment:

SAT/UNSAT

Performance Information

NOTE: Since no high radiation is confirmed, then entry into the Secondary Containment Control EOP is not required and the next RAP step (not included here) is NA.

Performance Step: 16

Procedure Step: RAP-10F1k

Refer to EP-OC-1010, Radiological Emergency Plan for Oyster Creek Generating Station to determine EAL.

Standard: Refers the SRO to EP-OC-1010, Radiological Emergency Plan for Oyster Creek Generating Station to determine EAL.

Cue: As the SRO, acknowledge the report.

Comment:

SAT/UNSAT

Performance Step: 17

Procedure Step: RAP-10F1k

Notify the Shift Manager.

Standard: Notifies the Shift Manager.

Cue: As the Shift Manager, acknowledge the report.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 18

Procedure Step: RAP-10F1k

As directed, announce over the page system the evacuation requirements of the specific area.

Standard: As directed, announces over the page system the evacuation requirements of the specific area.**Cue:** Another Operator will make the announcement.Comment:

SAT/UNSAT

✓

Performance Step: 19

Procedure Step: RAP-10F1k

For RO10A-1, RO10A-2 or RO10A-3, place the Control Room HVAC in PART RECIRC in accordance with Procedure 331.1, Control Room and Old Cable Spreading Room Heating Ventilation and Air Conditioning.

Standard: Places the CONTROL ROOM HVAC A SYSTEM MODE switch in PART RECIRC (amber PART RECIRC light ON, NORM light OFF).Comment:

SAT/UNSAT

JPM Stop Time: _____

Validation of Completion

JPM Number: NRC JPM SIM8

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: _____

Simulator Setup

1. Reset to full power IC-65
2. Verify CR HVAC System B is in operation
3. Have procedure 331.1, section 10 complete up to and including step 10.4.5.
4. Have a clean copy of RAP-10F1k, AREA MON HI.
5. Insert the following conditional trigger on Trigger 1: hwx22o303b.gt.0
 - a. This will activate Trigger 1 when the CR Vent System A damper DM 826-042 red light comes on
6. Place the following on Trigger 1:
 - a. SWI-RMS031A to 6 mr/hr 2 minute time delay
 - i. This places radiation monitor R010-A1 above its high alarm setpoint of 5 mr/hr (Admin Bldg Entr to Turb Bldg ARM)
 - b. SWI-RMS031D to ON 2 minute time delay
 - i. This places the high trip light to ON for radiation monitor R010-A1
 - c. ANN-10F1k to ON 2 minute time delay
 - i. This activates annunciator 10F1k, AREA MON HI

Note: The 2 minute time delay may be made longer or shorter if required. It is intended that the actions above occur when the candidate has completed the procedure to swap CR HVAC fans; or, the above actions may be manually inserted at the required time without the trigger.

STUDENT HANDOUTInitial Conditions:

1. The B Control Room Ventilation Fan is currently in service and needs to be removed from service for maintenance.
2. All prerequisites have been verified to perform the procedure, including TBCCW and Instrument, Service and Breathing Air Systems.
3. An EO has been briefed on the evolution, has a copy of the procedure and a radio and is ready to support the evolution.
4. The procedure has been completed up to and including step 10.4.5.

Task Cue:

Swap Control Room Ventilation System Fans IAW Procedure 331.1, Control Room and Old Cable Spreading Room Heating, Ventilation and Air Conditioning System, starting at step 10.4.6.

Facility: Oyster Creek Task No.: 2620101001Task Title: Perform SBO Panel OperationsJob Performance Measure No.: NRC JPM PLANT1 (RO/SRO)K/A Reference: 262001 K3.05 (RO/SRO 3.2/3.5)

Examinee: _____ 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 plant was at rated power when a total loss of offsite power has occurred.
2. The Forked River Combustion Turbine Operator has reported that CT#1 is ready.
3. Steps 1-5 of Attachment ABN-37-2 have been completed.

Task Standard: Combustion Turbine #1 (CT#1) is supplying the station through the SBO Breaker.

Required Materials: None.

