Facility: <u>Perry</u>   **JPM No:** <u>2004-301-2.a</u>

Task Title: Bypass a Control Rod Position at the RACCs

K/A Reference: <u>201005.A2.02</u>

Recommended Testing Method:

Simulate <u>X</u>   Actual <u>   </u>

Classroom <u>   </u>   Simulator <u>   </u>   Plant <u>X</u>

Task Standard: Control Rod 18-47 position is bypassed at both RACCs.

Required Materials: SOI-C11(RCIS)
                                          RACC Bypass File Key

General References: SOI-C11(RCIS)

Time Critical Task: NO

Validation Time: <u>   </u>

Initial Conditions:

If steps 7.15.15 – 19 are going to be performed in the simulator, then insert the remote that bypasses rod position for control rod 18-47.

<u>READ TO THE EXAMINEE</u>

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

Initiating Cue:

A DATA FAULT exists for control rod 18-47. The Reactor Engineer has been informed and concurs with the Unit Supervisor that the control rod position must be bypassed to allow movement of the control rod. Bypass the control rod position indication for control rod 18-47.

```
----------------------------------------------------------------------
                              NOTE

There are two position bypass channels, one in each RACC. Although each Bypass
File has 20 card slots, only 8 will have cards installed. Each card contains 11 toggle
switches in a vertical arrangement.

    --   The top switch has the bypass function.

    --   The remaining 10 switches are provided for the binary
         address of the rod to be bypassed.
----------------------------------------------------------------------
```

```
----------------------------------------------------------------------
                              NOTE

         Procedure step 7.15.1 is satisfied by the initial conditions.
----------------------------------------------------------------------
```

Start Time: _____

* **Step:** 7.15.2   **DETERMINE** the binary address of the rod to be bypassed
from Attachment 1, Binary Coordinates.

Standard: Uses Attachment 1 to determine that the binary coordinates
for control rod 18-47 are:

X_4 X_3 X_2 X_1 X_0 Y_4 Y_3 Y_2 Y_1 Y_0
0   0   1   0   1   0   1   1   0   1

Cue:

Comment:

Step: 7.15.3   **RECORD** the following on Attachment 4, Verification Checklist
Section 7.15 and 7.16, Rod Position Bypass in RACC.

     --   Binary address of the rod to be bypassed

     --   Rod position of the rod to be bypassed.

Standard: Records the rod position and binary address for control rod
18-47 on Attachment 4.

Cue: Control rod 18-47 is at position 24.

Comment:

Step: 7.15.4   **PERFORM** independent verification of
the following:

    --   Binary address of the rod to be bypassed

    --   Rod position of the rod to be bypassed.

Standard: Requests independent verification of rod position and binary address.

Cue: Inform candidate that independent verification is complete.

Comment:

* **Step:** 7.15.5   **IF** required, **THEN UNLOCK** the Bypass File in the RACC at 1H13-P651.

Standard: Obtains key and unlocks the bypass file in the RACC at P651.

Cue:

Comment:

> **NOTE**
>
> Toggle switches are positioned to the right for a "1" or to the left for a "0".

* **Step:** 7.15.6   **POSITION** the bottom 10 toggle switches to the binary address for the rod being bypassed on a Bypass Card at 1H13-P651

Standard: Simulates positioning of the bottom 10 toggle switches to the binary address for rod 18-47.

	X_4	X_3	X_2	X_1	X_0	Y_4	Y_3	Y_2	Y_1	Y_0
Required	L	L	R	L	R	L	R	R	L	L
Simulated										

Cue: Indicate that the toggle switches are in the position specified by the candidate.

Comment:

Step: 7.15.7   **RECORD** the 1H13-P651 Bypass Card slot number on Attachment 4, Verification Checklist Section 7.15 and 7.16, Rod Position Bypass in RACC.

Standard: Records slot number on Attachment 4.

Cue:

Comment:

* **Step:** 7.15.8   **PLACE** the bypass (top) switch for the card to BYPASS (right) at 1H13-P651.

Standard: Simulates placing the bypass (top) switch for the card to BYPASS (right) at 1H13-P651.

