OPERATOR: _____

RO ____   SRO ____   DATE:_____

JPM NUMBER: a

TASK NUMBER: U-068-AB-01

TASK TITLE: Recirc Pump Recovery with Manual Scram

K/A NUMBER: 202001 A2.04   K/A RATING: RO 3.7 SRO 3.8

TASK STANDARD: Recover tripped Recirc Pump at power and insert a manual Reactor Scram
                when the operating Recirc Pump trips

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-68, 2-AOI-68-1A, 2-AOI-100-1

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ____

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. 2A Recirc Pump has tripped. All actions of 2-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable, have been completed. The problem with 2A Recirc Pump has been corrected ~~and all requirements of Tech Spec LCO 3.4.1 are satisfied for Single Loop Operations~~. The SRO has directed 2A Recirc Pump be restarted. The Reactor Engineer is in the control room. All prerequisites have been met and 2-SR-3.4.9.3 & 4 has been successfully completed. The startup procedure has been completed through step 5.3[9.1] of 2-OI-68, Reactor Recirculation System.

INITIATING CUES: The US directs you to continue the return of 2A Recirc Pump to service as directed by 2-OI-68, Reactor Recirculation System, starting at Step 5.3[10] ~~and balance jet pump flows~~

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. 2A Recirc Pump has tripped. All actions of 2-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable, have been completed. The problem with 2A Recirc Pump has been corrected and all requirements of Tech Spec LCO 3.4.1 are satisfied for Single Loop Operations. The SRO has directed 2A Recirc Pump be restarted. The Reactor Engineer is in the control room. All prerequisites have been met and 2-SR-3.4.9.3 & 4 has been successfully completed. The startup procedure has been completed through step 5.3[9.1] of 2-OI-68, Reactor Recirculation System.

INITIATING CUES: The US directs you to continue the return of 2A Recirc Pump to service as directed by 2-OI-68, Reactor Recirculation System, starting at Step 5.3[10] and balance jet pump flows

START TIME _____

****

Performance Step 1:   Critical __ Not Critical X

    [10]   **CHECK** RECIRC LOOP A DIFF PRESS LOW annunciation, 2-XA-55-4A, Window 31 in ALARM.

NOTE

All faults and alarms should be reset prior to closing a Recirc Pump Discharge Valve to ensure the DRIVE READY light is obtained thus preventing the loop from cooling down causing the start limitations of the recirc pump to possibly be exceeded thus delaying the startup.

Standard:

    Operator verifies 2-XA-55-4A, window 31 is in Alarm

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2:   Critical __ Not Critical X

    [11]   **DEPRESS** FAULT RESET, 2-HS-96-13, **THEN VERIFY** all Faults or Alarms are reset on ICS Screen VFDAAL.

        [11.1] **IF** all faults and alarms are clear, **THEN CONTINUE** recirc pump startup at Step 5.3[12]

Standard:

    Operator depresses FAULT RESET and verifies all Faults and Alarms are reset on ICS Screen VFDAAL. Operator proceeds to step 5.3[12]

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical X Not Critical

CAUTION
The closure circuit for RECIRC PUMP 2A(2B) DISCHARGE VALVE, 2-HS-68-3A(79A) is a seal-in and is **NOT** to be held in the CLOSE position unless specifically directed. If the handswitch is held to the close position ($\approx$ 2.5 seconds) after the valve has reached its full close valve position this will allow the reclosure circuit to engage. This reclosure causes the motor to re-engage at a rapid rate ($\approx$ 10 times a second), which can cause the motor to heat and also to exceed the recommended valve seat loading.

[12] **VERIFY CLOSED**, RECIRC PUMP 2A DISCHARGE VALVE,
2-FCV-68-3

CAUTION
Recirc System operation is restricted by criteria in Unit 2 Power to Flow Map (ICS or Station Reactor Engineering, 0-TI-248) and Illustration 1.

NOTES
1) The DRIVE READY light will only light after the FAULT RESET pushbutton is depressed, if all the active faults are reset. ICS screen VFDAAL(VFDBAL) can be referred to verify the Number of Active Faults is zero after depressing the fault reset pushbuttons. Any faults listed after the FAULT RESET pushbutton has been depressed, are keeping the drive from being ready to run.
2) Capacitor bank fuses are subject to clearing when the unit boards are being supplied from the 161 source and large pumps are started. Unit Supervisors are to evaluate the need to place the Capacitor Banks in Manual prior to starting a recirc pump from the Alternate feeder. The evaluation should consider placing a Caution order on the recirc pump's start switches stating, "evaluate the need to place CAP Banks in Manual prior to starting Pumps from the ALTERNATE FEED."
3) The actions which occur after the START pushbutton is depressed are listed on the next page.
4) When depressing the switches which control the recirc drives, these switches must be firmly depressed to ensure all the contacts are made-up.

Standard:

Operator closes 2-FCV-68-3

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 4:   Critical__ Not Critical X

[13]   **IF** the recirc drive startup seq incomplete alarm is received and the recirc
        discharge valve is jogging OPEN **THEN**: (N/A if alarm is not received)

Standard:

        Operator N/As this step and proceeds to step [14]

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical__ Not Critical X

NOTES
1) Tech Spec LCO 3.4.1 should be reviewed prior to starting a Recirc pump in Step 5.3[14]. The applicability for the Tech Spec is Modes 1 & 2.
2) Step 5.3[14] is used to start Recirc Pump 2A under normal conditions.
3) Step 5.3[15] can be used to start Recirc Pump 2A during cold shutdown (Mode 4) when it is desired to start the pump and open the discharge valve without the jogging circuit.

[14]   **IF** starting Recirc Pump 2A, **THEN PERFORM** the following (Otherwise N/A):

        [14.1] **VERIFY** Tech Spec LCO 3.4.1 requirements are satisfied.

Standard:

        Given in initial conditions

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 6:   Critical__ Not Critical X

[14.2] **DEPRESS** FAULT RESET, 2-HS-96-13

Standard:

Operator depresses fault reset pushbutton, 2-HS-96-13

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 7:   Critical__ Not Critical X

[14.3] **CHECK** DRIVE READY, 2-IL-96-37 is LIT.

Standard:

Operator checks drive ready light, 2-IL-96-37, is lit

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 8:   Critical X Not Critical

[14.4] **FIRMLY DEPRESS** DRIVE START, 2-HS-96-11.

Standard:

Operator depresses drive start pushbutton, 2-HS-96-11

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

| NOTE: | Simulator driver: When Recirc Pump 2A trips due to incomplete start sequence then insert 2B Recirc Pump Trip **th03b** |

****
Performance Step 9:   Critical X Not Critical

2-AOI-68-1A Recirc Pump Trip/Core Flow Decrease OPRMs Operable

4.2 Subsequent Actions

    [1]   **IF** both Recirc Pumps are tripped in modes 1 or 2, **THEN** (Otherwise N/A),

        [1.1]   **SCRAM** the Reactor.

Standard:

    Operator recognizes trip of 2B Recirc Pump and inserts a manual reactor scram based on
    2-AOI-68-1A section 4.2 step [1.1]. Operator performs immediate actions of 2-AOI-100-1
    Reactor Scram

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 10:   Critical X Not Critical

2-AOI-100-1 Reactor Scram

4.1 Immediate Actions

    [1]   **DEPRESS** REACTOR SCRAM A and B, 2-HS-99-5A/S3A and
        2-HS-99-5A/S3B, on Panel 2-9-5.

Standard:

    Operator depresses Reactor Scram A and B pushbuttons on Panel 2-9-5

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical__ Not Critical X

[2]   **IF** scram is due to a loss of RPS, **THEN PAUSE** in START & HOT STBY mode
for approximately 5 seconds before going to REFUEL. (Otherwise N/A)

Standard:

Operator does not perform this step, Scram is not due to loss of RPS.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 12:   Critical__ Not Critical X

[3]   REFUEL MODE ONE ROD PERMISSIVE light check:

[3.1]   **PLACE** REACTOR MODE SWITCH, 2-HS-99-5A-S1, in REFUEL.

[3.2]   **CHECK** REFUEL MODE ONE ROD PERMISSIVE light, 2-XI-85-46,
illuminates.

[3.3]   **IF** REFUEL MODE ONE ROD PERMISSIVE light, 2-XI-85-46, is not
illuminated, **THEN CHECK** all control rod positions at Full-In
Overtravel, or Full-In.

Standard:

Operator places Reactor Mode Switch in Refuel and observes Refuel Mode One Rod
Permissive Light Illuminated

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 13:   Critical X Not Critical

[4]   **PLACE** REACTOR MODE SWITCH, 2-HS-99-5A-S1, in SHUTDOWN
position.

Standard:

Operator places Reactor Mode Switch in Shutdown position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: After SCRAM report another operator will continue in 2-AOI-100-1

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____   SRO ____   DATE:_____

JPM NUMBER: a

TASK NUMBER: U-068-AB-01

TASK TITLE: Recirc Pump Recovery with Manual Scram

K/A NUMBER: 202001 A2.04   K/A RATING: RO 3.7 SRO 3.8

TASK STANDARD: Recover tripped Recirc Pump at power and insert a manual Reactor Scram
                when the operating Recirc Pump trips

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-68, 3-AOI-68-1A, 3-AOI-100-1

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ____

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. 3A Recirc Pump has tripped. All actions of 3-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable, have been completed. The problem with 3A Recirc Pump has been corrected and all requirements of Tech Spec LCO 3.4.1 are satisfied for Single Loop Operations. The SRO has directed 3A Recirc Pump be restarted. The Reactor Engineer is in the control room. All prerequisites have been met and 3-SR-3.4.9.3 & 4 has been successfully completed. The startup procedure has been completed through step 5.3[9.1] of 3-OI-68, Reactor Recirculation System.

INITIATING CUES: The US directs you to continue the return of 3A Recirc Pump to service as directed by 3-OI-68, Reactor Recirculation System, starting at Step 5.3[10] and balance jet pump flows

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. 3A Recirc Pump has tripped. All actions of 3-AOI-68-1A, Recirc Pump Trip/Core Flow Decrease OPRMs Operable, have been completed. The problem with 3A Recirc Pump has been corrected and all requirements of Tech Spec LCO 3.4.1 are satisfied for Single Loop Operations. The SRO has directed 3A Recirc Pump be restarted. The Reactor Engineer is in the control room. All prerequisites have been met and 3-SR-3.4.9.3 & 4 has been successfully completed. The startup procedure has been completed through step 5.3[9.1] of 3-OI-68, Reactor Recirculation System.

INITIATING CUES: The US directs you to continue the return of 3A Recirc Pump to service as directed by 3-OI-68, Reactor Recirculation System, starting at Step 5.3[10] and balance jet pump flows

START TIME _____

****

Performance Step 1:   Critical __ Not Critical X

> [10]   **VERIFY** RECIRC LOOP A DIFF PRESS LOW annunciation, 3-XA-55-4A, window 31 in ALARM.

NOTE

All faults and alarms should be reset prior to closing a Recirc Pump Discharge Valve to ensure the DRIVE READY light is obtained thus preventing the loop from cooling down causing the start limitations of the recirc pump to possibly be exceeded thus delaying the startup.

Standard:

>   Operator verifies 3-XA-55-4A, window 31 is in Alarm

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2:   Critical __ Not Critical X

> [11]   **DEPRESS** FAULT RESET, 3-HS-96-13, **THEN VERIFY** all Faults or Alarms are reset on ICS Screen VFDAAL.
>
>   [11.1] **IF** all faults and alarms are clear, **THEN CONTINUE** recirc pump startup at Step 5.3[12]

Standard:

>   Operator depresses FAULT RESET and verifies all Faults and Alarms are reset on ICS Screen VFDAAL. Operator proceeds to step 5.3[12]

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical X Not Critical

CAUTION
The closure circuit for RECIRC PUMP 3A(3B) DISCHARGE VALVE, 3-HS-68-3A(79A) is a seal-in and is **NOT** to be held in the CLOSE position unless specifically directed. If the handswitch is held to the close position (approx. 2.5 seconds) after the valve has reached its full close valve position this will allow the reclosure circuit to engage. This reclosure causes the motor to re-engage at a rapid rate (approx. 10 times a second), which can cause the motor to heat and also to exceed the recommended valve seat loading.

[12]   **VERIFY CLOSED**, RECIRC PUMP 3A DISCHARGE VALVE, 3-FCV-68-3

CAUTION
Recirc System operation is restricted by criteria in Unit 3 Power to Flow Map (ICS or Station Reactor Engineering, 0-TI-248) and Illustration 1.

NOTES
1) The DRIVE READY light will only light after the FAULT RESET push button is depressed, if all the active faults are reset. ICS screen VFDAAL(VFDBAL) can be referred to verify the Number of Active Faults is zero after depressing the fault reset push buttons. Any faults listed after the FAULT RESET push button has been depressed, are keeping the drive from being ready to run.
2) Capacitor bank fuses are subject to clearing when the unit boards are being supplied from the 161 source and large pumps are started. Unit Supervisors are to evaluate the need to place the Capacitor Banks in Manual prior to starting a Recirc pump from the Alternate feeder. The evaluation should consider placing a Caution order on the Recirc pump's start switches stating, "evaluate the need to place CAP Banks in Manual prior to starting Pumps from the ALTERNATE FEED."
3) The actions which occur after the START push-button is depressed are listed on the next page.
4) When depressing the switches which control the Recirc Drives these switches are to be firmly depressed to ensure all the contacts are made-up.

Standard:

        Operator closes 3-FCV-68-3

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical__ Not Critical X

[13]   **IF** the recirc drive startup seq incomplete alarm is received and the recirc
discharge valve is jogging OPEN **THEN**: (N/A if alarm is not received)

Standard:

Operator N/As this step and proceeds to step [14]

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical__ Not Critical X

NOTES
1) Tech Spec LCO 3.4.1 should be reviewed prior to starting Recirc Pump 3A in Step 5.3[14] The applicability for the Tech Spec is Modes 1 & 2.
2) Step 5.3[14] is used to start Recirc Pump 3A under normal conditions.
3) Step 5.3[15] can be used to start Recirc Pump 3A during cold shutdown (Mode 4) when it is desired to start the pump and open the discharge valve without the jogging circuit.

[14]   **IF** starting Recirc Pump 3A, **THEN PERFORM** the following (Otherwise N/A):

[14.1] **VERIFY** Tech Spec LCO 3.4.1 requirements are satisfied.

Standard:

Given in initial conditions

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6:   Critical__ Not Critical X

      [14.2] **DEPRESS** FAULT RESET, 3-HS-96-13

Standard:

      Operator depresses fault reset pushbutton, 3-HS-96-13

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7:   Critical__ Not Critical X

      [14.3] **CHECK** DRIVE READY, 3-IL-96-37 is LIT.

Standard:

      Operator checks drive ready light, 3-IL-96-37, is lit

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8:   Critical X Not Critical

      [14.4] **FIRMLY DEPRESS** DRIVE START, 3-HS-96-11.

Standard:

      Operator depresses drive start pushbutton, 3-HS-96-11

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

| **NOTE:** | Simulator driver: When Recirc Pump 3A trips due to incomplete start sequence then insert 3B Recirc Pump Trip **th03b** |

****

Performance Step 9:   Critical X Not Critical

3-AOI-68-1A Recirc Pump Trip/Core Flow Decrease OPRMs Operable

4.2 Subsequent Actions

    [1]   **IF** both Recirc Pumps are tripped in modes 1 or 2, **THEN** (Otherwise N/A),

        [1.1]   **SCRAM** the Reactor.

Standard:

    Operator recognizes trip of 3B Recirc Pump and inserts a manual reactor scram based on
    3-AOI-68-1A section 4.2 step [1.1]. Operator performs immediate actions of 3-AOI-100-1
    Reactor Scram

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10:   Critical X Not Critical

3-AOI-100-1 Reactor Scram

4.1 Immediate Actions

    [1]   **DEPRESS** REACTOR SCRAM A and B, 3-HS-99-5A/S3A and
            3-HS-99-5A/S3B, on Panel 3-9-5.

Standard:

    Operator depresses Reactor Scram A and B pushbuttons on Panel 3-9-5

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 11:</u>   Critical__ Not Critical <u>X</u>

[2]   **IF** scram is due to a loss of RPS, **THEN PAUSE** in START & HOT STBY mode
       for approximately 5 seconds before going to REFUEL. (Otherwise N/A)

<u>Standard:</u>

Operator does not perform this step, Scram is not due to loss of RPS.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 12:</u>   Critical__ Not Critical <u>X</u>

[3]   REFUEL MODE ONE ROD PERMISSIVE light check:

       [3.1]   **PLACE** REACTOR MODE SWITCH, 3-HS-99-5A-S1, in REFUEL.

       [3.2]   **CHECK** REFUEL MODE ONE ROD PERMISSIVE light, 3-XI-85-46,
               illuminates.

       [3.3]   **IF** REFUEL MODE ONE ROD PERMISSIVE light, 3-XI-85-46, is not
               illuminated, **THEN CHECK** all control rod positions at Full-In
               Overtravel, or Full-In.

<u>Standard:</u>

Operator places Reactor Mode Switch in Refuel and observes Refuel Mode One Rod
Permissive Light Illuminated

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical X Not Critical

[4]   **PLACE** REACTOR MODE SWITCH, 3-HS-99-5A-S1, in SHUTDOWN
position.

Standard:

Operator places Reactor Mode Switch in Shutdown position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: After SCRAM report another operator will continue in 3-AOI-100-1

END OF TASK

STOP TIME ___

OPERATOR: _____

RO _____   SRO _____   DATE:_____

JPM NUMBER: b

TASK NUMBER: U-000-EM-28

TASK TITLE: 2-EOI Appendix-4 Injection Prevention

K/A NUMBER: 295031 EA1.12   K/A RATING: RO 3.9 SRO 4.1

TASK STANDARD: Prevent Injection per 2-EOI Appendix-4, and then maintain level minus 50
                to minus 100 inches using 2-EOI-Appendix-5A

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-EOI Appendix-4, 2-EOI-Appendix-5A

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES _____   NO _____

RESULTS: SATISFACTORY _____   UNSATISFACTORY _____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. An ATWS is in progress. Plant conditions are as found.

INITIATING CUE: The Unit Supervisor directs you to stop and prevent all injection into the RPV except RCIC, CRD and SLC in accordance with 2-EOI Appendix-4, Prevention of Injection, once level has lowered to minus 50 inches, maintain level minus 50 to minus 100 inches using 2-EOI-Appendix-5A.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. An ATWS is in progress. Plant conditions are as found.

INITIATING CUE: The Unit Supervisor directs you to stop and prevent all injection into the RPV except RCIC, CRD and SLC in accordance with 2-EOI Appendix-4, Prevention of Injection, once level has lowered to minus 50 inches, maintain level minus 50 to minus 100 inches using 2-EOI-Appendix-5A.