General References:

1. ABN-37, Station Blackout, revision 7

Initiating Cue: Complete Attachment ABN-37-2, with Combustion Turbine #1.

Time Critical Task: No.

Validation Time: 14 minutes
(simulator portion
only)

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

Performance Step: 2

Procedure Step: 6

Place the keylock SYNCH/BYPASS SWITCH to the BYPASS position.

Standard: Places the keylock SYNCH/BYPASS SWITCH to the BYPASS position.

Comment: _____

SAT/UNSAT _____

Performance Information

Performance Step: 3

Cue:

System Dispatch reports that CT#1 is ready.

Procedure Step: 8.1.1

When System Dispatch or the FRCT operator reports that CT#1 is ready, perform the following at the SBO Panel: Verify the following lockout relays are not tripped:

- SBO XFMR OVERCURRENT LKOUT RELAY 86TX3-3
- SBO XFMR DIFF/GND OVERCURRENT LOCKOUT RELAY 86TX3-4
- SBO BRKR OVERCURRENT LKOUT RELAY 86TX3-5

Standard:

Verifies the following lockout relays are not tripped (no flags):

- SBO XFMR OVERCURRENT LKOUT RELAY 86TX3-3
- SBO XFMR DIFF/GND OVERCURRENT LOCKOUT RELAY 86TX3-4
- SBO BRKR OVERCURRENT LKOUT RELAY 86TX3-5

Comment:

SAT/UNSAT

Performance Step: 4

Procedure Step: 8.1.2

Verify the COMBUSTION TURB 1 READY TO START blue light is not lit.

Standard:

Verifies the COMBUSTION TURB 1 READY TO START blue light is not lit.

Comment:

SAT/UNSAT

Performance Information

Performance Step: 5

Procedure Step: 8.1.3

Verify 230 KV CKT SWITCHER 89-B9 is open.

Standard: Verifies 230 KV CKT SWITCHER 89-B9 is open (red light OFF, green light ON).**Cue:** The 230 KV CKT SWITCHER 89-B9 is open.Comment:

SAT/UNSAT

Performance Step: 6

Procedure Step: 8.1.4

Verify CT 1 GENERATOR BRKR 52G1 is closed.

Standard: Verifies CT 1 GENERATOR BRKR 52G1 is closed (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Information

Performance Step: 7

Procedure Step: 8.1.5

Verify CT 1 PLANT FEEDER BRKR 52G-1N is closed.

Standard: Verifies CT 1 PLANT FEEDER BRKR 52G-1N is closed (red light ON, green light OFF).Comment:

SAT/UNSAT

Performance Step: 8

Procedure Step: 8.1.6

Verify CT 2 PLANT FEEDER BRKR 52G-2N is open.

Standard: Verifies CT 2 PLANT FEEDER BRKR 52G-2N is open (red light OFF, green light ON).Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 9

Procedure Step: 8.2.1

If LBS-C is open, direct System Dispatch or the FRCT Operator to open OC SUPPLY BREAKER 52G-1N.

Standard: Directs System Dispatch or the FRCT Operator to open OC SUPPLY BREAKER 52G-1N (red light OFF, green light ON).**Booth:** When contacted by the Candidate, **INSERT BKR-OED022 to TRIP** to open OC SUPPLY BREAKER 52G-1N is open. (CT 1 PLANT FEEDER BRKR 52G-1N)

Comment:

SAT/UNSAT

Performance Step: 10

Procedure Step: 8.2.2

Confirm SBO BRKR is open.

Standard: Confirms SBO BRKR is open (breaker indicating lights are currently not lit with the breaker open and switch in PTL).**Cue:** The SBO breaker is open. (this would have been verified earlier in the procedure in the plant).

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 11

Procedure Step: 8.2.3

Confirm open CT 1 LOAD BREAK SWITCH LBS-A.

Standard: Places CT 1 LOAD BREAK SWITCH LBS-A to OPEN (red light OFF, green light ON).

Comment:

SAT/UNSAT

Performance Step: 12

Procedure Step: 8.2.4

Confirm open CT 2 LOAD BREAK SWITCH LBS-B.