Cue: Indicate that the toggle switch is in the position specified by the candidate.

Comment:

* **Step:** 7.15.9   **IF** required, **THEN UNLOCK** the Bypass File in the RACC at 1H13-P652.

Standard: Obtains key and unlocks the bypass file in the RACC at P652.

Cue:

Comment:

> **NOTE**
>
> Toggle switches are positioned to the right for a "1" or to the left for a "0".

* **Step:** 7.15.10 **POSITION** the bottom 10 toggle switches to the binary address for the rod being bypassed on a Bypass Card at 1H13-P652.

  Standard: Simulates positioning of the bottom 10 toggle switches to the binary address for rod 18-47.

	X_4	X_3	X_2	X_1	X_0		Y_4	Y_3	Y_2	Y_1	Y_0
Required	L	L	R	L	R		L	R	R	L	L
Actual											

  Cue: Indicate that the toggle switches are in the position specified by the candidate.

  Comment:

Step: 7.15.11 **RECORD** the 1H13-P652 Bypass Card slot number on Attachment 4, Verification Checklist Section 7.15 and 7.16, Rod Position Bypass in RACC.

  Standard: Records the slot number on Attachment 4.

  Cue:

  Comment:

* **Step:** 7.15.12 **PLACE** the bypass (top) switch for the card to BYPASS (right) at 1H13-P652.

  Standard: Simulates placing the bypass (top) switch for the card to BYPASS (right) at 1H13-P652.

  Cue: Indicate that the toggle switch is in the position specified by the candidate.

  Comment:

Step: 7.15.13   **PERFORM** independent verification of the following:

      --   Bypass Card slot number

      --   Bypass Card toggle switch positions.

Standard: Requests independent verification of slot number and toggle switch positions.

Cue: Inform candidate that independent verification is complete.

Comment:

Step: 7.15.14   **IF** all bypassing is complete, **THEN LOCK** the Bypass File.

Standard: Locks the Bypass Files at both RACCs and returns key to original location.

Cue:

Comment:

NOTE

The following steps may be performed on the simulator after ensuring that control rod 18-47 is bypassed by the simulator operator.

Step: 7.15.15   **CONFIRM** the CHANNEL DISAGREE light is **NOT** backlit at the OCM, unless backlit for other reasons.

Standard: Confirms that the CHANNEL DISAGREE light is **NOT** backlit.

Cue: **IF** performed in the MCR, **THEN** indicate that CHANNEL DISAGREE is **NOT** backlit.

Comment:

NOTE

IF performed in the MCR, ensure candidate requests permission from the CRO before performing this step.

Step: 7.15.16   **DEPRESS** POSITION BYPASSED at the OCM.

    Standard: Depresses POSITION BYPASSED at the OCM.

    Cue:

    Comment:

Step: 7.15.17   **CONFIRM** the rod to be bypassed is indicated as Bypassed by its green LED at the OCM.

    Standard: Control Rod 18-47 green LED is lit.

    Cue: **IF** performed in the MCR, **THEN** Indicate that green LED for control rod 18-47 is lit.

    Comment:

Step: 7.15.18   **RELEASE** POSITION BYPASSED at the OCM.

    Standard: POSITION BYPASSED pushbutton is released.

    Cue:

    Comment:

Step: 7.15.19   **VERIFY** the following:

-- The Control Rod Position Bypass is recorded in the Plant Narrative Log.

-- The bypass condition is recorded in accordance with OAI-1701.

-- A copy of Attachment 4, Verification Checklist Section 7.15 and 7.16, Rod Position Bypass in RACC is attached to the LCO Tracking Sheet.

Standard: Reports to US that control rod 18-47 is bypassed and simulates initiating the necessary log entry and LCO.

Cue: Task is complete.

Comment:

Stop Time: _____

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: <u>Perry</u>   **JPM No:** <u>2004-301-2.b</u>

Task Title: Shift HPCS from Full Flow Test to CST mode to injection mode.

K/A Reference: <u>209002.A2.01</u>

Recommended Testing Method:

Simulate _____   Perform <u>X</u>

Classroom _____   Simulator <u>X</u>   Plant _____

Task Standard: HPCS is injecting into the Reactor Pressure Vessel.