START TIME _____

****

<u>Performance Step 1:</u>   *Critical <u>X</u> Not Critical

NOTE
Steps 1 through 6 may be performed in any order.

1.   **PREVENT** injection from HPCI by performing the following:

    a.   IF HPCI Turbine is NOT at zero speed, THEN **PRESS** and **HOLD** 2-HS-73-18A, HPCI TURBINE TRIP push-button.

    *b.   WHEN HPCI Turbine is at zero speed, THEN **PLACE** 2-HS-73-47A, HPCI AUXILIARY OIL PUMP control switch in PULL TO LOCK and **RELEASE** 2-HS-73-18A, HPCI TURBINE TRIP push-button

<u>Standard:</u>

    Verifies HPCI Turbine at zero speed and places HPCI Aux Oil Pump in Pull to Lock

SAT _____ UNSAT _____ N/A _____ COMMENTS: _____

_____

****

<u>Performance Step 2:</u>   Critical__ Not Critical <u>X</u>

2.   **PREVENT** injection from RCIC by performing the following:

    a.   IF **DIRECTED** by SRO to allow RCIC injection, THEN **EXIT** step 2.

    b.   **PRESS** 2-HS-71-9A, RCIC TURBINE TRIP push-button to trip RCIC Turbine.

<u>Standard:</u>

    RCIC is not prevented

SAT _____ UNSAT _____ N/A _____ COMMENTS: _____

_____

****

<u>Performance Step 3:</u>   Critical __ Not Critical <u>X</u>

NOTE
Following receipt of a CORE SPRAY automatic initiation signal, it is NOT necessary to wait until a pump starts before performing step 3.

3.   **PREVENT** injection from CORE SPRAY following an initiation signal by **PLACING** ALL Core Spray pump control switches in STOP.

<u>Standard:</u>

No initiation signal exists and <u>DOES NOT</u> place Core Spray pump control switches in STOP.

SAT ___ UNSAT ___ N/A ____ COMMENTS: _____

_____

****

<u>Performance Step 4:</u>   Critical __ Not Critical <u>X</u>

4.   **PREVENT** injection from LPCI SYSTEM I by performing the following:

NOTE
Injection may be prevented by performing EITHER step 4.a or step 4.b.

   a.   Following automatic pump start, **PLACE** RHR SYSTEM I pump control
          switches in STOP.

                              OR

   b.   BEFORE RPV pressure drops below 450 psig,

          1)   **PLACE** 2-HS-74-155A, LPCI SYS I OUTBD INJ VLV BYPASS SEL in
                  BYPASS.

                              AND

          2)   **VERIFY CLOSED** 2-FCV-74-52, RHR SYS I LPCI OUTBD INJECT
                  VALVE.

<u>Standard:</u>

       Closes 2-FCV-74-52 before RPV pressure drops below 450 psig

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

****

Performance Step 5:   Critical _ Not Critical X

5.   **PREVENT** injection from LPCI SYSTEM II by performing the following:

NOTE
Injection may be prevented by performing EITHER step 5.a or step 5.b.

   a.   Following automatic pump start, **PLACE** RHR SYSTEM II pump control
            switches in STOP.

                                            OR
   b.   BEFORE RPV pressure drops below 450 psig,

        1)   **PLACE** 2-HS-74-155B, LPCI SYS II OUTBD INJ VLV BYPASS SEL in
                 BYPASS.
                                            AND
        2)   **VERIFY CLOSED** 2-FCV-74-66, RHR SYS II LPCI OUTBD INJECT
                 VALVE.

Standard:

        Closes 2-FCV-74-66 before RPV pressure drops below 450 psig

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

****
Performance Step 6:   Critical _ Not Critical X

6.   **PREVENT** injection from CONDENSATE and FEEDWATER by performing the following:

   a.   IF Immediate injection termination from a reactor feedwater pump is required, THEN **PERFORM** step 6.d for the desired pump.

   b.   **LOWER** RFPT 2C speed to minimum setting (approximately 600 rpm) using ANY of the following methods on Panel 2-9-5:

      •   Using 2-LIC-46-5, REACTOR WATER LEVEL CONTROL, in MANUAL AND individual 2-SIC-46-10, RFPT 2C SPEED CONTROL in AUTO,
            OR
      •   Using individual 2-SIC-46-10, RFPT 2C SPEED CONTROL in MANUAL,
            OR
      •   Using individual 2-HS-46-10A, RFPT 2C SPEED CONT RAISE/LOWER switch in MANUAL GOVERNOR.

Standard:

   Attempts to lower 2C RFPT speed, cannot be lowered due to a controller failure

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 7:   Critical _ Not Critical X

    c.   **CLOSE** the following valves BEFORE RPV pressure drops below 500 psig:

        • 2-FCV-3-19, RFP 2A DISCHARGE VALVE
        • 2-FCV-3-12, RFP 2B DISCHARGE VALVE
        • 2-FCV-3-5, RFP 2C DISCHARGE VALVE
        • 2-LCV-3-53, RFW START-UP LEVEL CONTROL

Standard:

    Determines that RPV pressure will remain above 500 psig and <u>DOES NOT</u> close RFP discharge valves

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 8:   Critical X Not Critical

    d.   **TRIP** RFPTs as necessary to prevent injection by **DEPRESSING** the following push-buttons:

        • 2-HS-3-176A, RFPT 2C TRIP.

Standard:

    Trips RFPT 2C

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

<u>Performance Step 9:</u>   Critical <u>X</u> Not Critical

Lower level to less than -50 inches, then recommence injection with Feedwater using 2-EOI-Appendix-5A to maintain level band of -50 to -100 inches.

<u>Standard:</u>

Lowers level to minus 50 inches then performs 2-EOI-Appendix-5A to maintain level band

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

> NOTE: Applicant must control level in designated level band

****

<u>Performance Step 10:</u>   Critical _ Not Critical <u>X</u>

1.   IF it is desired to use a reactor feed pump that is in operation, THEN **CONTINUE** at step 12 to control the operating pump.

<u>Standard:</u>

Operator proceeds to step 12

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 11:   Critical X̲ Not Critical

12.   **SLOWLY ADJUST** RFPT speed UNTIL feedwater flow to the RPV is indicated,
       using ANY of the following methods on Panel 2-9-5:

       •   Individual 2-HS-46-8A(9A), RFPT 2A(2B) SPEED
               CONT RAISE/LOWER switch in MANUAL GOVERNOR,

                                OR

       •   Individual 2-SIC-46-8(9), RFPT 2A(2B) SPEED CONTROL in
               MANUAL,

                                OR

       •   2-LIC-46-5, REACTOR WATER LEVEL CONTROL, in MANUAL with
               individual 2-SIC-46-8(9), RFPT 2A(2B) SPEED CONTROL in AUTO.

13.   **ADJUST** RFPT speed as necessary to control injection using the methods of step
       12.

Standard:

       Slowly adjusts RFP A or B speed until injection is indicated by one of the above methods,
       then adjusts RFP A or B speed to maintain level minus 50 to minus 100 inches

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

                              END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____   SRO ____   DATE:_____

JPM NUMBER: b

TASK NUMBER: U-000-EM-28

TASK TITLE: 3-EOI Appendix-4 Injection Prevention

K/A NUMBER: 295031 EA1.12   K/A RATING: RO 3.9 SRO 4.1

TASK STANDARD: Prevent Injection per 3-EOI Appendix-4, and then maintain level minus 50 to minus 100 inches using 3-EOI-Appendix-5A

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-EOI Appendix-4, 3-EOI-Appendix-5A

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                        EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. An ATWS is in progress. Plant conditions are as found.

INITIATING CUE: The Unit Supervisor directs you to stop and prevent all injection into the RPV except RCIC, CRD and SLC in accordance with 3-EOI Appendix-4, Prevention of Injection, once level has lowered to minus 50 inches, maintain level minus 50 to minus 100 inches using 3-EOI-Appendix-5A.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. An ATWS is in progress. Plant conditions are as found.

INITIATING CUE: The Unit Supervisor directs you to stop and prevent all injection into the RPV except RCIC, CRD and SLC in accordance with 3-EOI Appendix-4, Prevention of Injection, once level has lowered to minus 50 inches, maintain level minus 50 to minus 100 inches using 3-EOI-Appendix-5A.

START TIME _____

****

Performance Step 1:   *Critical X Not Critical

NOTE
Steps 1 through 6 may be performed in any order.

1.   **PREVENT** injection from HPCI by performing the following:

   a.   IF HPCI Turbine is NOT at zero speed, THEN **PRESS** and **HOLD 3**-HS-73-18A, HPCI TURBINE TRIP push-button.

   *b.   WHEN HPCI Turbine is at zero speed, THEN **PLACE** 3-HS-73-47A, HPCI AUXILIARY OIL PUMP control switch in PULL TO LOCK and **RELEASE** 3-HS-73-18A, HPCI TURBINE TRIP push-button.

Standard:

   Verifies HPCI Turbine at zero speed and places HPCI Aux Oil Pump in Pull to Lock

SAT _____ UNSAT _____ N/A _____ COMMENTS: _____

_____

****

Performance Step 2:   Critical_ Not Critical X

2.   **PREVENT** injection from RCIC by performing the following:

   a.   IF **DIRECTED** by SRO to allow RCIC injection, THEN **EXIT** step 2.

   b.   **PRESS** 3-HS-71-9A, RCIC TURBINE TRIP push-button to trip RCIC Turbine.

Standard:

   RCIC is not prevented

SAT _____ UNSAT _____ N/A _____ COMMENTS: _____

_____

****

<u>Performance Step 3:</u>   Critical __ Not Critical <u>X</u>

NOTE
Following receipt of a CORE SPRAY automatic initiation signal, it is NOT necessary to wait until a pump starts before performing step 3.

3.   **PREVENT** injection from CORE SPRAY following an initiation signal by **PLACING** ALL Core Spray pump control switches in STOP.

<u>Standard:</u>

No initiation signal exists and <u>DOES NOT</u> place Core Spray pump control switches in STOP.

SAT ___ UNSAT ___ N/A ____ COMMENTS: _____

_____

****

Performance Step 4:   Critical __ Not Critical X

4.   **PREVENT** injection from LPCI SYSTEM I by performing the following:

NOTE
Injection may be prevented by performing EITHER step 4.a or step 4.b.

     a.   Following automatic pump start, **PLACE** RHR SYSTEM I pump control switches in STOP.

<p align="center">OR</p>

     b.   BEFORE RPV pressure drops below 450 psig,

          1)   **PLACE** 3-HS-74-155A, LPCI SYS I OUTBD INJ VLV BYPASS SEL in **BYPASS.**

<p align="center">AND</p>

          2)   **VERIFY CLOSED** 3-FCV-74-52, RHR SYS I LPCI OUTBD INJECT VALVE.

Standard:

     Closes 3-FCV-74-52 before RPV pressure drops below 450 psig

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

****

Performance Step 5:   Critical _ Not Critical X

5.   **PREVENT** injection from LPCI SYSTEM II by performing the following:

NOTE
Injection may be prevented by performing EITHER step 5.a or step 5.b.

   a.   Following automatic pump start, **PLACE** RHR SYSTEM II pump control
           switches in STOP.

                                            OR

   b.   BEFORE RPV pressure drops below 450 psig,

           1)   **PLACE** 3-HS-74-155B, LPCI SYS II OUTBD INJ VLV BYPASS SEL in
                   BYPASS.

                                            AND

           2)   **VERIFY CLOSED** 3-FCV-74-66, RHR SYS II LPCI OUTBD INJECT
                   VALVE.

Standard:

       Closes 3-FCV-74-66 before RPV pressure drops below 450 psig

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

<u>Performance Step 6:</u>   Critical _ Not Critical <u>X</u>

6.   **PREVENT** injection from CONDENSATE and FEEDWATER by performing the
        following:

   a.   IF Immediate injection termination from a reactor feedwater pump is required,
            THEN **PERFORM** step 6.d for the desired pump.

   b.   **LOWER** RFPT 3C speed to minimum setting (approximately 600 rpm) using
            ANY of the following methods on Panel 3-9-5:

        •   Using 3-LIC-46-5, REACTOR WATER LEVEL CONTROL, in
                MANUAL AND individual 3-SIC-46-10, RFPT 3C SPEED CONTROL in
                AUTO,
                OR
        •   Using individual 3-SIC-46-10, RFPT 3C SPEED CONTROL in
                MANUAL,
                OR
        •   Using individual 3-HS-46-10A, RFPT 3C SPEED CONT RAISE/LOWER
                switch in MANUAL GOVERNOR.

<u>Standard:</u>

        Attempts to lower 3C RFPT speed, cannot be lowered due to a controller failure

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 7:   Critical _ Not Critical X

     c.   **CLOSE** the following valves BEFORE RPV pressure drops below 500 psig:

- 3-FCV-3-19, RFP 3A DISCHARGE VALVE
- 3-FCV-3-12, RFP 3B DISCHARGE VALVE
- 3-FCV-3-5, RFP 3C DISCHARGE VALVE
- 3-LCV-3-53, RFW START-UP LEVEL CONTROL

Standard:

Determines that RPV pressure will remain above 500 psig and <u>DOES NOT</u> close RFP discharge valves

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 8:   Critical X Not Critical

     d.   **TRIP** RFPTs as necessary to prevent injection by **DEPRESSING** the following push-buttons:

- 3-HS-3-176A, RFPT 3C TRIP.

Standard:

Trips RFPT 3C

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 9:   Critical X Not Critical

Lower level to less than -50 inches, then recommence injection with Feedwater using 3-EOI-Appendix-5A to maintain level band of -50 to -100 inches.

Standard:

Lowers level to minus 50 inches then performs 3-EOI-Appendix-5A to maintain level band

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

NOTE: Applicant must control level in designated level band

****

Performance Step 10:   Critical _ Not Critical X

1.   IF It is desired to use a reactor feed pump that is in operation, THEN **CONTINUE** at step 12 to control the operating pump.

Standard:

Operator proceeds to step 12

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

****

Performance Step 11:   Critical X Not Critical

12. **SLOWLY ADJUST** RFPT speed UNTIL feedwater flow to the RPV is indicated, using ANY of the following methods on Panel 3-9-5:

- Individual 3-HS-46-8A(9A), RFPT 3A(3B) SPEED
  CONT RAISE/LOWER switch in MANUAL GOVERNOR,

  OR

- Individual 3-SIC-46-8(9), RFPT 3A(3B) SPEED CONTROL in
  MANUAL,

  OR

- 3-LIC-46-5, REACTOR WATER LEVEL CONTROL, in MANUAL with
  individual 3-SIC-46-8(9), RFPT 3A(3B) SPEED CONTROL in AUTO.

13. **ADJUST** RFPT speed as necessary to control injection using the methods of step 12.

Standard:

Slowly adjusts RFP A or B speed until injection is indicated by one of the above methods, then adjusts RFP A or B speed to maintain level minus 50 to minus 100 inches

SAT ___ UNSAT ___ N/A ___ COMMENTS: _____

_____

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: c

TASK NUMBER: U-000-EM-55

TASK TITLE: 2-EOI-Appendix-11C Alternate RPV Pressure Control Systems HPCI Test Mode

K/A NUMBER: 206000 A4.06   K/A RATING: RO 4.3 SRO 4.3

TASK STANDARD: 2-EOI-Appendix-11C complete with HPCI controlling RPV pressure in Test Mode

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-EOI-Appendix-11C

VALIDATION TIME: 10 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ____

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are an operator. The Unit 2 reactor has scrammed and bypass valves are not responding properly for pressure control. EOI-1 has been followed to RC/P-11.

INITIATING CUE: The Unit Supervisor directs you to place HPCI in Alternate RPV Pressure Control as directed by 2-EOI Appendix-11C and maintain Reactor Pressure 800-1000 psig

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. The Unit 2 reactor has scrammed and bypass valves are not responding properly for pressure control. EOI-1 has been followed to RC/P-11.

INITIATING CUE: The Unit Supervisor directs you to place HPCI in Alternate RPV Pressure Control as directed by 2-EOI Appendix-11C and maintain Reactor Pressure 800-1000 psig

Simulator Driver:	This JPM requires <u>tc02 0</u> present on snap and malfunction <u>hp03 10</u> inserted when operator throttles the 73-35 valve, maintain Reactor water level with RCIC

START TIME_____

****

<u>Performance Step 1:</u>   Critical __ Not Critical <u>X</u>

CAUTION

- Operating HPCI turbine below 2400 rpm may result in unstable system operation and equipment damage.
- Operating HPCI Turbine with suction temperatures above 140°F may result in equipment damage.

---

1.   IF Suppression Pool level drops below 12.75 ft, THEN **TRIP** HPCI and **CONTROL** RPV pressure using other options.

<u>Standard:</u>

Operator verifies Suppression Pool Level above 12.75 feet using either Narrow range or Wide range level indicators

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 2:   Critical __ Not Critical X

2.   IF Emergency RPV Depressurization is required,

                 OR

         Steam Cooling is required, THEN **EXECUTE** EOI Appendix 16C and 16D as necessary
         to bypass HPCI Low RPV pressure and Test Mode Isolation Interlocks.

Standard:

         Operator determines Appendices 16C and 16D are not required

SAT___ UNSAT___ N/A ___COMMENTS:_____

Cue: **Emergency Depressurization or Steam Cooling is not required**

****

Performance Step 3:   Critical __ Not Critical X

3.   IF Suppression Pool level CANNOT be maintained below 5.25 in, THEN **EXECUTE**
         EOI Appendix 16E concurrently with this procedure to bypass HPCI High Suppression
         Pool Level Suction Transfer Interlock.

Standard:

         Operator verifies Suppression Pool level below 5.25 inches on Narrow Range level
         indicator and does not execute Appendix 16E

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 4:   Critical __ Not Critical X

4.   IF HPCI Turbine is operating, THEN **ALIGN** HPCI in test mode as follows:

        a.   **OPEN** 2-FCV-73-35, HPCI PUMP CST TEST VLV.

        b.   **OPEN** 2-FCV-73-36, HPCI/RCIC CST TEST VLV.

        c.   **CLOSE** 2-FCV-73-44, HPCI PUMP INJECTION VALVE.

        d.   **CONTINUE** in this procedure at Step 6.

Standard:

        Operator observes HPCI is not operating and NAs step 4

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical __ Not Critical X

5.   IF HPCI is in standby readiness, THEN **START** HPCI as follows:

        a.   **VERIFY** at least one SGTS Train in operation.