Standard: Confirms CT 2 LOAD BREAK SWITCH LBS-B open (red light OFF, green light ON).

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 13

Procedure Step: 8.2.5

Close SBO XFMR LOAD BREAK SWITCH LBS-C.

Standard: Closes SBO XFMR LOAD BREAK SWITCH LBS-C by placing its control switch to CLOSE (red light ON, green light OFF).

Comment:

SAT/UNSAT

✓

Performance Step: 14

Procedure Step: 8.2.6

Close CT 1 LOAD BREAK SWITCH LBS-A.

Standard: Closes CT 1 LOAD BREAK SWITCH LBS-A by placing its control switch to CLOSE (red light ON, green light OFF).

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 15

Procedure Step: 8.2.7

Direct System Dispatch or the FRCT Operator to close OC
SUPPLY BREAKER 52G-1N.

Standard: Directs System Dispatch or the FRCT Operator to close OC
SUPPLY BREAKER 52G-1N (red light ON, green light OFF). (CT
1 PLANT FEEDER BRKR 52G-1N)

Booth: When contacted by the Candidate, **INSERT BKR-OED022 to
CLOSE** to close OC SUPPLY BREAKER 52G-1N is open. (CT 1
PLANT FEEDER BRKR 52G-1N)

Comment:

SAT/UNSAT

Performance Step: 16

Procedure Step: 8.3

If LBS-A is open, perform the following steps contained in Step
8.3.

Standard: Determines position of LBS-A as closed (steps are not required to
be performed).

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 17

Cue 1:

The Control Room directs that you close the SBO Breaker.

Procedure Step: 8.4

When directed by the Control Room, close the SBO Breaker.

Standard:

Closes the SBO BRKR by placing its control switch to close (red light ON, green light OFF).

Comment:

SAT/UNSAT**JPM Stop Time:** _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. This JPM was validated in IC-65 (but can probably be run in any IC)
2. Insert LOA-OED013 to START
 - a. This will start Combustion Turbine #1 and the blue CT#1 Ready to Start light will go out at the SBO Panel
3. Insert BKR-OED024 to CLOSE
 - a. This will close CT1 generator breaker 52G1
4. Insert VLV-OED010 to OPEN, then DELETE
 - a. This will open Load Break Switch C
5. Insert SWI-OED063 to ON
 - a. This places the SBO breaker SYNCH/BYPASS in bypass.

In-Plant Activities

Discuss the following items from Attachment ABN-37-2 (provide the Candidate with page E2-1 of Procedure ABN-37):

1. Notify Security that access to 480V and 4160V Rooms is required and that these rooms should not be padlocked.
2. Obtain the following:
 - Vital Access key for access to the 4160V Room
 - This key can be obtained from the key locker in the SM office
 - MB1 key to unlock SBO Panel Synch key
 - This key can be obtained from the key locker in the SM office
 - Flashlight to supplement emergency lighting
 - Operators normally carry flashlights
 - Radio
 - This can be obtained from the Control Room
3. Proceed to the 4160V Room
4. Confirm open and rack in the Station Blackout Transformer breaker at 4160V Bus 1B
 - The breaker is in the racked out position and shows the open indication on the breaker face
 - Racking motor is used to rack-in the breaker.
5. Place the SBO Breaker 69 permissive switch on the breaker cubicle in the CLOSED position
 - The SBO Breaker 69 permissive switch is located on the front face of the breaker cubicle and is placed in Closed.

STUDENT HANDOUTInitial Conditions:

1. The plant was at rated power when a total loss of offsite power has occurred.
2. The Forked River Combustion Turbine Operator has reported that CT#1 is ready.
3. Steps 1-5 of Attachment ABN-37-2 have been completed. (Steps 1-5 of ABN-37 will be discussed/simulated during the in-plant walk-through portion of the exam.)

Task Cue:

Complete Attachment ABN-37-2, with Combustion Turbine #1.

Facility: Oyster Creek Task No.: ABN-30Task Title: Perform Backup Methods for Critical FunctionsJob Performance Measure No.: NRC JPM PLANT2 (RO/SRO)K/A Reference: 259001 K1.07 (RO/SRO 2.9/2.9)

Examinee: _____ 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 plant was at rated power when a Control Room evacuation was required (NOT due to a fire).
2. The Control Room was evacuated prior to performing Control Room actions IAW ABN-30, Control Room Evacuation.