Required Materials:

General References: SOI-E22 and SVI-E22

Time Critical Task: NO

Validation Time: _____

Initial Conditions:

Any IC with RPV pressure >600 psig.

Align the High Pressure Core Spray system in the full flow test mode to the CST in accordance with SVI-E22.

Insert malfunction(s) to disable automatic and manual initiation (pushbutton) of HPCS.

Lower RPV water level below Level 3 (178").

READ TO THE EXAMINEE

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

Initiating Cue:

The HPCS pump is being operated in the CST to CST mode per SVI-E22. RPV water level is below Level 3 and lowering. Manually initiate High Pressure Core Spray and inject into the RPV.

> *NOTE TO EVALUATOR*
>
> *Initiation logic is disabled, therefore the candidate will have to complete the line-up manually.*

Start Time: _____

Step: 4.3.1   **ARM** and **DEPRESS** the HPCS MANUAL INITIATION push-button on 1H13-P0601.

Standard: Rotates the arming collar to the ARMED position AND depresses the pushbutton.
Annunciator "HPCS MAN INITIATION SWITCH ARMED" alarms.

Cue:

Comment:

> *NOTE TO EVALUATOR*
>
> *Since the HPCS pump is running and aligned to the CST, and the ESW pump is already running, verification of those actions is not listed in the JPM.*
>
> *The candidate is not expected to, nor required to start the Division 3 Standby Diesel Generator as part of verifying the Automatic Initiation.*

*   **Step:** 4.3.2   **REFER TO** Automatic Initiation (section 4.4) and **VERIFY** initiation actions occur.

Standard: Recognizes that initiation logic did NOT actuate and proceeds with manual lineup.

Cue: If candidate reports to SRO that HPCS logic failed to initiate and requests further guidance, then ask the candidate what (s)he recommends and direct the candidate to manually perform the required actions to inject with HPCS.

Comment:

NOTE TO EVALUATOR

Due to the conditional nature of the following step, it is listed before the other Section 4.4 steps to ensure the evaluator is prepared to monitor for performance of the step.

Step: 4.4.3   **WHILE** performing the following steps, **VERIFY** the HPCS PUMP MIN FLOW VALVE:
         --   opens WHEN HPCS PUMP FLOW is <725 gpm.
         --   closes WHEN HPCS PUMP FLOW is >725 gpm.

     Standard:

        Cue:

     Comment:

*   **Step:** 4.4.1   **HOLD** the HPCS FIRST TEST VALVE TO CST, 1E22-F010,
       (a)   in CLOSE **UNTIL** closed.

     Standard: Green light ON; Red light OFF for 1E22-F010

        Cue:

     Comment:

*   **Step:** 4.4.1   **HOLD** the HPCS SECOND TEST VALVE TO CST, 1E22-
       (b)   F011, in CLOSE **UNTIL** closed.

     Standard: Green light ON; Red light OFF for 1E22-F011

        Cue:

     Comment:

* **Step:** 4.4.1 (c)   **TAKE** the HPCS INJECTION VALVE,1E22-F004, to OPEN.

   Standard: Green light OFF; Red light ON for 1E22-F004.
RPV water level is increasing.

   Cue:

   Comment:

Step: 4.4.1 (d)   **WHEN** time permits, **THEN VERIFY** the following: HPCS TEST VALVE TO SUPR POOL, 1E22-F023, is closed.

   Standard: Green light ON; Red light OFF for 1E22-F023.

   Cue:

   Comment:

Step: 4.4.2   **VERIFY** the HPCS INJ CHECK VLV, 1E22-F005, opens.

   Standard: RPV water level is increasing.

   Cue:

   Comment:

Step: 4.4.4   **NOTIFY** Radiation Protection that a Suppression Pool evolution is in progress so the survey frequency may be increased as necessary.

   Standard: Initiates action to notify Radiation Protection.

   Cue:

   Comment:

Step: Reports to SRO that HPCS is injecting into the RPV and that RPV level is increasing.