Standard:

        Operator verifies SGT in operation by illuminated RED SGTS status indicating lamps on
        Panel 2-9-20

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 6:</u>   Critical __ Not Critical <u>X</u>

> b.   **VERIFY** 2-FIC-73-33, HPCI SYSTEM FLOW/CONTROL, controller in AUTO and set for 5300 gpm.

<u>Standard:</u>

> Operator verifies 2-FIC-73-33 in AUTO and set for 5300 gpm on controller digital readout

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 7:</u>   Critical <u>X</u> Not Critical

<div style="border:2px solid black">

<div align="center"><u>NOTE</u></div>

HPCI Auxiliary Oil Pump will <u>NOT</u> start <u>UNTIL</u> 2-FCV-73-16, HPCI TURBINE STEAM SUPPLY VLV, starts to open.

</div>

> c.   **PLACE** 2-HS-73-47A, HPCI AUXILIARY OIL PUMP handswitch, in START.

<u>Standard:</u>

> Operator places 2-HS-73-47A in START.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 8:</u>   Critical __ Not Critical <u>X</u>

      d.   **PLACE** 2-HS-73-10A, HPCI STEAM PACKING EXHAUSTER, in START.

<u>Standard:</u>

    Operator places 2-HS-73-10A in START.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 9:</u>   *Critical <u>X</u> Not Critical

      e.   **OPEN** the following valves:

        *•   2-FCV-73-36, HPCI/RCIC CST TEST VLV

        *•   2-FCV-73-35, HPCI PUMP CST TEST VLV

        •   2-FCV-73-30, HPCI PUMP MIN FLOW VALVE.

<u>Standard:</u>

    Operator places handswitches 2-HS-73-36A, 2-HS-73-35A, and 2-HS-73-30A in the OPEN position and verifies only RED valve position indicating lamps illuminated above associated control switches.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 10:</u>   Critical <u>X</u> Not Critical

        f.   **OPEN** 2-FCV-73-16, HPCI TURBINE STEAM SUPPLY VLV, to start HPCI Turbine.

<u>Standard:</u>

Operator places 2-HS-73-16A in OPEN and verifies illuminated RED valve position indicating lamp above handswitch

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

<u>Performance Step 11:</u>   Critical __ Not Critical <u>X</u>

        g.   **VERIFY** HPCI Auxiliary Oil Pump starts and turbine accelerates above 2400 rpm.

<u>Standard:</u>

Operator verifies HPCI AUX Oil Pump starts by observing RED light illuminated above 2-HS-73-47A and verifies speed >2400 rpm on 2-SI-73-51

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 12:   Critical __ Not Critical X

6.   **VERIFY** proper HPCI minimum flow valve operation as follows:

      a.   IF HPCI flow is above 1200 gpm, THEN **VERIFY CLOSED** 2-FCV-73-30, HPCI PUMP MIN FLOW VALVE.

      b   IF HPCI flow is below 600 gpm, THEN **VERIFY OPEN** 2-FCV-73-30, HPCI PUMP MIN FLOW VALVE.

Standard:

When flow >1200 gpm on 2-FIC-73-33, Operator verifies 2-FCV-73-30 closes by green light above handswitch

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical X Not Critical

7.   **THROTTLE** 2-FCV-73-35, HPCI PUMP CST TEST VLV, to control HPCI pump discharge pressure at or below 1100 psig.

Standard:

Operator throttles 2-FCV-73-35 using handswitch to control pressure less than or equal to 1100 psig on 2-PI-73-31A

SAT__ UNSAT__ N/A ___COMMENTS:_____

_____

DRIVER: **When operator throttles 2-FCV-73-35 insert malfunction hp03 at 10% to fail HPCI flow controller in automatic control**

****

Performance Step 14:   Critical X Not Critical

8.   **ADJUST** 2-FIC-73-33, HPCI SYSTEM FLOW/CONTROL, controller to control RPV
        pressure.

Standard:

        Operator attempts to adjust HPCI SYSTEM FLOW/CONTROL, however, controller has
        failed downscale in automatic. Operator shifts controller to manual and adjusts HPCI flow.
        Operator adjusts controller and 2-FCV-73-35 to control Reactor pressure.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15:   Critical __ Not Critical X

9.   IF HPCI injection to the RPV becomes necessary, THEN **ALIGN** HPCI to the RPV as
        follows:

                a.   **OPEN** 2-FCV-73-44, HPCI PUMP INJECTION VALVE.

                b.   **THROTTLE** 2-FCV-73-35, HPCI PUMP CST TEST VLV, to control
                        injection.

                c.   **GO** TO EOI Appendix-5D.

Standard:

        Operator monitors Reactor water level and determines HPCI injection to the RPV is not
        required

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Cue:	Injection to the RPV is not necessary at this time

END OF TASK

STOP TIME_____

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: c

TASK NUMBER: U-000-EM-55

TASK TITLE: 3-EOI-Appendix-11C Alternate RPV Pressure Control Systems HPCI Test Mode

K/A NUMBER: 206000 A4.06   K/A RATING: RO 4.3 SRO 4.3

TASK STANDARD: 3-EOI-Appendix-11C complete with HPCI controlling RPV pressure in Test Mode

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-EOI-Appendix-11C

VALIDATION TIME: 10 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ____

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are an operator. The Unit 3 reactor has scrammed and bypass valves are not responding properly for pressure control. EOI-1 has been followed to RC/P-11.

INITIATING CUE: The Unit Supervisor directs you to place HPCI in Alternate RPV Pressure Control as directed by 3-EOI Appendix-11C and maintain Reactor Pressure 800-1000 psig

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. The Unit 3 reactor has scrammed and bypass valves are not responding properly for pressure control. EOI-1 has been followed to RC/P-11.

INITIATING CUE: The Unit Supervisor directs you to place HPCI in Alternate RPV Pressure Control as directed by 3-EOI Appendix-11C and maintain Reactor Pressure 800-1000 psig

Simulator Driver:	This JPM requires <u>tc02 0</u> present on snap and malfunction <u>hp03 10</u> inserted when operator throttles the 73-35 valve, maintain Reactor water level with RCIC

START TIME_____

****

<u>Performance Step 1:</u>   Critical __ Not Critical <u>X</u>

CAUTION

- Operating HPCI turbine below 2400 rpm may result in unstable system operation and equipment damage.
- Operating HPCI Turbine with suction temperatures above 140°F may result in equipment damage.

·1.   IF Suppression Pool level drops below 12.75 ft, THEN **TRIP** HPCI and **CONTROL** RPV pressure using other options.

<u>Standard:</u>

Operator verifies Suppression Pool Level above 12.75 feet using either Narrow range or Wide range level indicators

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 2:   Critical __ Not Critical X

2.   IF Emergency RPV Depressurization is required,

                    OR

        Steam Cooling is required, THEN **EXECUTE** EOI Appendix 16C and 16D as necessary
        to bypass HPCI Low RPV pressure and Test Mode Isolation Interlocks.

Standard:

        Operator determines Appendices 16C and 16D are not required

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Cue:	**Emergency Depressurization or Steam Cooling is not required**

****

Performance Step 3:   Critical __ Not Critical X

3.   IF Suppression Pool level CANNOT be maintained below 5.25 in, THEN **EXECUTE**
        EOI Appendix 16E concurrently with this procedure to bypass HPCI High Suppression
        Pool Level Suction Transfer Interlock.

Standard:

        Operator verifies Suppression Pool level below 5.25 inches on Narrow Range level
        indicator and does not execute Appendix 16E

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 4:   Critical __ Not Critical X

4.   IF HPCI Turbine is operating, THEN **ALIGN** HPCI in test mode as follows:

        a.   **OPEN** 3-FCV-73-35, HPCI PUMP CST TEST VLV.

        b.   **OPEN** 3-FCV-73-36, HPCI/RCIC CST TEST VLV.

        c.   **CLOSE** 3-FCV-73-44, HPCI PUMP INJECTION VALVE.

        d.   **CONTINUE** in this procedure at Step 6.

Standard:

        Operator observes HPCI is not operating and NAs step 4

SAT__ UNSAT___ N/A ___COMMENTS:_____
_____

****
Performance Step 5:   Critical __ Not Critical X

5.   IF HPCI is in standby readiness, THEN **START** HPCI as follows:

        a.   **VERIFY** at least one SGTS Train in operation.

Standard:

        Operator verifies SGT in operation by illuminated RED SGTS status indicating lamps on
        Panel 3-9-20

SAT__ UNSAT___ N/A ___COMMENTS:_____
_____

****

<u>Performance Step 6:</u>   Critical __ Not Critical <u>X</u>

        b.   **VERIFY** 3-FIC-73-33, HPCI SYSTEM FLOW/CONTROL, controller in AUTO and set for 5300 gpm.

<u>Standard:</u>

      Operator verifies 3-FIC-73-33 in AUTO and set for 5300 gpm on controller digital readout

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 7:</u>   Critical <u>X</u> Not Critical

NOTE

HPCI Auxiliary Oil Pump will <u>NOT</u> start <u>UNTIL</u> 3-FCV-73-16, HPCI TURBINE STEAM SUPPLY VLV, starts to open.

---

        c.   **PLACE** 3-HS-73-47A, HPCI AUXILIARY OIL PUMP handswitch, in START.

<u>Standard:</u>

      Operator places 3-HS-73-47A in START.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 8:</u>   Critical __ Not Critical <u>X</u>

      d.   **PLACE** 3-HS-73-10A, HPCI STEAM PACKING EXHAUSTER, in
            START.

<u>Standard:</u>

    Operator places 3-HS-73-10A in START.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 9:</u>   *Critical <u>X</u> Not Critical

      e.   **OPEN** the following valves:

         *•   3-FCV-73-36, HPCI/RCIC CST TEST VLV

         *•   3-FCV-73-35, HPCI PUMP CST TEST VLV

         •   3-FCV-73-30, HPCI PUMP MIN FLOW VALVE.

<u>Standard:</u>

    Operator places handswitches 3-HS-73-36A, 3-HS-73-35A, and 3-HS-73-30A in the
    OPEN position and verifies only RED valve position indicating lamps illuminated above
    associated control switches.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10:   Critical X Not Critical

       f.   **OPEN** 3-FCV-73-16, HPCI TURBINE STEAM SUPPLY VLV, to start HPCI Turbine.

Standard:

Operator places 3-HS-73-16A in OPEN and verifies illuminated RED valve position indicating lamp above handswitch

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical __ Not Critical X

       g.   **VERIFY** HPCI Auxiliary Oil Pump starts and turbine accelerates above 2400 rpm.

Standard:

Operator verifies HPCI AUX Oil Pump starts by observing RED light illuminated above 3-HS-73-47A and verifies speed >2400 rpm on 3-SI-73-51

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12:   Critical __ Not Critical X

6.   **VERIFY** proper HPCI minimum flow valve operation as follows:

        a.   IF HPCI flow is above 1200 gpm, THEN **VERIFY CLOSED** 3-FCV-73-30, HPCI PUMP MIN FLOW VALVE.

        b   IF HPCI flow is below 600 gpm, THEN **VERIFY OPEN** 3-FCV-73-30, HPCI PUMP MIN FLOW VALVE.

Standard:

      When flow >1200 gpm on 3-FIC-73-33, Operator verifies 3-FCV-73-30 closes by green light above handswitch

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical X Not Critical

7.   **THROTTLE** 3-FCV-73-35, HPCI PUMP CST TEST VLV, to control HPCI pump discharge pressure at or below 1100 psig.

Standard:

      Operator throttles 3-FCV-73-35 using handswitch to control pressure less than or equal to 1100 psig on 3-PI-73-31A

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

> **DRIVER:**   **When operator throttles 3-FCV-73-35 insert malfunction hp03 at 10% to fail HPCI flow controller in automatic control**

****

<u>Performance Step 14:</u>   Critical <u>X</u> Not Critical

8.   **ADJUST** 3-FIC-73-33, HPCI SYSTEM FLOW/CONTROL, controller to control RPV pressure.

<u>Standard:</u>

Operator attempts to adjust HPCI SYSTEM FLOW/CONTROL, however, controller has failed downscale in automatic. Operator shifts controller to manual and adjusts HPCI flow. Operator adjusts controller and 3-FCV-73-35 to control Reactor pressure.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 15:</u>   Critical __ Not Critical <u>X</u>

9.   IF HPCI injection to the RPV becomes necessary, THEN **ALIGN** HPCI to the RPV as follows:

       a.   **OPEN** 3-FCV-73-44, HPCI PUMP INJECTION VALVE.

       b.   **THROTTLE** 3-FCV-73-35, HPCI PUMP CST TEST VLV, to control injection.

       c.   **GO** TO EOI Appendix-5D.

<u>Standard:</u>

Operator monitors Reactor water level and determines HPCI injection to the RPV is not required

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Cue:	Injection to the RPV is not necessary at this time

END OF TASK

STOP TIME_____

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: d

TASK NUMBER: U-000-EM-63

TASK TITLE: 2-EOI-Appendix-13 Emergency Venting Primary Containment

K/A NUMBER: 295024 EA2.01   K/A RATING: RO 4.2 SRO 4.4

TASK STANDARD: 2-EOI-Appendix-13 complete with Drywell Pressure restored and
maintained below 55 psig

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-EOI-Appendix-13

VALIDATION TIME: 5 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                        EXAMINER

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 2. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 2-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 2. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 2-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

Simulator Driver: This JPM may require RHR injection for level control

START TIME_____

****

Performance Step 1:   Critical __ Not Critical X

1.   **NOTIFY** Shift Manager / SED of the following:

   •   Emergency Venting of Primary Containment is in progress.

   •   Off-Gas Release Rate Limits will be exceeded.

Standard:

   Operator notifies Shift Manager/SED

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

**CUE: As Shift Manager/SED acknowledge report that Emergency Primary
        Containment Venting is in progress and Off-Gas release limits will be exceeded**

****

Performance Step 2:   Critical __ Not Critical X

2.   **VENT** the Suppression Chamber as follows (Panel 9-3):

a.   IF EITHER of the following exists:

•   Suppression Pool water level CANNOT be determined to be below 20 ft,

OR

•   Suppression Chamber CANNOT be vented,

THEN **CONTINUE** in this procedure at Step 3.

Standard:

Operator verifies Suppression Pool level below 20 ft using 2-LI-64-159A and does not continue to step 3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical X Not Critical

b.   **PLACE** keylock switch 2-HS-64-222B, HARDENED SUPPR CHBR VENT OUTBD PERMISSIVE, in PERM.

Standard:

Operator places 2-HS-64-222B in the PERM position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical __ Not Critical X

     c.   **CHECK** blue indicating light above 2-HS-64-222B, HARDENED SUPPR
          CHBR VENT OUTBD PERMISSIVE, illuminated.

Standard:

    Operator verifies BLUE indicating lamp above 2-HS-64-222B Illuminated

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical __ Not Critical X

     d.   **OPEN** 2-FCV-64-222, HARDENED SUPPR CHBR VENT OUTBD ISOL VLV.

Standard:

    Operator places 2-HS-64-222A in the OPEN position and determines valve cannot be
    opened. Operator proceeds to set 3 by direction of step 2.a

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6:   Critical __ Not Critical X

3.   IF Suppression Chamber vent path is NOT available, THEN **VENT** the Drywell as
        follows:

        a.   **NOTIFY** Shift Manager / SED that Secondary Containment integrity failure is
                possible.

        b.   **NOTIFY** Radiation Protection that Reactor Building is being evacuated due to
                imminent failure of Primary Containment vent ducts.

        c.   **EVACUATE** ALL Reactor Buildings using P.A. System.

Standard:

        Operator notifies the SM/SED that containment integrity failure is possible, notifies RP that
        the Reactor Building will be evacuated due to imminent failure of Primary Containment
        vent ducts, and makes P.A. announcement to evacuate Reactor Building.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE:	As SM/SED acknowledge report of possible containment integrity failure, As RP acknowledge report of Reactor Building evacuation due to imminent failure of Primary Containment vent ducts.

****

Performance Step 7:   Critical __ Not Critical X

        d.   **START** ALL available SGTS trains.

Standard:

        Operator determines that all trains of SGTS are already in service

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 8:   Critical __ Not Critical X

  e. **VERIFY CLOSED** 2-FCV-64-36, DW/SUPPR CHBR VENT TO SGT
     (Panel 9-3)

Standard:

  Operator verifies 2-FCV-64-36 is closed on Panel 9-3

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9:   Critical X Not Critical

  f. **VERIFY OPEN** the following dampers (Panel 9-25):

    • 2-FCO-64-40, REACTOR ZONE EXH TO SGTS

    • 2-FCO-64-41, REACTOR ZONE EXH TO SGTS

Standard:

  Operator verifies dampers 2-FCO-64-40 and 2-FCO-64-41 are open on Panel 9-25

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10:   Critical __ Not Critical X

  g. **VERIFY CLOSED** 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE
     (Panel 9-3 or Panel 9-54).

Standard:

  Operator verifies 2-FCV-64-29 is closed on Panel 9-3 or Panel 9-54

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical __ Not Critical X

    h.   **DISPATCH** personnel to Unit 2 Auxiliary Instrument Room to perform the
           following:

           1)   **REFER TO** Attachment 1 and **OBTAIN** one 12-in. banana jack jumper
                    from EOI Equipment Storage Box.

           2)   **LOCATE** terminal strip DD in Panel 9-43, Front.

           3)   **JUMPER** DD-76 to DD-77 (Panel 9-43).

           4)   **NOTIFY** Unit Operator that jumper for 2-FCV-64-30, DRYWELL VENT
                    OUTBD ISOLATION VLV, is in place.

Standard:

    Operator contacts an AUO or an extra operator to perform step h.1) thru h.4)

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	When contacted to perform step h.1) thru h.4) provide repeat back and inform operator that the Jumper for 2-FCV-64-30 is in place

****

Performance Step 12:   Critical X Not Critical

    i.   **VERIFY OPEN** 2-FCV-64-30, DRYWELL VENT OUTBD ISOLATION
           VLV (Panel 9-3).

Standard:

    Operator opens 2-FCV-64-30 on panel 9-3

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical X̲ Not Critical

CAUTION
•   The following step will fail ductwork inside Secondary Containment and may fail Secondary Containment Integrity. •   Off-Gas Release Rate Limits will be exceeded.

     j.   **PLACE** keylock switch 2-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP SELECT, to DRYWELL (Panel 9-54).

Standard:

     Operator places keylock switch 2-HS-84-36 to the DRYWELL position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14:   Critical __ Not Critical X̲

     k.   **VERIFY OPEN** 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 9-54).

Standard:

     Operator verifies that 2-FCV-64-29 opens on Panel 9-54

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 15:</u>   Critical __ Not Critical <u>X</u>

l.   **CHECK** Drywell and Suppression Chamber pressure lowering.

m.   **MAINTAIN** Primary Containment pressure below 55 psig using 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE, as directed by SRO.