Task Standard: RPS has been de-energized, and the Recirculation Pumps and Feedwater Pumps are tripped and locked-out IAW Attachment ABN-30-1.

Required Materials: 69 Permissive key is simulated.

General References:

1. ABN-30, Control Room Evacuation, revision 6.

Initiating Cue: Perform the actions to de-energize RPS, trip the Recirculation Pumps and the Reactor Feed Water Pumps IAW Attachment ABN-30-1.

Time Critical Task: No.

Validation Time: 20 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

✓

Performance Step: 2

Procedure Step: 1.1

Trip the RPS motor generator (MG) set supply breakers

- A2R (VMCC 1A2 – 480 V Rm)
- C2L (VMCC 1B2 – 480 V Rm)

Standard: Trips the RPS motor generator (MG) set supply breakers by rotating the operating handles to the OPEN position

- A2R (VMCC 1A2 – 480 V Rm)
- C2L (VMCC 1B2 – 480 V Rm)

Cue: The RPS motor generator (MG) set supply breakers are open

Comment: _____

SAT/UNSAT _____

Performance Information

✓

Performance Step: 3

Procedure Step: 1.2

Trip the supply breaker to PS-1 manual transfer switch

- A1R (VMCC 1A2 – 480 V Rm)
- C4L (VMCC 1B2 – 480 V Rm)

Standard:

Trips the supply breaker to PS-1 manual transfer switch by rotating the operating handles to the OPEN position

- A1R (VMCC 1A2 – 480 V Rm)
- C4L (VMCC 1B2 – 480 V Rm)

Cue:

The supply breakers to PS-1 manual transfer switch are open

Comment:

SAT/UNSAT

Performance Information

Note: Tripping the Recirculation Pumps can take place in any order.

✓

Performance Step: 4

Procedure Step: 2

Manually TRIP and LOCKOUT (using the 69 Permissive Switch) the following Reactor Recirculation Pump Breakers:

- A Recirculation Pump, P-37-1 at 4160V 1A Bus, unit A9
- B Recirculation Pump, P-37-2 at 4160V 1B Bus, unit B2
- C Recirculation Pump, P-37-3 at 4160V 1A Bus, unit A5
- D Recirculation Pump, P-37-4 at 4160V 1B Bus, unit B8
- E Recirculation Pump, P-37-5 at 4160V 1A Bus, unit A3

Standard:

Manually TRIP and LOCKOUT (using the 69 Permissive Switch) the following Reactor Recirculation Pump Breakers:

- A Recirculation Pump, P-37-1 at 4160V 1A Bus, unit A9
 - B Recirculation Pump, P-37-2 at 4160V 1B Bus, unit B2
 - C Recirculation Pump, P-37-3 at 4160V 1A Bus, unit A5
 - D Recirculation Pump, P-37-4 at 4160V 1B Bus, unit B8
 - E Recirculation Pump, P-37-5 at 4160V 1A Bus, unit A3
1. Inserts the 69 Permissive key into the 69 Permissive keylock
 2. Rotates the keylock to the TRIP position and holds
 3. Places the front panel breaker switch to the TRIP position and releases
 4. Releases the keylock and removes the key
- Observe red light OFF, green light ON, 0 amps

Cue:

The (respective) Recirculation Pump breaker is open and locked-out.

Comment:

SAT/UNSAT

Performance Information

Note: Tripping the Feed Water Pumps can take place in any order.