Standard:

Cue: Acknowledge report and inform candidate that JPM is complete.

Comment:

Stop Time: _____

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: <u>   Perry   </u>   **JPM No:**   <u>   2004-301-JPM.c   </u>

Task Title: Shutdown a Divisional EDG to Standby

K/A Reference: <u>   264000.A4.04   </u>

Recommended Testing Method:

Simulate <u>   </u>   Actual   <u> X   </u>

Classroom <u>   </u>   Simulator   <u> X   </u>   Plant <u>   </u>

Task Standard: Division 2 EDG Shutdown in Pull-to-Lock, Field Flash bkr open.

Required Materials: SOI-R43, Division 1 and 2 Diesel Generator System, Section 6.1

General References: SOI-R43, Division 1 and 2 Diesel Generator System

Time Critical Task: NO

Validation Time: <u>   </u>

READ TO THE EXAMINEE

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

Initial Conditions:

Diesel Generator 2 has completed a four hour run for post maintenance testing. It has been disconnected from EH12, inspected, and is ready to be secured. There is a PPO standing by at the diesel to assist. He has been briefed on the procedure and expectations.

Initiating Cue:

Shut down Diesel Generator 2 to Standby Readiness in accordance with SOI-R43, Division 1 and 2 Diesel Generator System, Section 6.1, Remote - Shutdown to Standby Readiness.

NOTE

1.   **Provide candidate a copy of SOI-R43, Section 6.1, after candidate demonstrates knowledge of how to get procedure.**

Start Time: _____

NOTE

If the applicant asks, voltage and speed are to be adjusted on DG shutdown to ensure operability.

The applicant may inform the U.S. that the Division 2 Diesel Generator will be unavailable for a non-LOCA restart for two to three minutes following shutdown due to a fuel rack lockout. Acknowledge this as the U.S.

The diesel unloading is to be done within the unloading limits listed in the Precautions and Limitations. It is not necessary to open the Diesel Turbo Prelube Oil Valve, 1R47-F544B

Step: 6.1.1   If diesel unloading was not within the unloading limits listed in the Precautions and Limitations then open the Diesel Turbo Prelube Oil Valve.

Standard: Asks examiner for unloading rate.

Cue: Diesel unloading was within limits. The Diesel Turbo Prelube Oil Valve.

Comment:

Step: 6.1.2   Verifies the Diesel Generator is in AUTO at 1H13-877.

Standard: Visually verifies the DG 2 is in Auto at 1H13-877.

Cue:

Comment:

Step: 6.1.3   Verifies the Diesel Generator Control Transfer is in CONT RM.

Standard: Calls PPO and asks PPO to verify switch is in CONT RM.

Cue: As PPO verify the switch is in CONT RM.

Comment:

* **Step:** 6.1.4.a-d   Verifies the Diesel Gen Out of Service is in NORM.
Confirms the Diesel Gen Breaker green light is on.
Places the Sync Selector Switch in TH1

Standard: Places sync selector switch in TH1. (Critical part of this step)

Cue: None

Comment:

* **Step:** 6.1.4.e-g   Adjusts the diesel generator governor so the synchroscope is moving slow in the fast direction, places the sync selector switch in OFF. Adjusts the Diesel Generator Voltage Regulator to read 4100 to 4200 Volts on DG A-B phase Volts.

Standard: Synchroscope rotating slowly in fast direction (critical part of this step). Sync selector switch in OFF. DG volts 4150 ± 50 volts.

Cue:

Comment:

START ALTERNATE PATH PORTION OF JPM HERE!

*   **Step:** 6.1.5   Verify with PPO that DG Field Breaker Closed amber light is ON. Informs U.S. that a Notification needs to be initiated.

Standard: Verifies with examiner the breaker closed amber light is off

Cue: The DG Field Breaker Closed amber light is NOT on. I've checked the bulb, it is good. As U.S., I'll have someone initiate a notification, continue with diesel generator shutdown.

Comment:

*   **Step:** 6.1.6   Takes the Diesel Generator control switch to STOP at 1H13-P877.

Standard: DG control switch in STOP.