<u>Standard:</u>

Operator checks that Drywell and Suppression Chamber pressure are lowering and informs SRO that Emergency Venting of the Drywell is in progress

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	As SRO acknowledge report of emergency venting of Drywell in progress. JPM complete

END OF TASK

STOP TIME_____

OPERATOR: _____

RO _____   SRO _____   DATE: _____

JPM NUMBER: d

TASK NUMBER: U-000-EM-63

TASK TITLE: 3-EOI-Appendix-13 Emergency Venting Primary Containment

K/A NUMBER: 295024 EA2.01   K/A RATING: RO 4.2 SRO 4.4

TASK STANDARD: 3-EOI-Appendix-13 complete with Drywell Pressure restored and
maintained below 55 psig

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-EOI-Appendix-13

VALIDATION TIME: 5 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES _____ NO _____

RESULTS: SATISFACTORY _____   UNSATISFACTORY _____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 3. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 3-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an operator. A large leak inside Primary Containment has developed on Unit 3. The Reactor has been scrammed and several control rods are not fully inserted. Primary containment pressure has exceeded the PSP curve (curve 6) and is approaching 55 psig and rising.

INITIATING CUE: The Unit Supervisor directs you to emergency vent Primary Containment as directed by 3-EOI Appendix 13 and maintain Primary Containment pressure below 55 psig

> **Simulator Driver:** This JPM may require RHR injection for level control

START TIME_____

****

Performance Step 1:   Critical __ Not Critical X

1.   **NOTIFY** Shift Manager / SED of the following:

   •   Emergency Venting of Primary Containment is in progress.

   •   Off-Gas Release Rate Limits will be exceeded. ✓

Standard:

   Operator notifies Shift Manager/SED

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

> **CUE:**   As Shift Manager/SED acknowledge report that Emergency Primary
> Containment Venting is in progress and Off-Gas release limits will be exceeded

****

Performance Step 2:   Critical __ Not Critical X

2.   **VENT** the Suppression Chamber as follows (Panel 9-3):

a.   IF EITHER of the following exists:

- Suppression Pool water level CANNOT be determined to be below 20 ft,

OR
- Suppression Chamber CANNOT be vented,

THEN **CONTINUE** in this procedure at Step 3.

Standard:

Operator verifies Suppression Pool level below 20 ft using 3-LI-64-159A and does not continue to step 3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical X Not Critical

b.   **PLACE** keylock switch 3-HS-64-222B, HARDENED SUPPR CHBR VENT OUTBD PERMISSIVE, in PERM.

Standard:

Operator places 3-HS-64-222B in the PERM position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical __ Not Critical X

    c.   **CHECK** blue indicating light above 3-HS-64-222B, HARDENED SUPPR
            CHBR VENT OUTBD PERMISSIVE, illuminated.

Standard:

    Operator verifies BLUE indicating lamp above 3-HS-64-222B Illuminated

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical __ Not Critical X

    d.   **OPEN** 3-FCV-64-222, HARDENED SUPPR CHBR VENT OUTBD ISOL VLV.

Standard:

    Operator places 3-HS-64-222A in the OPEN position and determines valve cannot be
    opened. Operator proceeds to set 3 by direction of step 2.a

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6:   Critical __ Not Critical X

3.   IF Suppression Chamber vent path is NOT available, THEN **VENT** the Drywell as
        follows:

        a.   **NOTIFY** Shift Manager / SED that Secondary Containment integrity failure is
                possible.

        b.   **NOTIFY** Radiation Protection that Reactor Building is being evacuated due to
                imminent failure of Primary Containment vent ducts.

        c.   **EVACUATE** ALL Reactor Buildings using P.A. System.

Standard:

        Operator notifies the SM/SED that containment integrity failure is possible, notifies RP that
        the Reactor Building will be evacuated due to imminent failure of Primary Containment
        vent ducts, and makes P.A. announcement to evacuate Reactor Building.

SAT__ UNSAT__ N/A __COMMENTS:_____

CUE:	As SM/SED acknowledge report of possible containment integrity failure, As RP acknowledge report of Reactor Building evacuation due to imminent failure of Primary Containment vent ducts.

****

Performance Step 7:   Critical __ Not Critical X

        d.   **START** ALL available SGTS trains.

Standard:

        Operator determines that all trains of SGTS are already in service

SAT__ UNSAT__ N/A __COMMENTS:_____

****

Performance Step 8:   Critical __ Not Critical X

    e.   **VERIFY CLOSED** 3-FCV-64-36, DW/SUPPR CHBR VENT TO SGT
            (Panel 9-3)

Standard:

    Operator verifies 3-FCV-64-36 is closed on Panel 9-3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9:   Critical X Not Critical

    f.   **VERIFY OPEN** the following dampers (Panel 9-25):

        •   3-FCO-64-40, REACTOR ZONE EXH TO SGTS

        •   3-FCO-64-41, REACTOR ZONE EXH TO SGTS

Standard:

    Operator verifies dampers 3-FCO-64-40 and 3-FCO-64-41 are open on Panel 9-25

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10:   Critical __ Not Critical X

    g.   **VERIFY CLOSED** 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE
            (Panel 9-3 or Panel 9-54).

Standard:

    Operator verifies 3-FCV-64-29 is closed on Panel 9-3 or Panel 9-54

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical __ Not Critical X

    h.   **DISPATCH** personnel to Unit 3 Auxiliary Instrument Room to perform the following:

          1)   **REFER TO** Attachment 1 and **OBTAIN** one 12-in. banana jack jumper from EOI Equipment Storage Box.

          2)   **LOCATE** terminal strip DD in Panel 3-9-43, Front.

          3)   **JUMPER** DD-76 to DD-77 (Panel 3-9-43).

          4)   **NOTIFY** Unit Operator that jumper for 3-FCV-64-30, DRYWELL VENT OUTBD ISOLATION VLV, is in place.

Standard:

    Operator contacts an AUO or an extra operator to perform step h.1) thru h.4)

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	When contacted to perform step h.1) thru h.4) provide repeat back and inform operator that the Jumper for 3-FCV-64-30 is in place

****

Performance Step 12:   Critical X Not Critical

    i.   **VERIFY OPEN** 3-FCV-64-30, DRYWELL VENT OUTBD ISOLATION VLV (Panel 9-3).

Standard:

    Operator opens 3-FCV-64-30 on panel 9-3

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical X̲ Not Critical

CAUTION
• The following step will fail ductwork inside Secondary Containment and may fail Secondary Containment Integrity. • Off-Gas Release Rate Limits will be exceeded.

j.   **PLACE** keylock switch 3-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP SELECT, to DRYWELL (Panel 9-54).

Standard:

Operator places keylock switch 3-HS-84-36 to the DRYWELL position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14:   Critical __ Not Critical X̲

k.   **VERIFY OPEN** 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 9-54).

Standard:

Operator verifies that 3-FCV-64-29 opens on Panel 9-54

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 15:</u>   Critical __ Not Critical <u>X</u>

      l.   **CHECK** Drywell and Suppression Chamber pressure lowering.

      m.   **MAINTAIN** Primary Containment pressure below 55 psig using 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE, as directed by SRO.

<u>Standard:</u>

     Operator checks that Drywell and Suppression Chamber pressure are lowering and informs SRO that Emergency Venting of the Drywell is in progress

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	As SRO acknowledge report of emergency venting of Drywell in progress. JPM complete

END OF TASK

STOP TIME_____

OPERATOR: _____

RO ____   SRO ____   DATE:_____

JPM NUMBER: e

TASK NUMBER: U-085-SU-02

TASK TITLE: 2-SR-3.3.2.1.2 RWM Functional Test for Startup

K/A NUMBER: 201006 A2.05   K/A RATING: RO 3.1 SRO 3.5

TASK STANDARD: Complete 2-SR-3.3.2.1.2 RWM Functional Test for Startup

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-SR-3.3.2.1.2 completed to step 7.0[1]
                                              Ensure 2-SR-3.1.3.5(A) is open to Group 1 rods
VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                  EXAMINER

INITIAL CONDITIONS: You are an Operator on Unit 2. Unit 2 is making preparations for startup using the A2 Startup Sequence. The RWM is in operation per 2-OI-85. Reactor Engineering has performed 2-SR-3.3.2.1.7.

INITIATING CUES: The Unit Supervisor has directed you to complete 2-SR-3.3.2.1.2, RWM Functional Test for Startup, a Reactor Engineer is present and monitoring as needed

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator on Unit 2. Unit 2 is making preparations for startup using the A2 Startup Sequence. The RWM is in operation per 2-OI-85. Reactor Engineering has performed 2-SR-3.3.2.1.7.

INITIATING CUES: The Unit Supervisor has directed you to complete 2-SR-3.3.2.1.2, RWM Functional Test for Startup, a Reactor Engineer is present and monitoring as needed

START TIME_____

****

Performance Step 1:   Critical _ Not Critical X

7.0   PROCEDURE STEPS

[1]   **VERIFY** that the following initial conditions are satisfied:

[1.1]   **ALL** precautions **AND** limitations in Section 3.0 have been reviewed.

[1.2]   **ALL** prerequisites in Section 4.0 are satisfied

Standard:

Reviews precautions and limitations and verifies initial conditions are satisfied

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2:   Critical _ Not Critical X

[2]   **OBTAIN** permission from Unit Supervisor (US) to perform this 2-SR-3.3.2.1.2 test procedure

[3]   **NOTIFY** Unit Operator (UO) before commencing this 2-SR-3.3.2.1.2 test procedure.

[4]   **RECORD** the start date **AND** time, reason for test, plant conditions **AND ANY** pre-test remarks on Attachment 1, Surveillance Procedure Review Form in Section 8.0.

Standard:

Already completed

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical X Not Critical

NOTE

ALL operations are performed on Panel 2-9-5 in the main Control Room unless otherwise noted.

---

[5]   **PLACE** the Control Rod Drive (CRD) POWER switch (2-HS-85-46) momentarily to OFF **AND** next **SWITCH** to ON.

Standard:

Places the CRD Power switch to OFF and then ON

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical _ Not Critical X

[6]   **VERIFY ALL** control rods are deselected on the rod select matrix.

Standard:

Verifies all control rods are deselected

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical _ Not Critical X

> [7]   **PERFORM** the RWM Functional Test as follows:
>
>> [7.1]   **VERIFY OR PLACE** the RWM in operation per 2-OI-85.
>>
>> [7.2]   **REQUEST** Reactor Engineering to **PERFORM** 2-SR-3.3.2.1.7
>>   **OR VERIFY** performance of 2-SR-3.3.2.1.7.

Standard:

> Given in initial conditions

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6:   Critical X Not Critical

>> [7.3]   **REFER** to the Control Rod Movement Data Sheet from 2-SR-
>>   3.1.3.5(A) to identify a rod from RWM Group 02.
>>
>> [7.4]   **RECORD** below the rod chosen:
>>
>>   Rod Number: _____ - _____

Standard:

> Refers to 2-SR-3.1.3.5(A) and chooses a rod from Group 2, records identified rod (can be
ANY control rod from RWM Group 2 (A2 Startup Sequence) – (02-31, 26-07, 58-23, 42-55, 10-
39, 42-07, 58-39, 26-55, 10-23, 50-15, 50-47, 18-47, 18-15, 50-31, 34-47, 18-31, 34-15, 42-39,
26-39, 26-23, 42-23, or 34-31)

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 7:   *Critical X̲ Not Critical

       *[7.5]   **SELECT** the rod recorded in Step 7.0[7.4].

       [7.6]   **VERIFY** the SELECT ERROR status block on the RWM display
                  is in alarm (red background).

Standard:

     Selects the rod previously recorded and verifies select error in alarm

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 8:   *Critical X̲ Not Critical

       *[7.7]   **NOTCH** the selected rod to position 02.

       [7.8]   **VERIFY** that the rod moved to position 02 is identified as a
                  withdraw error on the RWM display.
Standard:

     Notches the rod to position 02 and verifies a withdraw error on the display

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 9:</u>   *Critical <u>X</u> Not Critical

> *[7.9]   **PLACE** the CRD Control switch (2-HS-85-48) to ROD OUT NOTCH **AND VERIFY** the following:

>> [7.9.1]   The selected control rod does **NOT** withdraw.

>> [7.9.2]   The WITHDRAW BLOCK status block on the RWM display is in alarm (red background).

>> [7.9.3]   RWM ROD BLOCK (2-XA-55-5B, Window 35) is in ALARM.

<u>Standard:</u>

> Places the CRD control switch to ROD OUT NOTCH and verifies rod does not withdraw. Verifies withdraw block status block on RWM display is in alarm as well as RWM Rod Block alarm 2-XA-55-5B, window 35.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 10:</u>   Critical <u>X</u> Not Critical

> `   [7.10]   **INSERT** the selected rod from position 02 to 00.

<u>Standard:</u>

> Inserts the selected rod from position 02 to 00

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical _ Not Critical X

        [7.11]   **VERIFY** the WITHDRAW BLOCK status block on the RWM
                        display is **NOT** in alarm.

        [7.12]   **VERIFY** RWM ROD BLOCK (2-XA-55-5B, Window 35) will
                        RESET.

Standard:

    Verifies the Withdraw Block status block on the RWM display is not in alarm and resets
    alarm window 35 on 2-XA-55-5B

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12:   Critical X Not Critical

        [7.13]   **REFER** to the Control Rod Movement Data Sheet from 2-SR-
                        3.1.3.5(A) to identify a rod from RWM Group 01.

        [7.14]   **RECORD** below the rod chosen:

                        Rod Number: _____ - _____

Standard:

    Refers to 2-SR-3.1.3.5(A) and chooses a rod from Group 1, records identified rod (can be
    ANY control rod from RWM Group 1 (A2 Startup Sequence) – (58-31, 34-07, 02-23, 18-
    55, 50-39, 19-07, 02-39, 34-55, 50-23, 10-15, 10-47, 42-47, 42-15, 10-31, 26-47, 42-31,
    26-15, 18-39, 34-39, 34-23, 18-23, or 26-31)

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   *Critical X Not Critical

`   *[7.15]   **SELECT** the rod recorded in Step 7.0[7.14].

          [7.16]   **VERIFY** that rod Group 01 is indicated as the latched group on the
                         RWM Panel.

Standard:

        Selects the rod recorded previously and verifies Group 1 is indicated as the latched group

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 14:   Critical _ Not Critical X

`   [8]   **RECORD** the appropriate test information on Attachment 1, Surveillance
                  Procedure Review Form (located in Section 8.0) **AND COMPLETE** up to the
                  Unit Supervisor review.

          [9]   **NOTIFY** the UO that this SR test procedure is complete.

          [10]   **NOTIFY** the US that this SR test procedure is complete.

Standard:

        Records test info on Attachment 1 up to US review and notifies personnel of completion

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

                                    END OF TASK

STOP TIME ___

OPERATOR: _____

RO _____   SRO _____   DATE:_____

JPM NUMBER: e

TASK NUMBER: U-085-SU-02

TASK TITLE: 3-SR-3.3.2.1.2 RWM Functional Test for Startup

K/A NUMBER: 201006 A2.05   K/A RATING: RO 3.1 SRO 3.5

TASK STANDARD: Complete 3-SR-3.3.2.1.2 RWM Functional Test for Startup

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-SR-3.3.2.1.2 completed to step 7.0[1]
                                Ensure 3-SR-3.1.3.5(A) is open to Group 1 rods
VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES _____   NO _____

RESULTS: SATISFACTORY _____   UNSATISFACTORY _____

SIGNATURE: _____   DATE: _____
                EXAMINER

INITIAL CONDITIONS: You are an Operator on Unit 3. Unit 3 is making preparations for startup using the A2 Startup Sequence. The RWM is in operation per 3-OI-85. Reactor Engineering has performed 3-SR-3.3.2.1.7.

INITIATING CUES: The Unit Supervisor has directed you to complete 3-SR-3.3.2.1.2, RWM Functional Test for Startup, a Reactor Engineer is present and monitoring as needed

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator on Unit 3. Unit 3 is making preparations for startup using the A2 Startup Sequence. The RWM is in operation per 3-OI-85. Reactor Engineering has performed 3-SR-3.3.2.1.7.

INITIATING CUES: The Unit Supervisor has directed you to complete 3-SR-3.3.2.1.2, RWM Functional Test for Startup, a Reactor Engineer is present and monitoring as needed

START TIME_____

****

<u>Performance Step 1:</u>   Critical _ Not Critical <u>X</u>

7.0   PROCEDURE STEPS

[1]   **VERIFY** that the following initial conditions are satisfied:

[1.1]   **ALL** precautions **AND** limitations in Section 3.0 have been
reviewed.

[1.2]   **ALL** prerequisites in Section 4.0 are satisfied

<u>Standard:</u>

Reviews precautions and limitations and verifies initial conditions are satisfied

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 2:</u>   Critical _ Not Critical <u>X</u>

[2]   **OBTAIN** permission from Unit Supervisor (US) to perform this 3-SR-3.3.2.1.2
test procedure

[3]   **NOTIFY** Unit Operator (UO) before commencing this 3-SR-3.3.2.1.2 test
procedure.

[4]   **RECORD** the start date **AND** time, reason for test, plant conditions **AND ANY**
pre-test remarks on Attachment 1, Surveillance Procedure Review Form in
Section 8.0.

<u>Standard:</u>

Already completed

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical X Not Critical

┌───┐
│   **NOTE**   │
│ **ALL** operations are performed on Panel 3-9-5 in the main Control Room unless otherwise noted. │
└───┘

[5]   **PLACE** the Control Rod Drive (CRD) POWER switch (3-HS-85-46)
momentarily to OFF **AND** next **SWITCH** to ON.

Standard:

Places the CRD Power switch to OFF and then ON

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical _ Not Critical X

[6]   **VERIFY ALL** control rods are deselected on the rod select matrix.

Standard:

Verifies all control rods are deselected

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical _ Not Critical X

    [7]   **PERFORM** the RWM Functional Test as follows:

          [7.1]   **VERIFY OR PLACE** the RWM in operation per 3-OI-85.

          [7.2]   **REQUEST** Reactor Engineering to **PERFORM** 3-SR-3.3.2.1.7
                                       OR VERIFY performance of 3-SR-3.3.2.1.7.

Standard:

    Given in initial conditions

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 6:   Critical X Not Critical

          [7.3]   **REFER** to the Control Rod Movement Data Sheet from 3-SR-
                                       3.1.3.5(A) to identify a rod from RWM Group 02.