✓	Performance Step: 5
<hr/>	
	Procedure Step: 3
	Manually TRIP and LOCKOUT (using the 69 Permissive Switch) the following Feed Water pump breakers:
	<ul style="list-style-type: none">● A Feed Water Pump P-2-2A at 4160 1A Bus, Unit A8
Standard:	Manually TRIP and LOCKOUT the breaker for A Feed Water Pump P-2-2A at 4160 1A Bus, Unit A8 by:
	<ol style="list-style-type: none">1. Inserts the 69 Permissive key into the 69 Permissive keylock2. Rotates the keylock to the TRIP position and holds3. Places the front panel breaker switch to the TRIP position and releases4. Releases the keylock and removes the key
	Observe red light OFF, green light ON, 0 amps
Cue:	The A Feed Water Pump breaker is open and locked-out.
Comment:	<hr/> <hr/> <hr/>
<hr/>	
SAT/UNSAT	

Performance Information

✓

Performance Step: 6

Procedure Step: 3

Manually TRIP and LOCKOUT (using the 69 Permissive Switch)
the following Feed Water pump breakers:

- B Feed Water Pump P-2-2B at 4160 1B Bus, Unit B2

Standard:Manually TRIP and LOCKOUT the breaker for B Feed Water
Pump P-2-2B at 4160 1B Bus, Unit B2 by:

1. Inserts the 69 Permissive key into the 69 Permissive
keylock
2. Rotates the keylock to the TRIP position and holds
3. Places the front panel breaker switch to the TRIP position
and releases
4. Releases the keylock and removes the key

Observe red light OFF, green light ON, 0 amps

Cue:

The B Feed Water Pump breaker is open and locked-out.

Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 7

Procedure Step: 3

Manually TRIP and LOCKOUT (using the 69 Permissive Switch)
the following Feed Water pump breakers:

- C Feed Water Pump P-2-2C at 4160 1B Bus, Unit B10

Standard:Manually TRIP and LOCKOUT the breaker for A Feed Water
Pump P-2-2C at 4160 1C Bus, Unit B10 by:

1. Inserts the 69 Permissive key into the 69 Permissive
keylock
2. Rotates the keylock to the TRIP position and holds
3. Places the front panel breaker switch to the TRIP position
and releases
4. Release the keylock and removes the key

Observe red light OFF, green light ON, 0 amps

Cue:

The C Feed Water Pump breaker is open and locked-out.

Comment:

SAT/UNSAT

JPM Stop Time:

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. None.

STUDENT HANDOUTInitial Conditions:

1. The plant was at rated power when a Control Room evacuation was required.
2. The Control Room was evacuated prior to performing Control Room actions IAW ABN-30, Control Room Evacuation.

Task Cue:

Perform the actions to de-energize RPS, trip the Recirculation Pumps and the Reactor Feed Water Pumps IAW Attachment ABN-30-1.

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

Facility: Oyster Creek Task No.: 2860401403Task Title: Lineup Fire Water to Core Spray to Raise Torus Water LevelJob Performance Measure No.: NRC JPM PLANT3 (RO/SRO)K/A Reference: 286000 A1.05 (RO/SRO 3.2/3.2)

Examinee: _____ 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 plant was at rated power when an event occurred resulting in a lowering Torus water level.
2. The US has determined to makeup to the Torus via Core Spray System 2, IAW the EOPs.
3. Core Spray is not required for adequate core cooling.
4. The NW Corner Room is not accessible.
5. EMG-SP37, Makeup to the Torus Via Core Spray System, is complete up to and including Step 3.3.3.

Task Standard: Fire Water is injecting into the Torus IAW EMG-SP37.

Required Materials: A radio and Reactor Building keys are simulated.

General References:

1. EMG-SP37, Makeup to the Torus Via Core Spray System, revision 0.

Initiating Cue: IAW EMG-SP37, Makeup to the Torus Via Core Spray System, inject Fire Water into the Torus, starting at Step 3.3.4.

Time Critical Task: No.

Validation Time: 22 minutes

Performance Information

Denote critical steps with a check mark ✓

Performance Step: 1

Procedure Step: Provides repeat back of initiating cue.

JPM Start Time: _____

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

Comment: _____

SAT/UNSAT _____

Note: Performance Steps 2 and 3 may be performed in any order.

Performance Step: 2

Procedure Step: 3.3.4

Open the breaker for the Core Spray System 2 Parallel Isolation valve:

- V-20-21 (MCC 1A21)

Standard: Opens the breaker for the Core Spray System 2 Parallel Isolation valve:

- V-20-21 (MCC 1A21) by rotating the switch to OFF

Cue: The breaker for the Core Spray System 2 Parallel Isolation valve V-20-21 is open.