Cue:

Comment:

Step: 6.1.7   Confirm the Diesel Generator Field Breaker CLOSED amber light is de-energized.

Standard: Candidate determines DG Field Breaker is CLOSED (amber light on).

Cue:

Comment:

Step: 6.1.8   Initiates a Notification

Standard: Informs examiner of need to initiate notification.

Cue: Another operator will initiate the notification, continue with EDG shutdown.

Comment:

Step: 6.1.9   If Lockout Relay 86G is tripped, then confirm the cause of the trip is corrected. Reset Lockout Relay 86G on Diesel Generator Breaker.

Standard: Lockout Relay 86G is not tripped.

Cue: The Lockout Relay 86G is not tripped.

Comment:

Step: 6.1.10   If Lockkout Relay 86G/1 is tripped. Confirm the cause of the trip is corrected and reset lockout relay 86G/1 on DG Breaker.

Standard: Lockout Relay 86G/1 is not tripped.

Cue: The Lockout Relay 86G/1 is not tripped.

Comment:

Step: 6.1.11   If the Diesel Turbo Prelube Valve is open, then close the
Diesel Turbo Prelube Valve.

Standard: The Diesel Turbo Prelube Valve is shut.

Cue: The Diesel Turbo Prelube Valve is shut.

Comment:

Step: 6.1.12   When the control system is reset, as evidenced by Unit Avail
Emergency Status light illuminated approximately 2 minutes
after shutdown, then confirm the Gen Field Amps and the Gen
Field Volts are approximately zero.

Standard: Notes field is still energized.

Cue:

Comment:

*   **Step:** 6.1.12.b   If the field is still energized then place diesel generator in
PULL-TO-LOCK.

Standard: Diesel Generator in PULL-TO-LOCK.

Cue:

Comment: Someone else will perform the required surveillance and will
record appropriate Maintenance Rule status.

*   **Step:** 6.1.12.c   If the field is still energized, then direct the PPO to open the
Generator (Field Flash) Control Panel, 1H51-P055B.

Standard: PPO is contacted & directed to open the Generator Field
Flash.

Cue: As PPO report when directed that the Generator Field Flash is
open.

Comment: Terminate JPM at this point.

This completes this JPM.

Stop time: _____

Simulator setup initial conditions:
Any conditions with the Diesel Generator disconnected from its bus.

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: <u>Perry</u> **JPM No:** <u>2004-301-2.d</u>

Task Title: Place B RHR in Suppression Pool Feed and Bleed Mode

K/A Reference: <u>205000.K5.03</u>

Recommended Testing Method:

Simulate <u>X</u> Actual <u>   </u>

Classroom <u>   </u> Simulator <u>X</u> Plant <u>   </u>

Task Standard: RHR Lineup complete in Feed and Bleed mode, HX bypass & outlet valves throttled to control cooldown rate.

Required Materials: ONI-E12-2, Loss of Decay Heat Removal, Rev 6

General References: ONI-E-12-2, Loss of Decay Heat Removal, Rev 6

Time Critical Task: NO

Validation Time: <u>   </u>

READ TO THE EXAMINEE

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

Initial Conditions:

The reactor is in Mode 3 with the reactor head installed. "A" and "B" RHR systems are in suppression pool cooling mode.

Initiating Cue:

The Unit Supervisor directs you, the Reactor operator, to perform ONI-E-12-2, "Loss of Decay Heat Removal" Attachment 2, using the "B" RHR pump in Suppression Pool Feed and Bleed.

> **NOTE**
> With the given initial conditions, candidate should N/A Steps 2.0 and 2.1 in
> Attachment 2. Candidate should recognize that Step 2.5 is Suppression Pool Feed
> and Bleed Mode. Candidate should then N/A sections 2.3 and 2.4

Start Time: _____

   Step: 2.5.1 Notify Health Physics.
         2.5.2 Notify Chemistry

  Standard: Candidate notifies Health Physics and Chemistry of evolution

      Cue: Health Physics and Chemistry have been notified.