          [7.4]   **RECORD** below the rod chosen:

                                    Rod Number: ____ - ____

Standard:

    Refers to 3-SR-3.1.3.5(A) and chooses a rod from Group 2, records identified rod (can be
ANY control rod from RWM Group 2 (A2 Startup Sequence) – (02-31, 26-07, 58-23, 42-55, 10-
39, 42-07, 58-39, 26-55, 10-23, 50-15, 50-47, 18-47, 18-15, 50-31, 34-47, 18-31, 34-15, 42-39,
26-39, 26-23, 42-23, or 34-31)

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 7:   *Critical X Not Critical

> *[7.5]   **SELECT** the rod recorded in Step 7.0[7.4].
>
> [7.6]   **VERIFY** the SELECT ERROR status block on the RWM display
>   is in alarm (red background).

Standard:

    Selects the rod previously recorded and verifies select error in alarm

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 8:   *Critical X Not Critical

> *[7.7]   **NOTCH** the selected rod to position 02.
>
> [7.8]   **VERIFY** that the rod moved to position 02 is identified as a
>   withdraw error on the RWM display.

Standard:

    Notches the rod to position 02 and verifies a withdraw error on the display

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 9:   *Critical <u>X</u> Not Critical

        *[7.9]   **PLACE** the CRD Control switch (3-HS-85-48) to ROD OUT NOTCH **AND VERIFY** the following:

            [7.9.1]   The selected control rod does **NOT** withdraw.

            [7.9.2]   The WITHDRAW BLOCK status block on the RWM display is in alarm (red background).

            [7.9.3]   RWM ROD BLOCK (3-XA-55-5B, Window 35) is in ALARM.

Standard:

Places the CRD control switch to ROD OUT NOTCH and verifies rod does not withdraw. Verifies withdraw block status block on RWM display is in alarm as well as RWM Rod Block alarm 3-XA-55-5B, window 35.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10:   Critical <u>X</u> Not Critical

         `   [7.10]   **INSERT** the selected rod from position 02 to 00.

Standard:

Inserts the selected rod from position 02 to 00

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical _ Not Critical X

`   [7.11]   **VERIFY** the WITHDRAW BLOCK status block on the RWM display is **NOT** in alarm.

      [7.12]   **VERIFY** RWM ROD BLOCK (3-XA-55-5B, Window 35) will RESET.

Standard:

Verifies the Withdraw Block status block on the RWM display is not in alarm and resets alarm window 35 on 3-XA-55-5B

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12:   Critical X Not Critical

`   [7.13]   **REFER** to the Control Rod Movement Data Sheet from 3-SR-3.1.3.5(A) to identify a rod from RWM Group 01.

      [7.14]   **RECORD** below the rod chosen:

Rod Number: _____ - _____

Standard:

Refers to 3-SR-3.1.3.5(A) and chooses a rod from Group 1, records identified rod (can be ANY control rod from RWM Group 1 (A2 Startup Sequence) – (58-31, 34-07, 02-23, 18-55, 50-39, 19-07, 02-39, 34-55, 50-23, 10-15, 10-47, 42-47, 42-15, 10-31, 26-47, 42-31, 26-15, 18-39, 34-39, 34-23, 18-23, or 26-31)

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

`*******************************************************************`

Performance Step 13:   *Critical X Not Critical

           *[7.15]   **SELECT** the rod recorded in Step 7.0[7.14].

           [7.16]   **VERIFY** that rod Group 01 is indicated as the latched group on the RWM Panel.

Standard:

    Selects the rod recorded previously and verifies Group 1 is indicated as the latched group

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

`*******************************************************************`

Performance Step 14:   Critical _ Not Critical X

      [8]   **RECORD** the appropriate test information on Attachment 1, Surveillance Procedure Review Form (located in Section 8.0) **AND COMPLETE** up to the Unit Supervisor review.

      [9]   **NOTIFY** the UO that this SR test procedure is complete.

      [10]   **NOTIFY** the US that this SR test procedure is complete.

Standard:

    Records test info on Attachment 1 up to US review and notifies personnel of completion

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: f

TASK NUMBER: U-000-SS-26

TASK TITLE: Energize 4 KV SD BDs A and B from DGs

K/A NUMBER: 600000 AA2.17   K/A RATING: RO 3.1 SRO: 3.6

TASK STANDARD: Operator will energize 4KV SD BDs A and B from the Unit 1/2 DGs and energize 4KV SD BD 3EA from 4KV SD BD A. Operator will be required to perform an Emergency Shutdown of the B Diesel Generator due to Low Lube Oil Pressure

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 0-SSI-21

VALIDATION TIME: 20 minutes

MAX. TIME ALLOWED: 20 minutes step 20, 20 minutes steps 22 thru 23, and 20 minutes steps 24 thru 28

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ____

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                        EXAMINER

INITIAL CONDITIONS: You are the Unit 2 Operator, there is a fire in Unit 3 DG Building, the plant is operating in 0-SSI-21, Unit 3 Diesel Generator Building. All three units have been scrammed. Operator 4 has completed Section 1.0 of Attachment 4, and alignment of 4KV Shutdown Board 3EA is complete and ready to be re-energized. An AUO is stationed at the Diesel Generators.

INITIATING CUE: The Unit Supervisor directs you as the Unit 2 Operator to complete steps 20 through 26 in section 2.0 of 0-SSI-21 Unit 3 Diesel Generator Building

Time Critical

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Unit 2 Operator, there is a fire in Unit 3 DG Building, the plant is operating in 0-SSI-21, Unit 3 Diesel Generator Building. All three units have been scrammed. Operator 4 has completed Section 1.0 of Attachment 4, and alignment of 4KV Shutdown Board 3EA is complete and ready to be re-energized. An AUO is stationed at the Diesel Generators.

INITIATING CUE: The Unit Supervisor directs you as the Unit 2 Operator to complete steps 20 through 26 in section 2.0 of 0-SSI-21 Unit 3 Diesel Generator Building

Time Critical

START TIME _____
****
Performance Step 1:   *Critical X Not Critical

(20 Min)

[20] **IF** Diesel Generator A is **NOT** running and supplying its respective Board, **THEN**
      DIRECT Unit 2 Operator to start Diesel Generator A, AND re-energize 4KV Shutdown
      Board A as follows:

      *[20.1]   **TRIP** the 4KV SD BD A AUTO/LOCKOUT RESET switch by
                     momentarily depressing the 4KV SD BD A AUTO TO MANUAL TRIP
                     pushbutton, 0-HS-211-A on Panel 0-9-23-7.

              [20.1.1]   **CHECK** that 4KV SD BD A AUTO TO MANUAL TRIP,
                             0-HS-211-A, amber light extinguished.

              [20.1.2]   **CHECK** that 4KV SD BD A AUTO/LOCKOUT RESET,
                             0-43-211-A, trips.

Standard:

      Depresses the 4KV SD BD A AUTO TO MANUAL TRIP pushbutton and verifies
      lockout trips.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 2:   Critical___ Not Critical X

      [20.2] **PLACE** 4KV SD BD A ALT FDR BKR 1716 control switch 0-HS-211-A/24A,
              in TRIP on Panel 0-9-23-7.

Standard:

      Trips Alternate Feeder Breaker 1716

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical__ Not Critical X

   [20.3] **PLACE** 4KV SD BD A EMER FDR BKR 1824 control switch 0-HS-211-A/4A
   in TRIP on Panel 0-9-23-7.

Standard:

   Trips Emergency Feeder Breaker 1824

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical X Not Critical

   [20.4] **PLACE** 4KV SD BD A NORM FDR BKR 1614 control switch 0-HS-211-A/3A,
   in TRIP on Panel 0-9-23-7.

Standard:

   Trips Normal Feeder Breaker 1614

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical__ Not Critical X

   [20.5] **VERIFY** DIESEL GENERATOR A started and DG A BKR 1818,
   0-HS-211-A/22A, closed to re-energize 4KV Shutdown Board A.

Standard:

   Verifies DG A starts and DG A Breaker 1818 closes

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

STOP TIME ___

START TIME _____

****

<u>Performance Step 6:</u>   Critical__ Not Critical <u>X</u>

(20 Min)

[21]   **VERIFY** with Unit 3 Unit Supervisor that Operator 4 has completed Section 1.0 of
        Attachment 4, and alignment of 4KV Shutdown Board 3EA is complete and ready to be
        re-energized.

<u>Standard:</u>

        Given in initial conditions

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

STOP TIME ___

START TIME _____
****

<u>Performance Step 7:</u>   *Critical <u>X</u> Not Critical
(20 Min)

[22]   **DIRECT** Unit 2 Operator to align 4KV Shutdown Board A to Shutdown Board 3EA,
         AND **PERFORM** the following at Panel 0-9-23:

         *[22.1] **PLACE** 4KV SDBD A BKR 1824 SYNC switch, 0-25-211-A/4A, to ON.

         *[22.2] **PLACE** 4KV SD BD A EMER FDR BKR 1824, in CLOSE, 0-HS-211-A/4A,
                  AND **VERIFY** breaker closes.

         [22.3] **PLACE** 4kV SD BD A BKR 1824 SYNC switch, 0-25-211-A/4A, to OFF.

<u>Standard:</u>

         Places 4KV SDBD A BKR 1824 SYNC switch to on, Places 4KV SDBD A EMER FDR
BKR 1824 in close and verifies breaker closes, and Places 4KV SDBD A BKR 1824 SYNC switch
to off

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 8:</u>   Critical__ Not Critical <u>X</u>

[23]   **DIRECT** Unit 2 Operator to verify the following stopped at Panel 2-9-3:

         A. CORE SPRAY PUMP 2A, 2-HS-75-5A
         B. RHR PUMP 2A, 2-HS-74-5A
         C. RHRSW PUMP A2, 0-HS-23-5A/2

<u>Standard:</u>

         Verifies the components listed above are stopped

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

STOP TIME ___

START TIME _____

****

<u>Performance Step 9:</u>   *Critical <u>X</u> Not Critical
(20 Min)

[24]   **IF** Diesel Generator B is **NOT** running and supplying its respective Board, **THEN**
        DIRECT Unit 2 Operator to start Diesel Generator B, AND **RE-ENERGIZE** 4KV
        Shutdown Board B as follows:

        *[24.1]   **TRIP** the 4KV SD BD B AUTO/LOCKOUT RESET switch by
                        momentarily depressing the 4KV SD BD B AUTO TO MANUAL TRIP
                        pushbutton, 0-HS-211-B, on Panel 0-9-23-7.

                [24.1.1]   **CHECK** that 4KV SD BD B AUTO TO MANUAL TRIP, 0-HS-
                                211-B, amber light extinguished.

                [24.1.2]   **CHECK** that 4KV SD BD B AUTO/LOCKOUT RESET, 0-43-
                                211-B, trips.

<u>Standard:</u>

        Depresses the 4KV SD BD B AUTO TO MANUAL TRIP pushbutton and verifies
        lockout trips.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 10:</u>   Critical__ Not Critical <u>X</u>

        [24.2] **PLACE** 4KV SD BD B ALT FDR BKR 1714 control switch, 0-HS-211-B/20A,
                in TRIP on Panel 0-9-23-7.

<u>Standard:</u>

        Trips Alternate Feeder Breaker 1714

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 11:   Critical X Not Critical

[24.3] **PLACE** 4KV SD BD B NORM FDR BKR 1616 control switch, 0-HS-211-B/2A, in TRIP on Panel 0-9-23-7.

Standard:

Trips Normal Feeder Breaker 1616

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 12:   Critical__ Not Critical X

[24.4] **PLACE** 4KV SD BD B EMER FDR BKR 1828 control switch, 0-HS-211-B/19A in TRIP on Panel 0-9-23-7.

Standard:

Trips Emergency Feeder Breaker 1828

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 13:   Critical__ Not Critical X

[24.5] **VERIFY** DIESEL GENERATOR B started, and DG B BKR 1822, 0-HS-211-B/4A, closed to re-energize 4KV Shutdown Board B.

Standard:

Verifies DG B starts and DG B Breaker 1822 closes

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

DRIVER: after DG is started enter BAT NRC/DGBlowlube for Low Lube Oil Pressure

Examiner note: ALARM on 9-23B win 4 DG B LUBE OIL ABNORMAL will alarm and LOW LOW OIL PRESSURE LIGHT for D DG will illuminate, the operator should respond per the ARP.

****

Performance Step 14:   Critical _ Not Critical X

RESPONDS to the Alarm 9-23B WIN 4 (DIESEL GEN B LUBE OIL ABNORMAL) and notices the AMBER LIGHT (LOW LOW OIL PRESSURE)

Standard:

>   Responds per the ARP and Verifies the AMBER LIGHT is lit.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 15:   Critical _ Not Critical X

DIESEL GEN 3D LUBE OIL ABNORMAL Window 4

>   A.   **CHECK** Panel 0-9-23-7 to see if Low Low Lube Oil pressure light is illuminated.

Standard:

>   Verifies the AMBER LIGHT is lit.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: If asked, continued operation of DG D is not absolutely necessary.

****

Performance Step 16:   Critical _ Not Critical X

DIESEL GEN 3D LUBE OIL ABNORMAL Window 4

> B.   **DISPATCH** personnel to diesel generator room to check:

Standard:

> Contacts personnel in DG Room

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE: If asked, continued operation of DG D is not absolutely necessary.

CUE: If Assistant Unit Operator is called, After Lube oil pressure alarm is received on 9-23, report lube oil pressure low at 5 psig and lowering. Lube Oil is spraying out of a damaged coupling

****

Performance Step 17:   Critical X Not Critical

DIESEL GEN 3D LUBE OIL ABNORMAL Window 4

> C.   **SHUT DOWN** the diesel generator with Emergency Stop Pushbutton, if
> necessary.

Standard:

> Operator depresses Emergency Stop Pushbutton

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE: Another operator will complete the remainder of the procedure, JPM complete

If the operator fails to shutdown DG B he will continue to step 25 and 26 in procedure.

****

Performance Step 18:   Critical__ Not Critical X

[25]   **DIRECT** Unit 2 Operator to verify the following stopped at Panel 2-9-3:

   A. CORE SPRAY PUMP 2C, 2-HS-75-14A
   B. RHR PUMP 2C, 2-HS-74-16A
   C. RHRSW PUMP C2, 0-HS-23-12A/2

Standard:

   Verifies the components listed above are stopped

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 19:   Critical__ Not Critical X

[26]   **DIRECT** Unit 2 Operator to verify CONTROL BAY CHILLER A,
        0-HS-31-2100A, stopped at Panel 2-9-20.

Standard:

   Verifies the component listed above is stopped

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE:	Another operator will complete the remainder of the procedure, JPM complete

END OF TASK

STOP TIME ___

OPERATOR: _____

RO _____   SRO _____   DATE: _____

JPM NUMBER: g

TASK NUMBER: U-000-EM-61

TASK TITLE: 2-EOI Appendix-12 Primary Containment Venting

K/A NUMBER: 295017 AA1.03   K/A RATING: RO 3.4 SRO: 3.4

TASK STANDARD: Vent Primary Containment IAW 2-EOI Appendix-12, after Suppression
Chamber Vent path fails will vent through Drywell and flow adjusted to
limit high release rates.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-EOI Appendix-12

VALIDATION TIME: 7 minutes

MAX. TIME ALLOWED:

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES _____   NO _____

RESULTS: SATISFACTORY _____   UNSATISFACTORY _____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are a Unit 2 Operator. Unit 2 reactor has scrammed. A small leak exists in primary containment. EOI-2 has been followed to PC/P-1.

INITIATING CUE: The Unit Supervisor directs you to vent the pressure suppression chamber in accordance with 2-EOI Appendix-12.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit 2 Operator. Unit 2 reactor has scrammed. A small leak exists in primary containment. EOI-2 has been followed to PC/P-1.

INITIATING CUE: The Unit Supervisor directs you to vent the pressure suppression chamber in accordance with 2-EOI Appendix-12.

START TIME_____

****

Performance Step 1:   Critical _ Not Critical X

CAUTION
Stack release rates exceeding $1.4 \times 10_7 \, \mu Ci/s$, or 0-SI-4.8.B.1.a.1 release fraction above 1.0 will result in ODCM release limits being exceeded.

1.   **VERIFY** at least one SGTS train in service.

Standard:

        Verifies SGTS in service

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2:   Critical _ Not Critical X

2.   **VERIFY CLOSED** the following valves (Panel 2-9-3 or Panel 2-9-54):

        • 2-FCV-64-31, DRYWELL INBOARD ISOLATION VLV,
        • 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE,
        • 2-FCV-64-34, SUPPR CHBR INBOARD ISOLATION VLV,
        • 2-FCV-64-32, SUPPR CHBR VENT INBD ISOL VALVE.

Standard:

        Verifies closed the above listed valves

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical _ Not Critical X

3.   IF While executing this procedure to vent the Suppression Chamber, Suppression Pool
        water level can not be determined to be below 20 ft, THEN **PERFORM** step 13 to secure
        the vent path and reenter this procedure if further venting is required.

Standard:

        Verifies Suppression Pool Level below 20 feet

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical _ Not Critical X

4.   IF While executing this procedure, the desired vent path is lost or can not be established,
        THEN **PERFORM** step 13 to secure the vent path and reenter this procedure if further
        venting is required.

Standard:

        NA

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical_ Not Critical X

5.   IF While executing this procedure, CAD addition per SAMG-2, Step G-4 OR G-9, is to
        begin, THEN BEFORE CAD is initiated, **PERFORM** Step 13 to secure the vent path.

Standard:

        NA

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

| **CUE:**   CAD addition is not required |

****

Performance Step 6:   Critical _ Not Critical X

NOTE: Venting may be accomplished using EITHER:
- 2-FIC-84-19, PATH B VENT FLOW CONT,
  OR
- 2-FIC-84-20, PATH A VENT FLOW CONT.

NOTE: Unless the TSC recommends otherwise, venting the Drywell DIRECTLY should be performed ONLY if the Suppression Chamber can NOT be vented.

6.   IF ANY of the following exists:
- Suppression Pool water level can not be determined to be below 20 ft,
  OR
- Suppression Chamber can NOT be vented,
  OR
- SRO orders DIRECT drywell venting,

THEN **CONTINUE** in this procedure at:

- Step 10 to vent the Drywell through 2-FCV-84-19,
  OR
- Step 11 to vent the Drywell through 2-FCV-84-20.

Standard:

Verifies Suppression Pool Level below 20 feet and proceeds to step 7

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 7:   Critical _ Not Critical X

7.   **CONTINUE** in this procedure at:

- Step 8 to vent the Suppression Chamber through 2-FCV-84-19,
                          OR
- Step 9 to vent the Suppression Chamber through 2-FCV-84-20.