Comment: _____

SAT/UNSAT _____

Performance Information

Performance Step: 3

Procedure Step: 3.3.4

Open the breaker for the Core Spray System 2 Parallel Isolation valve:

- V-20-41 (MCC 1AB2)

Standard: Opens the breaker for the Core Spray System 2 Parallel Isolation valve:

- V-20-41 (MCC 1AB2) by rotating the switch to OFF

Cue: The breaker for the Core Spray System 2 Parallel Isolation valve V-20-41 is open.Comment:

SAT/UNSAT

NOTE: Step 3.3.4 is NA.

Performance Step: 4

Procedure Step: 3.3.5.1

Close Tell-Tale Drain valve V-20-90 (South Side RB).

Standard: Closes Tell-Tale Drain valve V-20-90 by rotating valve handwheel CW until tight.**Cue:** Tell-Tale Drain valve V-20-90 is closed.Comment:

SAT/UNSAT

Performance Information

✓

Performance Step: 5

Procedure Step: 3.3.5.2

Start the available Diesel Fire Pumps by placing their switches in MAN position (Panel 13R).

Standard: Calls the Control Room on the radio and directs them to start the available Diesel Fire Pumps.**Cue:** All available Diesel Fire Pumps are started.Comment:

SAT/UNSAT

✓

Performance Step: 6

Procedure Step: 3.3.5.3

Open Fire Protection Supply valve V-20-82 (South Side RB).

Standard: Open Fire Protection Supply valve V-20-82 by rotating the valve handwheel CCW until tight.**Cue:** Fire Protection Supply valve V-20-82 is open.Comment:

SAT/UNSAT

Performance Information

Performance Step: 7

Procedure Step: 3.3.5.4

Place Core Spray System 2 Main Pump control switches in the PULL-TO-LOCK position (Panel 1F/2F):

- Core Spray Main Pump B and
- Core Spray Main Pump D

Standard: Calls the Control Room on the radio and directs them place Core Spray System 2 Main Pump control switches in the PULL-TO-LOCK position (Panel 1F/2F):

- Core Spray Main Pump B and
- Core Spray Main Pump D

Cue: Core Spray Main Pumps B and D are in the PULL-TO-LOCK position.

Comment: _____

SAT/UNSAT

Performance Information

✓

Performance Step: 8

Procedure Step: 3.3.6

Unlock and place the breaker for Torus Test Flow Return Valve V-20-26 in the ON position (MCC 1B21A) (RB23 E).

Standard: Unlocks the breaker for Torus Test Flow Return Valve V-20-26, and rotates the breaker switch to the ON position on MCC 1A21B.**Cue:** The breaker for Torus Test Flow Return Valve V-20-26 is in the ON position.Comment: _____

_____**SAT/UNSAT**

✓

Performance Step: 9

Procedure Step: 3.3.7

Open Torus Test Flow Return Valve V-20-26 (Keylock RB 51' NW).

Standard: Open Torus Test Flow Return Valve V-20-26 by inserting the key in the upper keylock and rotating to the right. (red light ON, green light OFF)**Cue:** Torus Test Flow Return Valve V-20-26 is open.Comment: _____

_____**SAT/UNSAT****JPM Stop Time:** _____

Validation of Completion

JPM Number: NRC JPM 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: _____

Simulator Setup

1. Have a copy of EMG-SP37 completed up to and including 3.3.3.

STUDENT HANDOUTInitial Conditions:

1. The plant was at rated power when an event occurred resulting in a lowering Torus water level.
2. The US has determined to makeup to the Torus via Core Spray System 2, IAW the EOPs.
3. Core Spray is not required for adequate core cooling.
4. The NW Corner Room is not accessible.
5. EMG-SP37, Makeup to the Torus Via Core Spray System, is complete up to and including Step 3.3.3.

Task Cue:

IAW EMG-SP37, Makeup to the Torus Via Core Spray System, inject Fire Water into the Torus, starting at Step 3.3.4.

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