  Comment:

  Step: 2.5.3 Evacuate containment

  Standard: Candidate orders containment to be evacuated

      Cue: If requested, as Health Physics, you will have containment evacuated

  Comment:

  Step: 2.5.4 If RHR A or B loop is available, refer to SOI-E-12 to place one RHR
               loop in suppression pool cooling.

  Standard: Candidate determines that RHR loop B is available for feed and
             bleed evolution. RHR loop A is in suppression pool cooling mode.

      Cue:

  Comment:

Step:2.5.5   VERIFY the following valves CLOSED:
        1B21F022A INBD MSIV   1B21F022A OUTBD MSIV
        1B21F022B INBD MSIV   1B21F022A OUTBD MSIV
        1B21F022C INBD MSIV   1B21F022A OUTBD MSIV
        1B21F022D INBD MSIV   1B21F022A OUTBD MSIV
        1B21F016 MSL DRN& MSIV BYP INBD ISOL
        1B21F019 MSL DRN& MSIV BYP OUTBD ISOL
        1B21-F001 RX HEAD TO DW SECOND VENT VALVE
        1B21-F002 RX HEAD TO DW FIRST VENT VALVE
        1B21-F005 RX HEADTO MSL A VENT VALVE
        1E12-F008 SHUTDOWN COOLING OTBD SUCT ISOL
        1E12-F009 SHUTDOWN COOLING INBD SUCT ISOL
        1E12-F006A RHR A SHUTDOWN COOLING SUCT.
        1E12-F006B RHR B SHUTDOWN COOLING SUCT.
        1E51-063 RHR & RCIC ST SUPP INBD ISOL.
        1E51-064 RHR & RCIC ST SUPP OUTBD ISOL.
        1E51-076 RHR & RCIC ST SUPP WARMUP ISOL.

Standard: Candidate CLOSES/VERIFIES CLOSED the above valves.

Cue:

Comment:

* **Step:**2.5.6   IF the reactor vessel head is installed, THEN VERIFY OPEN two
        SRVs located outside the vicinity of the ECCS pump suction strainers.
        (Strainers between 324/ and 54/).

Standard: Candidate determines from initial conditions that RPV head is installed
        and OPENS/VERIFIES OPEN two SRVs between 324/ and 54/.

Cue:

Comment:

Step:2.5.7   If the reactor head is NOT installed, then CLOSE/VERIFY CLOSED
        2.5.8   the following valves:

Standard: Candidate determines from initial conditions that RPV head IS
        installed then N/As steps 2.5.7. and 2.5.8

Cue:

Comment:

Step: 2.5.9   IF the second RHR loop is available, THEN REFER to SOI-E12 to PLACE the second RHR Loop in Suppression Pool Cooling.

Standard: Candidate rercognizes that RHR loop B is already in Suppression Pool Cooling mode per Initiating Cue.

Cue:

Comment:

Step: 2.5.10   If RHR C and LPCS are available, then refer to SOI-E-12 to start
2.5.11   RHR C and LPCS in the Test Mode.

Standard: Candidate asks SRO if RHR C and LPCS can be placed in the Test Mode

Cue: As SRO, you will have another operator place RHR C and LPCS in the Test Mode. Continue on with the procedure.

Comment:

Step: 2.5.12   While cooling down the RPV, monitor temperature and pressure.

Standard: Candidate acknowledges step.

Cue:

Comment:

Step: 2.5.13   Only one RHR loop is in Suppression Pool Cooling. ____1_____
Other Injection systems are available. _____2_____.
Then inject to the RPV with a system other than the RHR loop being used for suppression pool cooling

Standard: Candidate fills in "Loop A RHR" for 1.
Candidate fills in "Loop B & C RHR and LPCS" for 2.
Candidate chooses to inject with Loop B RHR from Initiating Cue.

Cue:

Comment:

* **Step:**2.5.14 SELECT one of the following lineups to inject to the RPV
   • RHR A or B, Step 2.5.14
   • RHR C, Step 2.5.15
   • LPCS, Step 2.5.16

   Standard: Candidate chooses RHR B for injection per Step 2.5.15 (sic)

   Cue: Error in step has been identified. Proceed with step 2.5.15 in lieu of 2.5.14.