Standard:

   Continues at Step 8 or 9

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

| NRC: Step 8 starts below, Step 9 starts at performance step 13 |

****

Performance Step 8:   Critical X Not Critical

8.   **VENT** the Suppression Chamber using 2-FIC-84-19, PATH B VENT FLOW CONT, as
        follows:

   a.   **PLACE** keylock switch 2-HS-84-35, SUPPR CHBR/DW VENT ISOL BYP
           SELECT, to SUPPR-CHBR position (Panel 2-9-54).

Standard:

   Placed 2-HS-84-35 in the SUPPR-CHBR position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 9:</u>   Critical _ Not Critical <u>X</u>

      b.   **VERIFY OPEN** 2-FCV-64-32, SUPPR CHBR VENT INBD ISOL VALVE
           (Panel 2-9-54).

<u>Standard:</u>

      2-FCV-64-32 fails to open Operator proceeds to Vent the Suppression Chamber using
2-FIC-84-20 Step 9.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 10:</u>   Critical <u>X</u> Not Critical

9.   **VENT** the Suppression Chamber using 2-FIC-84-20, PATH A VENT FLOW CONT, as
     follows:

      a.   **VERIFY OPEN** 2-FCV-64-141, DRYWELL DP COMP BYPASS VALVE
           (Panel 2-9-3).

<u>Standard:</u>

      Opens 2-FCV-64-141

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical X Not Critical

    b.   **PLACE** keylock switch 2-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP
        SELECT, to SUPPR-CHBR position (Panel 2-9-54).

Standard:

    Placed 2-HS-84-36 in the SUPPR-CHBR position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12:   Critical _ Not Critical X

    c.   **VERIFY OPEN** 2-FCV-64-34, SUPPR CHBR INBOARD ISOLATION VLV
        (Panel 2-9-54).

Standard:

    Verifies 2-FCV-64-34 Open

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical _ Not Critical X

    d.   **VERIFY** 2-FIC-84-20, PATH A VENT FLOW CONT, in AUTO with setpoint at
        100 scfm (Panel 2-9-55).

Standard:

    Places 2-FIC-84-20 in Auto at 100 SCFM

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14:   Critical _ Not Critical X

        e.   **PLACE** keylock switch 2-HS-84-20, 2-FCV-84-20 ISOLATION BYPASS, in BYPASS (Panel 2-9-55).

4.   IF While executing this procedure, the desired vent path is lost or cannot be established, THEN **PERFORM** step 13 to secure the vent path and re-enter this procedure if further venting is required.

Standard:

      2-FCV-84-20 will fail to Open, Operator proceeds to Step 4 which directs Step 13

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE:	SRO Directs Drywell venting

****

Performance Step 15:   Critical _ Not Critical X

13.   WHEN ANY of the following exists:

- Venting is no longer required,
- Pressure in the space being vented approaches zero,
- Directed by SRO,
OR
- Directed by Step 3, 4, or 5,

THEN **SECURE** venting as follows:

a.   **VERIFY** the following keylock switches in OFF (Panel 2-9-54):

- 2-HS-84-35, SUPPR CHBR / DW VENT ISOL BYP SELECT,
- 2-HS-84-36, SUPPR CHBR / DW VENT ISOL BYP SELECT.

Standard:

Operator places 2-HS-84-35 and 36 in Off

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 16:   Critical _ Not Critical X

b.   **VERIFY** keylock switch 2-HS-84-20, 2-FCV-84-20 ISOLATION BYPASS, in
        NORMAL (Panel 2-9-55).

Standard:

Places 2-HS-84-20 to Normal

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 17:   Critical _ Not Critical X

    c.   **VERIFY** keylock switch 2-HS-84-19, 2-FCV-84-19 CONTROL,
         in CLOSE (Panel 2-9-55).

Standard:

    Verifies 2-HS-84-19 is in Close

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 18:   Critical _ Not Critical X

    d.   **VERIFY CLOSED** the following valves (Panel 2-9-3 or Panel 2-9-54):

        • 2-FCV-64-31, DRYWELL INBD ISOLATION VLV,
        • 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE,
        • 2-FCV-64-34, SUPPR CHBR INBD ISOLATION VLV,
        • 2-FCV-64-32, SUPPR CHBR VENT INBD ISOL VALVE.

Standard:

    Verifies above listed valves are closed

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 19:   Critical _ Not Critical X

    e.   **VERIFY CLOSED** 2-FCV-64-141, DRYWELL DP COMP BYPASS VALVE
         (Panel 2-9-3).

Standard:

    Verifies closed 2-FCV-64-141

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE:	SRO Directs Drywell venting

****

Performance Step 20:   Critical X Not Critical

10.   **VENT** the Drywell using 2-FIC-84-19, PATH B VENT FLOW CONT, as follows:

   a.   **VERIFY CLOSED** 2-FCV-64-141, DRYWELL DP COMP BYPASS VALVE
           (Panel 2-9-3).

Standard:

   Verify Closed 2-FCV-64-141

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 21:   Critical X Not Critical

   b.   **PLACE** keylock switch 2-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP
           SELECT, to DRYWELL position (Panel 2-9-54).

Standard:

   Placed 2-HS-84-36 in the DRYWELL position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 22:   Critical _ Not Critical X

   c.   **VERIFY OPEN** 2-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel
           2-9-54).

Standard:

   Verifies 2-FCV-64-29 Opens

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 23:   Critical X Not Critical

    d.   **PLACE** 2-FIC-84-19, PATH B VENT FLOW CONT, in AUTO with setpoint at 100 scfm (Panel 2-9-55).

Standard:

    Places 2-FIC-84-19 in Auto at 100 SCFM

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 24:   Critical X Not Critical

    e.   **PLACE** keylock switch 2-HS-84-19, 2-FCV-84-19 CONTROL, in OPEN (Panel 2-9-55).

Standard:

    Places 2-HS-84-19 in Open

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 25:   Critical _ Not Critical X

    f.   **VERIFY** 2-FIC-84-19, PATH B VENT FLOW CONT, is indicating approximately 100 scfm.

    g.   **CONTINUE** in this procedure at step 12.

Standard:

    Verifies 2-FIC-84-19 is indicating approximately 100 scfm and continues at step 12

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 26:   Critical _ Not Critical X

12.   **ADJUST** 2-FIC-84-19, PATH B VENT FLOW CONT, as applicable, to maintain ALL
of the following:

• Stable flow as indicated on controller,
AND
• 2-PA-84-21, VENT PRESS TO SGT HIGH, alarm light extinguished,
AND
• Release rates as determined below:

       i.   IF PRIMARY CONTAINMENT FLOODING per C-1, Alternate Level
Control, is in progress, THEN **MAINTAIN** release rates below those
specified in Attachment 2.

      ii.   IF Severe Accident Management Guidelines are being executed,
THEN **MAINTAIN** release rates below those specified by the TSC SAM
Team.

     iii.   IF Venting for ANY other reason than items i or ii above, THEN
MAINTAIN release rates below

        • Stack release rate of 1.4 x 107 µCi/s
        AND
        • 0-SI-4.8.B.1.a.1 release fraction of 1.

Standard:

    Request release rates from Log AUO

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	Primary Containment Flooding and SAMG are not being executed

CUE:	When Release rates are requested report a Stack Release Rate of **1.6 x 10^7** µCi/s and release fraction of .95

****

<u>Performance Step 27:</u>   Critical <u>X</u> Not Critical

REDUCE vent flow to obtain acceptable release rate/fraction readings.

<u>Standard:</u>

Recognized exceeding Release Rate Limit of 1.4 x 10^7 μCi/s and adjusted 2-FIC-84-19

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE:	If Flow is reduced report a new Stack Release Rate of **1.3 x 10^7** μCi/s and a release fraction of .85

STOP TIME _____

END OF TASK

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: g

TASK NUMBER: U-000-EM-61

TASK TITLE: 3-EOI Appendix-12 Primary Containment Venting

K/A NUMBER: 295017 AA1.03   K/A RATING: RO 3.4 SRO: 3.4

TASK STANDARD: Vent Primary Containment IAW 3-EOI Appendix-12, after Suppression
Chamber Vent path fails will vent through Drywell and flow adjusted to
limit high release rates.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-EOI Appendix-12

VALIDATION TIME: 7 minutes

MAX. TIME ALLOWED:

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ___   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are a Unit 2 Operator. Unit 3 reactor has scrammed. A small leak exists in primary containment. EOI-2 has been followed to PC/P-1.

INITIATING CUE: The Unit Supervisor directs you to vent the pressure suppression chamber in accordance with 3-EOI Appendix-12.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit 3 Operator. Unit 2 reactor has scrammed. A small leak exists in primary containment. EOI-2 has been followed to PC/P-1.

INITIATING CUE: The Unit Supervisor directs you to vent the pressure suppression chamber in accordance with 3-EOI Appendix-12.

START TIME_____

****

Performance Step 1:   Critical _ Not Critical X

CAUTION

Stack release rates exceeding $1.4 \times 10_7\,\mu\text{Ci/s}$, or 0-SI-4.8.B.1.a.1 release fraction above 1.0 will result in ODCM release limits being exceeded.

1.   **VERIFY** at least one SGTS train in service.

Standard:

        Verifies SGTS in service

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2:   Critical _ Not Critical X

2.   **VERIFY CLOSED** the following valves (Panel 3-9-3 or Panel 3-9-54):

-   3-FCV-64-31, DRYWELL INBOARD ISOLATION VLV,
-   3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE,
-   3-FCV-64-34, SUPPR CHBR INBOARD ISOLATION VLV,
-   3-FCV-64-32, SUPPR CHBR VENT INBD ISOL VALVE.

Standard:

        Verifies closed the above listed valves

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3:   Critical _ Not Critical X

3.   IF While executing this procedure to vent the Suppression Chamber, Suppression Pool
        water level can not be determined to be below 20 ft, THEN **PERFORM** step 13 to secure
        the vent path and reenter this procedure if further venting is required.

Standard:

        Verifies Suppression Pool Level below 20 feet

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4:   Critical _ Not Critical X

4.   IF While executing this procedure, the desired vent path is lost or can not be established,
        THEN **PERFORM** step 13 to secure the vent path and reenter this procedure if further
        venting is required.

Standard:

        NA

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical_ Not Critical X

5.   IF While executing this procedure, CAD addition per SAMG-2, Step G-4 OR G-9, is to
        begin, THEN BEFORE CAD is initiated, **PERFORM** Step 13 to secure the vent path.

Standard:

        NA

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

| CUE: CAD addition is not required |

****

Performance Step 6:   Critical _ Not Critical X

NOTE: Venting may be accomplished using EITHER:
- 3-FIC-84-19, PATH B VENT FLOW CONT,
     OR
- 3-FIC-84-20, PATH A VENT FLOW CONT.

NOTE: Unless the TSC recommends otherwise, venting the Drywell DIRECTLY should be performed ONLY if the Suppression Chamber can NOT be vented.

6.   IF ANY of the following exists:
- Suppression Pool water level can not be determined to be below 20 ft,
     OR
- Suppression Chamber can NOT be vented,
     OR
- SRO orders DIRECT drywell venting,

   THEN **CONTINUE** in this procedure at:

- Step 10 to vent the Drywell through 3-FCV-84-19,
     OR
- Step 11 to vent the Drywell through 3-FCV-84-20.

Standard:

   Verifies Suppression Pool Level below 20 feet and proceeds to step 7

SAT__ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 7:   Critical _ Not Critical X

7.   **CONTINUE** in this procedure at:

- Step 8 to vent the Suppression Chamber through 3-FCV-84-19,
                      OR
- Step 9 to vent the Suppression Chamber through 3-FCV-84-20.

Standard:

   Continues at Step 8 or 9

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

NRC:	Step 8 starts below, Step 9 starts at performance step 13

****

Performance Step 8:   Critical X Not Critical

8.   **VENT** the Suppression Chamber using 3-FIC-84-19, PATH B VENT FLOW CONT, as
        follows:

   a.   **PLACE** keylock switch 3-HS-84-35, SUPPR CHBR/DW VENT ISOL BYP
           SELECT, to SUPPR-CHBR position (Panel 3-9-54).

Standard:

   Placed **3**-HS-84-35 in the SUPPR-CHBR position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 9:</u>   Critical _ Not Critical <u>X</u>

     b.   **VERIFY OPEN 3**-FCV-64-32, SUPPR CHBR VENT INBD ISOL VALVE
            (Panel 3-9-54).

<u>Standard:</u>

     3-FCV-64-32 fails to open Operator proceeds to Vent the Suppression Chamber using
3-FIC-84-20 Step 9.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 10:</u>   Critical <u>X</u> Not Critical

9.   **VENT** the Suppression Chamber using 3-FIC-84-20, PATH A VENT FLOW CONT, as
      follows:

     a.   **VERIFY OPEN 3**-FCV-64-141, DRYWELL DP COMP BYPASS VALVE
            (Panel 3-9-3).

<u>Standard:</u>

     Opens 3-FCV-64-141

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11:   Critical X Not Critical

   b.   **PLACE** keylock switch 3-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP
           SELECT, to SUPPR-CHBR position (Panel 3-9-54).

Standard:

   Placed **3-HS-84-36** in the SUPPR-CHBR position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12:   Critical _ Not Critical X

   c.   **VERIFY OPEN 3**-FCV-64-34, SUPPR CHBR INBOARD ISOLATION VLV
           (Panel 3-9-54).

Standard:

   Verifies 3-FCV-64-34 Open

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13:   Critical _ Not Critical X

   d.   **VERIFY** 3-FIC-84-20, PATH A VENT FLOW CONT, in AUTO with setpoint at
           100 scfm (Panel 3-9-55).

Standard:

   Places 3-FIC-84-20 in Auto at 100 SCFM

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 14:</u>   Critical _ Not Critical <u>X</u>

     e.   **PLACE** keylock switch 3-HS-84-20, 3-FCV-84-20 ISOLATION BYPASS, in
            BYPASS (Panel 3-9-55).

4.   IF While executing this procedure, the desired vent path is lost or cannot be established,
     THEN **PERFORM** step 13 to secure the vent path and re-enter this procedure if further
     venting is required.

<u>Standard:</u>

     3-FCV-84-20 will fail to Open, Operator proceeds to Step 4 which directs Step 13

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE:	SRO Directs Drywell venting

****

Performance Step 15:   Critical _ Not Critical X

13.   WHEN ANY of the following exists:

- Venting is no longer required,
- Pressure in the space being vented approaches zero,
- Directed by SRO,
OR
- Directed by Step 3, 4, or 5,

THEN **SECURE** venting as follows:

a.   **VERIFY** the following keylock switches in OFF (Panel 3-9-54):

- 3-HS-84-35, SUPPR CHBR / DW VENT ISOL BYP SELECT,
- 3-HS-84-36, SUPPR CHBR / DW VENT ISOL BYP SELECT.

Standard:

Operator places 3-HS-84-35 and 36 in Off

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 16:   Critical _ Not Critical X

b.   **VERIFY** keylock switch 3-HS-84-20, 3-FCV-84-20 ISOLATION BYPASS, in
       NORMAL (Panel 3-9-55).

Standard:

Places 3-HS-84-20 to Normal

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 17:   Critical _ Not Critical X

     c.   **VERIFY** keylock switch 3-HS-84-19, 3-FCV-84-19 CONTROL,
            in CLOSE (Panel 3-9-55).

Standard:

     Verifies 3-HS-84-19 is in Close

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 18:   Critical _ Not Critical X

     d.   **VERIFY CLOSED** the following valves (Panel 3-9-3 or Panel 3-9-54):

        • 3-FCV-64-31, DRYWELL INBD ISOLATION VLV,
        • 3-FCV-64-29, DRYWELL VENT INBD ISOL VALVE,
        • 3-FCV-64-34, SUPPR CHBR INBD ISOLATION VLV,
        • 3-FCV-64-32, SUPPR CHBR VENT INBD ISOL VALVE.

Standard:

     Verifies above listed valves are closed

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 19:   Critical _ Not Critical X

     e.   **VERIFY CLOSED** 3-FCV-64-141, DRYWELL DP COMP BYPASS VALVE
            (Panel 3-9-3).

Standard:

     Verifies closed 3-FCV-64-141

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	SRO Directs Drywell venting

****

Performance Step 20:   Critical X Not Critical

10.   **VENT** the Drywell using 2-FIC-84-19, PATH B VENT FLOW CONT, as follows:

    a.   **VERIFY CLOSED** 2-FCV-64-141, DRYWELL DP COMP BYPASS VALVE (Panel 2-9-3).

Standard:

    Verify Closed 2-FCV-64-141

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 21:   Critical X Not Critical

    b.   **PLACE** keylock switch 3-HS-84-36, SUPPR CHBR/DW VENT ISOL BYP SELECT, to DRYWELL position (Panel 3-9-54).

Standard:

    Placed **3**-HS-84-36 in the DRYWELL position

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 22:   Critical _ Not Critical X

    c.   **VERIFY OPEN 3**-FCV-64-29, DRYWELL VENT INBD ISOL VALVE (Panel 3-9-54).

Standard:

    Verifies 3-FCV-64-29 Opens

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 23:   Critical X̲ Not Critical

    d.   **PLACE 3**-FIC-84-19, PATH B VENT FLOW CONT, in AUTO with setpoint at 100 scfm (Panel 3-9-55).

Standard:

    Places 3-FIC-84-19 in Auto at 100 SCFM

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 24:   Critical X̲ Not Critical

    e.   **PLACE** keylock switch 3-HS-84-19, 3-FCV-84-19 CONTROL, in OPEN (Panel 3-9-55).

Standard:

    Places 3-HS-84-19 in Open

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 25:   Critical _ Not Critical X̲

    f.   **VERIFY 3**-FIC-84-19, PATH B VENT FLOW CONT, is indicating approximately 100 scfm.

    g.   **CONTINUE** in this procedure at step 12.

Standard:

    Verifies 3-FIC-84-19 is indicating approximately 100 scfm and continues at step 12

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 26:   Critical _ Not Critical X

12.   **ADJUST** 3-FIC-84-19, PATH B VENT FLOW CONT, as applicable, to maintain ALL of the following:

• Stable flow as indicated on controller,
AND
• 3-PA-84-21, VENT PRESS TO SGT HIGH, alarm light extinguished,
AND
• Release rates as determined below:

      i.   IF PRIMARY CONTAINMENT FLOODING per C-1, Alternate Level Control, is in progress, THEN **MAINTAIN** release rates below those specified in Attachment 2.

      ii.   IF Severe Accident Management Guidelines are being executed, THEN **MAINTAIN** release rates below those specified by the TSC SAM Team.

      iii.   IF Venting for ANY other reason than items i or ii above, THEN **MAINTAIN** release rates below

          • Stack release rate of 1.4 x 107 µCi/s
          AND
          • 0-SI-4.8.B.1.a.1 release fraction of 1.

Standard:

     Request release rates from Log AUO

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE:	Primary Containment Flooding and SAMG are not being executed

CUE:	When Release rates are requested report a Stack Release Rate of **1.6 x 10⁷** µCi/s and release fraction of .95

****

<u>Performance Step 27:</u>   Critical <u>X</u> Not Critical

REDUCE vent flow to obtain acceptable release rate/fraction readings.

<u>Standard:</u>

Recognized exceeding Release Rate Limit of 1.4 x 10^7 µCi/s and adjusted 3-FIC-84-19

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE:	If Flow is reduced report a new Stack Release Rate of **1.3 x 10^7** µCi/s and a release fraction of .85

STOP TIME _____

<div align="center">END OF TASK</div>

OPERATOR: _____

RO _____   SRO _____   DATE: _____

JPM NUMBER: h

TASK NUMBER: U-001-NO-08

TASK TITLE: Close MSIVs during Power Operations

K/A NUMBER: 239001 A4.01   K/A RATING: RO 4.2 SRO 4.0

TASK STANDARD: Closes Inboard and Outboard MSIVs on Main Steam Line C

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-1

VALIDATION TIME: 20 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES _____   NO _____

RESULTS: SATISFACTORY _____   UNSATISFACTORY _____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. No MSIVs LS-3 or LS-4 is failed. Precautions and limitations of 2-OI-1, Main Steam System, have been reviewed.

INITIATING CUES: The Unit Supervisor directs you to close both MSIVs on Main Steam Line C per 2-OI-1, Main Steam System, section 8.2

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect, if applicable). When you have completed your assigned task, you will say "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. No MSIVs LS-3 or LS-4 is failed. Precautions and limitations of 2-OI-1, Main Steam System, have been reviewed.

INITIATING CUES: The Unit Supervisor directs you to close both MSIVs on Main Steam Line C per 2-OI-1, Main Steam System, section 8.2

START TIME_____

****

Performance Step 1:   Critical _ Not Critical X

8.2.3 Closing Main Steam Line C Valve(s) During Power Operations

NOTES
1) Test stroking an MSIV to the closed position takes about 45-60 seconds.
2) LS-5 limit switches cause the MSIV green position indicator light to illuminate at 85% open. The LS-3 and LS-4 limit switches for the Unit 2 MISVs actuate at 90% open to initiate a reactor scram via the RPS. During MSIV testing, a half-scram initiation signal will be received before the green position indicator light illuminates.
3) Closing a MSIV with another main steam line MSIV closed or a failed LS-3 or LS-4 switch, may cause a half or a full reactor scram. **REFER TO** Illustrations 1 and 2.
4) Main Steam Line Flow Indication goes to the Reactor Feed Control System. Closing and Opening a MSIV will cause a fluctuation in the Reactor Feed Water System.

[1]   **REVIEW** all Precautions and Limitations in Section 3.0.

[2]   **VERIFY** that ALL MSIVs are open.

[3]   **CHECK** by administration means that no MSIVs LS-3 or LS-4 has failed (i.e., Narrative Logs, Caution Orders, Work Orders).

[4]   **IF** a failed LS-3 or LS-4 for a MSIV has been determined, **THEN CHECK** that a Half Scram will NOT occur when the valve to be operated is closed. (**REFER TO** Illustrations 1 and 2, and RPS Logic prints 730E915)

[5]   **IF** a Half Scram is expected to occur, **THEN STOP** and **OBTAIN** Unit Supervisors permission to continue in the procedure.

[6]   **VERIFY** or **LOWER** Reactor Power to ≤ 66% per 2-GOI-100-12 or 2-GOI-100-12A.

Standard:

Given in initial conditions for step 3, power is less than 66%

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 2:   Critical X Not Critical

NOTES
1) To prevent a RPS Half Scram, only one set of Main Steam Line Isolation Valves (Inboard and Outboard) should be closed at a time.
2) Closing a MSIV may cause MSL drain valves to operate. P&L 3.3A, 3.3B and 3.3C should be reviewed for applicability.
3) When a MSIV is closed at power, the potential exists for an isolation of the Hydrogen Water Chemistry System to occur. **REFER TO** Precaution 3.2.1B.
4) During power operations when using the test pushbutton to slow stroke the MISV closed, the MSIV is to be considered closed when either one of the following conditions are met: • The red position indicating light on Panel 9-3 extinguishes, or   • The test pushbutton has been held for approximately 3 minutes and the steam flow in the isolated MSL is essentially zero (less than 0.4 Mlb/hr).

[7]   **PERFORM** the following to close MSIV LINE C INBOARD MSIV:

[7.1]   **DEPRESS** and **HOLD** MSIV LINE C INBOARD TEST, 2-HS-1-37B push-button until Step 8.2.3[7.3].

[7.2]   **WHEN** MSIV LINE C INBOARD indicates closed
                    OR
AFTER approximately three minutes have past since Step 8.2.3[7.1] and steam flow in the isolated MSL has been verified as essentially zero, **THEN**

•   **PLACE** MSIV LINE C INBOARD, 2-HS-1-37A in the CLOSE position.

[7.3]   **RELEASE** MSIV LINE C INBOARD TEST, 2-HS-1-1-37B push-button

Standard:

Operator depresses and holds the MSIV Line C Inboard test push button until the MSIV is closed, then places the switch to close, and then releases the test push button.
Note: if the valve goes back open after it is closed it would be a failure.

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

<u>Performance Step 3:</u>   Critical <u>X</u> Not Critical

NOTES
1) To prevent a RPS Half Scram, only one set of Main Steam Line Isolation Valves (Inboard and Outboard) should be closed at a time.
2) Closing a MSIV may cause MSL drain valves to operate. P&L 3.3A, 3.3B and 3.3C should be reviewed for applicability.
3) When a MSIV is closed at power, the potential exists for an isolation of the Hydrogen Water Chemistry System to occur. **REFER TO** Precaution 3.2.1B.

4) During power operations when using the test pushbutton to slow stroke the MISV closed, the MSIV is to be considered closed when either one of the following conditions are met:
    • The red position indicating light on Panel 9-3 extinguishes, or
    • The test pushbutton has been held for approximately 3 minutes and the steam flow in the isolated MSL is essentially zero (less than 0.4 Mlb/hr).

[8]   **PERFORM** the following to close MSIV LINE C OUTBOARD MSIV:

[8.1]   **DEPRESS** and **HOLD** MSIV LINE C OUTBOARD TEST, 2-HS-1-38B push-button until Step 8.2.3[8.3].

[8.2]   **WHEN** MSIV LINE C OUTBOARD indicates closed
                     OR
AFTER approximately three minutes have past since Step 8.2.3[8.1] and steam flow in the isolated MSL has been verified as essentially zero, **THEN**

• **PLACE** MSIV LINE C OUTBOARD, 2-HS-1-38A in the CLOSE position.

[8.3]   **RELEASE** MSIV LINE C OUTBOARD TEST, 2-HS-1-1-38B push-button.

<u>Standard:</u>

Operator depresses and holds the MSIV Line C Outboard test push button until the MSIV is closed, then places the switch to close, and then releases the test push button.
Note: if the valve goes back open after it is closed it would be a failure.

SAT___ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 4:   Critical X Not Critical

NOTES
1)   When turbine generator RPM is above 1700 and one or more MSIVs fully close, Valves 2-FCV-1-168, -169, -170, and -171 will close and Valves 2-FCV-1-57, MSIV DOWNSTREAM DRAINS SHUTOFF, and 2-FCV-1-58, UPSTREAM MSL DRAIN TO CONDENSER opens, if closed, and their handswitches are in AUTO.
2)   When opening the 2-FCV-1-55 and 2-FCV-56, Main Steam Line Drain Valves the HWC system may isolate on LOW OFFGAS Oxygen.

[9] **OPEN** 2-FCV-1-55 using MN STM LINE DRAIN INBD ISOLATION VLV, 2-HS-1-55A.

Standard:

   Opens drain valve 2-FCV-1-55

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5:   Critical X Not Critical

[10] **OPEN** 2-FCV-1-56 using MN STM LINE DRAIN OUTBD ISOLATION VLV, 2-HS-1-56A.

Standard:

   Opens drain valve 2-FCV-1-56

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 6:</u>   Critical _ Not Critical <u>X</u>

[11] **VERIFY OPEN** 2-FCV-1-57 using MSIV DOWNSTREAM DRAINS SHUTOFF, 2-HS-1-57A.

[12] **VERIFY OPEN** 2-FCV-1-58 using UPSTREAM MSL DRAIN TO CONDENSER, 2-HS-1-58A.

[13] **CHECK CLOSED** valves 2-FCV-1-168, -169, -170, and -171, ON 2-PNL-9-3 as follows: **VERIFY** the green indicating light ILLUMINATED and the red indicating light EXTINGUISHED for MAIN STM LINE DRAIN VALVES POSITION, 2-ZI-1-174.

<u>Standard:</u>

   Verifies 2-FCV-1-57 and 58 are open and that 2-FCV-1-168, 169, 170, and 171 are closed.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 7:</u>   Critical _ Not Critical <u>X</u>

[14]   **IF** desired **AND** directed by the Unit Supervisor, **THEN**

       RAISE Reactor Power per 2-GOI-100-12, while maintaining the   remaining steam lines below an average of 3.54 x 106 lbm/hr steam flow (approximately 80% Reactor Power), on the remaining three main steam lines.

<u>Standard:</u>

   None, another Operator will raise power.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	Another Operator will raise Reactor Power

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: h

TASK NUMBER: U-001-NO-08

TASK TITLE: Close MSIVs during Power Operations

K/A NUMBER: 239001 A4.01   K/A RATING: RO 4.2 SRO 4.0

TASK STANDARD: Closes Inboard and Outboard MSIVs on Main Steam Line C

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-1

VALIDATION TIME: 20 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. No MSIVs LS-3 or LS-4 is failed. Precautions and limitations of 3-OI-1, Main Steam System, have been reviewed.

INITIATING CUES: The Unit Supervisor directs you to close both MSIVs on Main Steam Line C per 3-OI-1, Main Steam System, section 8.2

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect, if applicable). When you have completed your assigned task, you will say "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. No MSIVs LS-3 or LS-4 is failed. Precautions and limitations of 3-OI-1, Main Steam System, have been reviewed.

INITIATING CUES: The Unit Supervisor directs you to close both MSIVs on Main Steam Line C per 3-OI-1, Main Steam System, section 8.2

START TIME_____

****

Performance Step 1:   Critical _ Not Critical X

8.2.3 Closing Main Steam Line C Valve(s) During Power Operations

NOTES
1)   Test stroking an MSIV to the closed position takes about 45-60 seconds.
2)   LS-5 limit switches cause the MSIV green position indicator light to illuminate at 85% open. The LS-3 and LS-4 limit switches for the Unit 3 MISVs actuate at 90% open to initiate a reactor scram via the RPS. During MSIV testing, a half-scram initiation signal will be received before the green position indicator light illuminates.
3)   Closing a MSIV with another main steam line MSIV closed or a failed LS-3 or LS-4 switch, may cause a half or a full reactor scram. **REFER TO** Illustrations 1 and 2.
4)   Main Steam Line Flow Indication goes to the Reactor Feed Control System. Closing and Opening a MSIV will cause a fluctuation in the Reactor Feed Water System.

[1]   **REVIEW** all Precautions and Limitations in Section 3.0.

[2]   **VERIFY** that ALL MSIVs are open.

[3]   **CHECK** by administration means that no MSIVs LS-3 or LS-4 has failed (i.e., Narrative Logs, Caution Orders, Work Orders).

[4]   **IF** a failed LS-3 or LS-4 for a MSIV has been determined, **THEN CHECK** that a Half Scram will NOT occur when the valve to be operated is closed. (**REFER TO** Illustrations 1 and 2, and RPS Logic prints 730E915)

[5]   **IF** a Half Scram is expected to occur, **THEN STOP** and **OBTAIN** Unit Supervisors permission to continue in the procedure.

[6]   **VERIFY** or **LOWER** Reactor Power to ≤ 66% per 3-GOI-100-12 or 3-GOI-100-12A.

Standard:

        Given in initial conditions for step 3, power is less than 66%

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

<u>Performance Step 2:</u>   Critical <u>X</u> Not Critical

NOTES
1)   To prevent a RPS Half Scram, only one set of Main Steam Line Isolation Valves (Inboard and Outboard) should be closed at a time.
2)   Closing a MSIV may cause MSL drain valves to operate. P&L 3.3A, 3.3B and 3.3C should be reviewed for applicability.
3)   When a MSIV is closed at power, the potential exists for an isolation of the Hydrogen Water Chemistry System to occur. **REFER TO** Precaution 3.2.1C.

4)   During power operations when using the test pushbutton to slow stroke the MISV closed, the MSIV is to be considered closed when either one of the following conditions are met:
 	
    • The red position indicating light on Panel 9-3 extinguishes, or
 	
    • The test pushbutton has been held for approximately 3 minutes and the steam flow in the isolated MSL is essentially zero (less than 0.4 Mlb/hr).

[7]   **PERFORM** the following to close MSIV LINE C INBOARD MSIV:

[7.1]   **DEPRESS** and **HOLD** MSIV LINE C INBOARD TEST, 3-HS-1-37B push-button until Step 8.2.3[7.3].

[7.2]   **WHEN** MSIV LINE C INBOARD indicates closed
                         OR
        AFTER approximately three minutes have past since Step 8.2.3[7.1] and steam flow in the isolated MSL has been verified as essentially zero, **THEN**

        •   **PLACE** MSIV LINE C INBOARD, 3-HS-1-37A in the CLOSE position.

[7.3]   **RELEASE** MSIV LINE C INBOARD TEST, 3-HS-1-1-37B push-button

<u>Standard:</u>

        Operator depresses and holds the MSIV Line C Inboard test push button until the MSIV is closed, then places the switch to close, and then releases the test push button.
        Note: if the valve goes back open after it is closed it would be a failure.

SAT__ UNSAT___ N/A ___COMMENTS:_____

****

Performance Step 3:   Critical X Not Critical

NOTES
1) To prevent a RPS Half Scram, only one set of Main Steam Line Isolation Valves (Inboard and Outboard) should be closed at a time.
2) Closing a MSIV may cause MSL drain valves to operate. P&L 3.3A, 3.3B and 3.3C should be reviewed for applicability.
3) When a MSIV is closed at power, the potential exists for an isolation of the Hydrogen Water Chemistry System to occur. **REFER TO** Precaution 3.2.1C.
4) During power operations when using the test pushbutton to slow stroke the MISV closed, the MSIV is to be considered closed when either one of the following conditions are met: • The red position indicating light on Panel 9-3 extinguishes, or • The test pushbutton has been held for approximately 3 minutes and the steam flow in the isolated MSL is essentially zero (less than 0.4 Mlb/hr).

[8]   **PERFORM** the following to close MSIV LINE C OUTBOARD MSIV: (Otherwise N/A this section)

[8.1]   **DEPRESS** and **HOLD** MSIV LINE C OUTBOARD TEST, 3-HS-1-38B push-button until Step 8.2.3[8.3].

[8.2]   **WHEN** MSIV LINE C OUTBOARD indicates closed
                    OR
AFTER approximately three minutes have past since Step 8.2.3[8.1] and steam flow in the isolated MSL has been verified as essentially zero, **THEN**

• **PLACE** MSIV LINE C OUTBOARD, 3-HS-1-38A in the CLOSE position.

[8.3]   **RELEASE** MSIV LINE C OUTBOARD TEST, 3-HS-1-1-38B push-button.

Standard:

Operator depresses and holds the MSIV Line C Outboard test push button until the MSIV is closed, then places the switch to close, and then releases the test push button.
Note: if the valve goes back open after it is closed it would be a failure.

SAT__ UNSAT___ N/A ___COMMENTS:_____

****
Performance Step 4:   Critical X Not Critical

NOTES
1)   When turbine generator RPM is above 1700 and one or more MSIVs fully close, Valves 3-FCV-1-168, -169, -170, and -171 will close and Valves 3-FCV-1-57, MSIV DOWNSTREAM DRAINS SHUTOFF, and 3-FCV-1-58, UPSTREAM MSL DRAIN TO CONDENSER opens, if closed, and their handswitches are in AUTO.
2)   When TACF 3-10-004-001 is in effect, 3-FCV-1-170 is maintained in the OPEN position with its breaker maintained in the OFF position. The valve will not automatically open or close and can only be repositioned locally using the manual handwheel. The valve is located in the Unit 3 Turbine Bldg. steam tunnel.
3)   When opening the 3-FCV-1-55 and 3-FCV-56, Main Steam Line Drain Valves the HWC system may isolate on LOW OFFGAS Oxygen.

[9] **OPEN** 3-FCV-1-55 using MN STM LINE DRAIN INBD ISOLATION VLV, 3-HS-1-55A.

Standard:

       Opens drain valve 3-FCV-1-55

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****
Performance Step 5:   Critical X Not Critical

[10] **OPEN** 3-FCV-1-56 using MN STM LINE DRAIN OUTBD ISOLATION VLV, 3-HS-1-56A.

Standard:

       Opens drain valve 3-FCV-1-56

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6:   Critical _ Not Critical X

[11] **VERIFY OPEN** 3-FCV-1-57 using MSIV DOWNSTREAM DRAINS SHUTOFF, 3-HS-1-57A.

[12] **VERIFY OPEN** 3-FCV-1-58 using UPSTREAM MSL DRAIN TO CONDENSER, 3-HS-1-58A.

[13] **CHECK CLOSED** valves 3-FCV-1-168, -169, -170, and -171, ON 3-PNL-9-3 as follows: **VERIFY** the green indicating light ILLUMINATED and the red indicating light EXTINGUISHED for MAIN STM LINE DRAIN VALVES POSITION, 3-ZI-1-174.

Standard:

Verifies 3-FCV-1-57 and 58 are open and that 3-FCV-1-168, 169, 170, and 171 are closed.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7:   Critical _ Not Critical X

[14]   **IF** desired **AND** directed by the Unit Supervisor, **THEN**

RAISE Reactor Power per 3-GOI-100-12, while maintaining the remaining steam lines below an average of 3.54 x 106 lbm/hr steam flow (approximately 80% Reactor Power), on the remaining three main steam lines.

Standard:

None, another Operator will raise power.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Another Operator will raise Reactor Power

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: i

TASK NUMBER: U-35A-AL-04

TASK TITLE: Stator Cooling Water System Return to Automatic Temp Control

K/A NUMBER: 241000 A2.10   K/A RATING: RO 3.1 SRO 3.2

TASK STANDARD: Stator Cooling Water System simulated returned to Automatic Temperature
                          Control

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 2-ARP-25-114A, Window 9, STATOR CLG
                                                    WATER GEN INLET HI TEMP

VALIDATION TIME: 5 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                    EXAMINER

INITIAL CONDITIONS: You are an Auxiliary Unit Operator. The Unit 2 Main Generator was tied to the grid several days ago. Approximately 3 hours later, Annunciator STATOR CLG WATER GEN INLET HI TEMP was received on Panel-25-114A, Window 9. The Turbine Building AUO responded in accordance with 2-ARP-25-114A, Window 9. Control Air Supply to 2-TCV-35-54 was manually isolated.