   Comment: Candidate may observe error in Step 2.5.14.

* **Step:**2.5.15 IF using RHR A or B, THEN THROTTLE the RHR HX'S OUTLET VALVE closed UNTIL RHR PUMP FLOW is 2500 gpm.

   Standard: Candidate throttles 1E12-003B & valve until RHR pump flow is 2500 gpm as indicated on 1E12-R603B.

   Cue:

   Comment:

* **Step:**2.5.15a Open the LPCI INJECTION VALVE.

   Standard: Candidate OPENs 1E12F042B.

   Cue:

   Comment:

* **Step:** 2.5.15b CLOSE the RHR TEST VALVE TO SUPR POOL.

   Standard: Candidate CLOSES 1E12-F024B valve.

   Cue:

   Comment:

* **Step:** 2.5.15c   Simultaneously Throttle:
RHR HX's BYPASS VALVE 1E12-F048B
RHR HX's OUTLET VALVE 1E12-F003B
to control cooldown rate.

    Standard: Candidate throttles F048B and F003B valves to establish a
cooldown rate of <100°F/hr.

    Cue:

    Comment:

* **Step:** 2.5.15d   WHEN the RPV is filled, then OPEN the HX's OUTLET VALVE
until RHR PUMP FLOW is 7000 to 7100 gpm.

    Standard: Candidate throttles open 1E12-F003B to establish flow 7000 to
7100 gpm flow rate as indicated on 1E12-R603B.

    Cue:

    Comment:

    Steps: 2.5.16
to step 2.5.17   (Instructions to use RHR C and LPCS for RPV injection)

    Standard: Candidate N/As these steps.

    Cue:

    Comment:

    Step: 2.5.18
and 2.5.19   If additional cooling capacity is required, and the RPV head is
installed, THEN OPEN a third SRV and/or start an additional
injection pump.

    Standard: Candidate considers opening a third SRV and starting an
additional injection pump to obtain a cooldown rate <100°F/hr.

    Cue:

    Comment:

Step: 2.5.20   Maintain Suppression Pool temperature between 70°F and 95°F.

Standard: Candidate monitors suppression pool temperatures.

Cue: This completes this JPM

Comment:

Stop Time: _____

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____ Stop: _____ Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____ Date: _____

Facility: <u>Perry</u>   **JPM No:** <u>2004-301-2.e</u>

Task Title: Shift Steam Jet Air Ejectors

K/A Reference: <u>271000.K3.01</u>

Recommended Testing Method:

Simulate <u> X </u>   Actual <u>   </u>

Classroom <u>   </u>   Simulator <u> X </u>   Plant <u>   </u>

Task Standard: Steam Jet Air Ejector B is in service, Steam Jet Air Ejector A is secured.

Required Materials: SOI-N64(Offgas)

General References: SOI-N64(Off gas)

Time Critical Task: NO

Validation Time: <u>   </u>

READ TO THE EXAMINEE

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

Initial Conditions:

With the plant operating a full power, in-plant operators report that the operating steam jet air ejector "A" has developed a steam leak. In order to affect repairs on line, operations management has decided to shift SJAEs.

Initiating Cue:

Unit Supervisor directs you, the Reactor operator, to perform Section 5.2 of SOI-N64, "Off Gas/Condenser Air Removal System," procedure to shift SJAE and Preheater/Recombiner from A to B.

```
┌─────────────────────────────────────────────────────────────────────┐
│                              NOTE                                     │
└─────────────────────────────────────────────────────────────────────┘
```

Start Time: _____

       Step: 1a   Verify Recombiner B catalyst temperature is >300/F as indicated on RECOMBINER TEMPERATURE RECORDER, 1N64-R602.

Standard: Candidate verifies temperature is >300/F on 1N64-R602

       Cue:

Comment:

       Step: 1b   Verify SJAE Intercondenser Loop Seal B level is near the low end of the band.

Standard: Candidate verifies B SJAE intercondenser loop seal level.

       Cue:

Comment:

*   **Step:** 2   OPEN SJAE CNDR B CNDS OUTLET VALVE 1N21-F250B

Standard: Candidate opens 1N21-F250B.