Subsequently, an automatic isolation signal was received. The failure was determined to be failed temperature controller, 2-TC-35-54, the controller has been replaced and the system is ready to be returned to automatic control.

INITIATING CUE: You are directed to return the Stator Water Cooling system to automatic temperature control in accordance with 2-ARP-25-114A, Window 9, step L

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. <u>ALL STEPS WILL BE SIMULATED</u>. Do <u>NOT</u> operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Auxiliary Unit Operator. The Unit 2 Main Generator was tied to the grid several days ago. Approximately 3 hours later, Annunciator STATOR CLG WATER GEN INLET HI TEMP was received on Panel-25-114A, Window 9. The Turbine Building AUO responded in accordance with 2-ARP-25-114A, Window 9. Control Air Supply to 2-TCV-35-54 was manually isolated.

Subsequently, an automatic isolation signal was received. The failure was determined to be failed temperature controller, 2-TC-35-54, the controller has been replaced and the system is ready to be returned to automatic control.

INITIATING CUE: You are directed to return the Stator Water Cooling system to automatic temperature control in accordance with 2-ARP-25-114A, Window 9, step L

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

****

Performance Step 1:   Critical <u>X</u> Not Critical

      L.   **WHEN** ready to return to automatic temperature control, **THEN PERFORM** the following:

          •   **VERIFY OPEN** TCV-35-54 ISOL, 2-32-1007.

Standard:

     Operator simulates opening 2-32-1007

SAT____ UNSAT_____ Comments:_____

CUE: When location of 2-32-1007 is identified and operator has simulated opening the valve, the valve is open

****

Performance Step 2:   Critical X̲ Not Critical

- **IF** the air supply to 2-TCV-35-54 was automatically isolated, **THEN PRESS** 2-HS-35-54 to RESET (OPEN) the air supply to 2-TCV-35-54.

Standard:

Operator simulates depressing 2-HS-35-54 to RESET (OPEN) the air supply to 2-TCV-35-54

SAT____ UNSAT____ Comments:_____

_____

CUE: When location of 2-HS-35-54 is identified and operator has simulated depressing the button, the air supply to 2-TCV-35-54 is open.
NOTE: The reset button is on panel 25-114A (Stator Water Cooling Panel)

****

<u>Performance Step 3:</u>   Critical <u>X</u> Not Critical

• **FULLY LOWER** (Clockwise) the 2-TCV-35-54 handwheel.

<u>Standard</u>:

Operator simulates turning the 2-TCV-35-54 handwheel fully clockwise

SAT____ UNSAT____ Comments:_____

_____

| CUE: When location of 2-TCV-35-54 is determined and operator has simulated turning the handwheel fully clockwise, the valve is FULLY LOWERED |

END OF TASK

STOP TIME_____

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: j

TASK NUMBER: S-082-NO-01

TASK TITLE: Transfer DG A control to A 4KV SD BD & Secure DG A

K/A NUMBER: 264000 A2.01   K/A RATING: RO 3.5 SRO 3.6

TASK STANDARD: Simulate transfer of Diesel Generator A control to 4KV Shutdown Board
                A and simulate securing the Diesel Generator from the Shutdown Board

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 0-OI-82, Standby Diesel Generator System

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ____

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                EXAMINER

INITIAL CONDITIONS: You are the extra operator. DG A is running and aligned in Parallel with System for a monthly operability check. ~~DG A is paralleled and loaded with the A 4KV SD BD.~~ The control room operator has lost control of DG A from Panel 9-23 while lowering load for termination from parallel operation. Current load is 100 kW and 75 kVAR. The Unit Operator is standing by at Panel 9-23 and has given you permission to transfer control of the Diesel Generator to the 4KV Shutdown Board. An AUO is on station at the Central Diesel Information Center, Panel 25-41, with a radio. An AUO is also on station locally at the Diesel Generator, with a radio, to obtain any local readings or perform any local actions. All Precautions and Limitations of 0-OI-82, Standby Diesel Generator System, section 3.0, have been reviewed.

INITIATING CUE: The Unit 2 Unit Supervisor has directed you to transfer DG A control to the A 4KV SD BD, in accordance with 0-OI-82, Standby Diesel Generator System, Section 8.4; **THEN** shutdown the diesel from the A 4KV Shutdown board in accordance with 0-OI-82, Standby Diesel Generator System, Section 7.2.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. <u>ALL STEPS WILL BE SIMULATED</u>. Do <u>NOT</u> operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the extra operator. DG A is running and aligned in Parallel with System for a monthly operability check. DG A is paralleled and loaded with the A 4KV SD BD. The control room operator has lost control of DG A from Panel 9-23 while lowering load for termination from parallel operation. Current load is 100 kW and 75 kVAR. The Unit Operator is standing by at Panel 9-23 and has given you permission to transfer control of the Diesel Generator to the 4KV Shutdown Board. An AUO is on station at the Central Diesel Information Center, Panel 25-41, with a radio. An AUO is also on station locally at the Diesel Generator, with a radio, to obtain any local readings or perform any local actions. All Precautions and Limitations of 0-OI-82, Standby Diesel Generator System, section 3.0, have been reviewed.

INITIATING CUE: The Unit 2 Unit Supervisor has directed you to transfer DG A control to the A 4KV SD BD, in accordance with 0-OI-82, Standby Diesel Generator System, Section 8.4; **THEN** shutdown the diesel from the A 4KV Shutdown board in accordance with 0-OI-82, Standby Diesel Generator System, Section 7.2.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

****

<u>Performance Step 1:</u>   Critical __ Not Critical <u>X</u>

8.4   Transfer of Diesel Generator Control to 4-kV Shutdown

NOTE
Transfer of Diesel Generator control to the associated 4-kV shutdown board is usually performed for test purposes or for loss of Diesel Generator control on Panel 9-23.

      [1]   **REQUEST** permission from the Unit Operator to transfer control of the Diesel Generator to the 4-kV shutdown board.

<u>Standard:</u>

      Given in initial conditions

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

<u>Performance Step 2:</u>   Critical __ Not Critical <u>X</u>

      [2]   **STATION** an operator at the Central Diesel Information Center, Panel 25-41.

<u>Standard:</u>

      Given in initial conditions

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 3:   Critical __ Not Critical X

[3]   **ESTABLISH** communications between personnel at 4-kV Shutdown Board A and the Central Diesel Information Center.

Standard:

    Given in initial conditions

SAT___ UNSAT___ N/A ___COMMENTS:_____

CUE:	If necessary, communicate with candidate as operator at the Central Diesel Information Center

CUE:	If requested when arriving at DG A Output Breaker 1818, Voltage is 4250, Amp meters A, B, and C indicate 50 amps, kVAR = 75, kW = 700. Breaker 1818 red light is ON and amber light is ON. DG Control Switch Red light ON

****

Performance Step 4:   Critical X Not Critical

[4]   **IF** the Diesel Generator output breaker is closed, **THEN PULL and PLACE**
       DIESEL GENERATOR A OPER MODE SELECTOR SWITCH on 4-kV
       Shutdown Board A in the same position as the DIESEL GENERATOR A
       OPERATION MODE SELECTOR switch on Panel 9-23.

Diesel	Handswitch Name	Handswitch No.	Compartment
A	DG A MODE SWITCH	0-HS-082-000A/5B	22
B	DG B MODE SWITCH	0-HS-082-000B/5B	4
C	DG C MODE SWITCH	0-HS-082-000C/5B	4
D	DG D MODE SWITCH	0-HS-082-000D/5B	20

Standard:

       Simulates pulling and placing DG A Mode Switch, 0-HS-082-000A/5B, in Parallel with
System

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	As Unit Operator, DG A Mode Switch is in Parallel with System on Panel 9-23.
	When candidate simulates operating OPER MODE SELECTOR SWITCH on 4KV Shutdown Board A, switch is in Parallel with System.

****

Performance Step 5:   Critical X Not Critical

CAUTION

Failure to verify the breaker local control switch in "normal after close" <u>before</u> placing the control transfer switch in "EMERG" can prevent auto closing of the Diesel Generator breaker on degraded voltage or loss of voltage to the Shutdown Board.

---

[5]   **IF** transfer of Diesel Generator control to 4-kV Shutdown Board A is required, **THEN PERFORM** the following:

[5.1]   **VERIFY** DG A OUTPUT BKR 1818 local control switch in NORM AFTER CLOSE.

Diesel	Handswitch Name	Handswitch No.	Compartment
A	BREAKER CONTROL SWITCH	0-HS-211-000A/22B	22
B	BREAKER CONTROL SWITCH	0-HS-211-000B/04B	4
C	BREAKER CONTROL SWITCH	0-HS-211-000C/04B	4
D	BREAKER CONTROL SWITCH	0-HS-211-000D/20B	20

Standard:

Simulates placing DG A OUTPUT BKR 1818 local control switch in NORM AFTER CLOSE to obtain a RED flag.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: When candidate simulates operating DG A OUTPUT BKR 1818 local control switch on 4KV Shutdown Board A, breaker switch is in NORM AFTER CLOSE, Red Flag indicated

****

Performance Step 6:   Critical X Not Critical

[5.2]   **PLACE** DIESEL GENERATOR A CONTROL TRANSFER SWITCH in EMERG.

Diesel	Handswitch Name	Handswitch No.	Compartment
A	BREAKER CONTROL TRANSFER SWITCH 43	0-43-211-000A/022	22
B	BREAKER CONTROL TRANSFER SWITCH 43	0-43-211-000B/04	4
C	BREAKER CONTROL TRANSFER SWITCH 43	0-43-211-000C/04	4
D	BREAKER CONTROL TRANSFER SWITCH 43	0-43-211-000D/20	20

Standard:

Simulates placing DG A CONTROL TRANSFER SWITCH in EMERG

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	When candidate simulates operating DG A CONTROL TRANSFER SWITCH on 4KV Shutdown Board A, switch is in EMERG. Synch Available light is ON and Parallel with System light is ON.

****

Performance Step 7:   Critical __ Not Critical X

[6]   **NOTIFY** the Unit Operator that control of the Diesel Generator has been transferred to the 4-kV shutdown board.

Standard:

Notifies Unit Operator that control of DG A has been transferred to 4KV Shutdown Board

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	Acknowledge notification as Unit Operator

****

Performance Step 8:   Critical __ Not Critical X

[7]   **IF** the Diesel Generator is operating, **THEN VERIFY** the following on 4-kV Shutdown Board A:

        A.   The appropriate Mode light (SINGLE UNIT or PARALLEL SYSTEM) illuminates.

        B.   The CONTROL AVAILABLE light illuminates (SYN AVAIL).

Standard:

Verifies proper light indications

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	PARALLEL SYSTEM light on SYN AVAIL light on

****

Performance Step 9:   Critical __ Not Critical X

[8]   **PULL and PLACE** the associated Diesel Generator mode selector switch in SINGLE UNIT at Panel 9-23.

Standard:

Directs Unit Operator to place DG A mode selector switch to SINGLE UNIT on Panel 9-23

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	As Unit Operator, inform that DG A mode selector switch is in SINGLE UNIT on Panel 9-23

****

Performance Step 10:   *Critical X Not Critical

7.2   Shutdown at 4-kV Shutdown Board

[1]   **VERIFY** the following initial conditions:

    A.   All Precautions and Limitations in Section 3.0 have been reviewed.

    *B.   DG A Output Bkr 1818 is OPEN.

Standard:

Simulates opening DG A Output Bkr 1818 by placing 0-HS-211-000A/22B to Trip.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

> **CUE:**   When candidate simulates opening DG A Output Bkr on 4KV Shutdown Board Red light Off, Green light On

****

Performance Step 11:   Critical __ Not Critical X

[2]   **IF** Diesel Generator control has **NOT** been transferred to the 4-kV shutdown board, **THEN REFER TO** Section 8.4 and **TRANSFER** Diesel Generator control.

Standard:

Operator has already completed this step

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12:   Critical X Not Critical

[3]   **PULL OUT** then **PUSH BACK IN** DIESEL GENERATOR A CONTROL
switch in NORMAL to initiate the shutdown sequence.

Diesel	Handswitch Name	Handswitch No.	Compartment
A	DG A CONTROL SWITCH	0-HS-082-000A/1B	22
B	DG B CONTROL SWITCH	0-HS-082-000B/1B	4
C	DG C CONTROL SWITCH	0-HS-082-000C/1B	4
D	DG D CONTROL SWITCH	0-HS-082-000D/1B	20

NOTE
The diesel engine will idle between 440 RPM and 460 RPM for approximately 11.5 minutes after receiving a stop signal. An additional 3 minutes should be allowed for the logic timer to reset.

Standard:

Simulates pulling out and pushing back in the DG A CONTROL switch

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

| CUE: | When candidate simulates pulling out and pushing back in the DG A CONTROL switch, White light ON, Red light ON. DG Volt reading goes from 4400 to 2200 Volts.

JPM Complete another Operator will continue |

END OF TASK

STOP TIME_____

OPERATOR: _____

RO ____   SRO ____   DATE: _____

JPM NUMBER: k

TASK NUMBER: U-000-EM-44

TASK TITLE: Line up Alternate RPV Injection System - Fire System in accordance with
                   1-EOI-Appendix-7K

K/A NUMBER: 295031EA1.01   K/A RATING: RO 4.4 SRO 4.4

TASK STANDARD: Simulate performing valve manipulations required to align the Fire System
                to inject into the RPV via the RHR System as directed by
                1-EOI-Appendix-7K

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 1-EOI-Appendix-7K

VALIDATION TIME: 25 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____

_____

_____

Additional comment sheets attached? YES ____   NO ___

RESULTS: SATISFACTORY ____   UNSATISFACTORY ____

SIGNATURE: _____   DATE: _____
                 EXAMINER

INITIAL CONDITIONS:

You are an extra operator. A tornado has caused Unit 1 reactor to scram and no AC power is available, all Diesel Generators failed. Due to an un-isolable leak and several equipment failures the RPV inventory cannot be maintained above TAF. The diesel fire pump is running. A Radiation Protection Technician is with you.

INITIATING CUES:

The Unit 1 Operator directs you to perform manual valve alignments per Attachment 1 of 1-EOI Appendix 7K. You have a radio and the Unit 1 operator will direct you to perform valve manipulations in accordance with the procedure steps listed in 1-EOI Appendix-7K.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. <u>ALL STEPS WILL BE SIMULATED</u>. Do <u>NOT</u> operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

You are an extra operator. A tornado has caused Unit 1 reactor to scram and no AC power is available, all Diesel Generators failed. Due to an un-isolable leak and several equipment failures the RPV inventory cannot be maintained above TAF. The diesel fire pump is running. A Radiation Protection Technician is with you.

INITIATING CUES:

The Unit 1 Operator directs you to perform manual valve alignments per Attachment 1 of 1-EOI Appendix 7K. You have a radio and the Unit 1 operator will direct you to perform valve manipulations in accordance with the procedure steps listed in 1-EOI Appendix-7K.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

CUE:	U1 Operator directs you to verify CLOSED the valves listed in Step 2.c and 2.d

****

Performance Step 1:   Critical __ Not Critical X

   2. **NOTIFY** Unit 1 Operator to perform the following:

      c. **VERIFY CLOSED** the following valves (Panel 1-9-20B):

         •   0-FCV-25-32, RSW STG TNK ISOL VLV
         •   0-FCV-25-70, RSW STG TNK ISOL CNTRL VLV

Standard:

   Checks closed 0-FCV-25-32, RSW STG TNK ISOL VLV and 0-FCV-25-70, RSW STG TNK ISOL CNTRL VLV by the position indication devices

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	0-FCV-25-32 and 0-FCV-25-70 are as found or closed

****

<u>Performance Step 2:</u>   Critical __ Not Critical <u>X</u>

> d. **VERIFY CLOSED** 1-FCV-23-52, RHR HX 1D RHRSW OUTLET
> VLV (Panel 1-9-3).

<u>Standard:</u>

> Verifies 1-FCV-23-52 valve position indicator indicating CLOSED or simulates
> engaging handwheel and rotating handwheel in the CLOCKWISE direction

SAT__ UNSAT___ N/A ___COMMENTS:_____

CUE:	If handwheel manipulation simulated, handwheel is snug

CUE:	U1 Operator directs you to OPEN the valve listed in Step 2.e

****

<u>Performance Step 3:</u>   Critical <u>X</u> Not Critical

> e. **OPEN** 1-FCV-23-57, STANDBY COOLANT VALVE FROM RHRSW
> (Unit 1, Panel 9-3).

<u>Standard:</u>

> Simulates engaging handwheel and rotating 1-FCV-23-57 handwheel in the
> COUNTERCLOCKWISE direction

SAT__ UNSAT___ N/A ___COMMENTS:_____

CUE:	When simulated, the handwheel is turning and the valve stem is moving outward (PAUSE), the handwheel is now snug

CUE:	U1 Operator directs you to OPEN the valve listed in Step 5

****

Performance Step 4:   Critical X Not Critical

5. **OPEN** 1-FCV-74-101, UNITS 1-2 DISCHARGE CROSSTIE, (Panel 1-9-3).

Standard:

Simulates engaging handwheel and rotating 1-FCV-74-101 handwheel in the
COUNTERCLOCKWISE direction

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	When simulated, the handwheel is turning and the valve stem is moving outward (PAUSE), the handwheel is now snug

CUE :	U1 Operator directs you to verify OPEN the valves listed in Step 6

****

Performance Step 5:   Critical X Not Critical

6. **VERIFY OPEN** the following valves (Panel 1-9-3):

- 1-FCV-74-67, RHR SYS II LPCI INBD INJECT VALVE

Standard:

Simulates engaging handwheel and rotating 1-FCV-74-67 handwheel in the
COUNTERCLOCKWISE direction

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	When simulated, the handwheel is turning and the valve stem is moving outward (PAUSE), the handwheel is now snug

****

<u>Performance Step 6:</u>   Critical __ Not Critical <u>X</u>

• 1-FCV-74-66, RHR SYS II LPCI OUTBD INJECT VALVE

<u>Standard:</u>

Verifies 1-FCV-74-66 valve position indicator indicating OPEN or simulates
engaging handwheel and rotating handwheel in the COUNTERCLOCKWISE direction

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	If handwheel manipulation simulated, handwheel is snug

CUE:	JPM complete

END OF TASK

STOP TIME_____