       Cue:

Comment:

*   **Step:** 3   Jog open MST TO SJAES'S B SUPPLY VALVE, 1N62-F020B.

Standard: Candidates jogs open 1N62-F020B valve.

       Cue:

Comment:

*   **Step:** 4   On 1H51-P5274, place SJAE LOOP SEAL DRAIN VALVE, 1N62-F220B in OPEN.

Standard: Candidate opens 1N62-F220B valve.

Cue:

Comment:

Caution
If recombiner B inlet temperature or catalyst temperature decreases to <250∕F while opening 1N62F140B, or 1N62-F170B, immediately close 1N62-F140B and 1N64-F170B.

---

*   **Step:** 5   When all the following conditions are met, place SJAE B 12 INCH SUCTION, 1N62-F140B in AUTO, and verify vacuum is improving.
a. SJAE Intercondenser Loop Seal level is in band and stabilized.
b. SJAE LOOP SEAL DRAIN VALVE, 1N62-F220B, is in OPEN.
c. RECOMBINER B INLET TEMPERATURE, 1N64-R601B, is ≥250F and stabilized.
d. Recombiner B catalyst temperature as indicated on RECOMBINER TEMPERATURE RECORDER, 1N64-R602, is ≥300∕F and stabilized or increasing.

Standard: When above conditions met, candidate places 1N62-140B in AUTO.

Cue:

Comment:

    Step: 6   Verify SJAE A 24 INCH SUCTION, 1N62-F170A, and SJAE A 12 INCH SUCTION, 1N62-F140A, switches are in CLOSE.

Standard: Candidate verifies suction valve switches are in CLOSE.

Cue:

Comment:

*   **Step:** 7   Verify condenser vacuum is being maintained then take MST TO SJAE'S A SUPPLY VALVE, 1N62-F020A, to CLOSE.

Standard: Candidate takes 1N62-F020A to close after conditions met.

Cue:

Comment:

*   **Step:** 8   On 1H51-P5274, place SJAE LOOP SEAL DRAIN VALVE, 1N62-F220A, in CLOSE.

Standard: Candidate places 1N62-F220A in CLOSE.

Cue:

Comment:

* **Step:** 9   If all of the following conditions are met, place SJAE B 24 INCH SUCTION, 1N62-F170B, in AUTO.
a. Main Generator output > 188 MWe.
b. Off-Gas flow rate has stabilized on OFF-GAS SYSTEM AFTER FILTER DISCH FLOW, 1N64-R620.
c. SJAE Intercondenser Loop Seal level is in band and stabilized.
d. SJAE LOOP SEAL DRAIN VALVE, 1N62-F220B, is in OPEN.
e. RECOMBINER B INLET TEMPERATURE, 1N64-R601B, is $\geq$250/F and stabilized.
f. Recombiner B catalyst temperature as indicated on RECOMBINER TEMPERATURE RECORDER, 1N64-R602, is $\geq$300/F and stabilized or increasing.

Standard: Once conditions are met, candidate places 1N62-F170B in AUTO.

Cue:

Comment:

Step: 10   Verify the following conditions:
a. Vacuum has stabilized or is improving.
b. Off-Gas flow rate has stabilized on OFF-GAS SYSTEM AFTER FILTER DISCH FLOW, 1N64-R620.
c. SJAE Intercondenser Loop Seal level is in band and stabilized.
d. SJAE LOOP SEAL DRAIN VALVE, 1N62-F220B, is in OPEN.
e. RECOMBINER B INLET TEMPERATURE, 1N64-R601B, is $\geq$250/F and stabilized.
f. Recombiner B catalyst temperature as indicated on RECOMBINER TEMPERATURE RECORDER, 1N64-R602, is $\geq$300/F or increasing.

Standard: Candidate verifies the above conditions.

Cue:

Comment:

* **Step:** 11   If SJAE B 24 INCH SUCTION, 1N62-F170B, is closed, throttle SJAE
Xtie Line 12 Inch Inlet Throttle Vlv, 1N62-F601, as necessary to maintain
main condenser pressure 3"HgA to 4"HgA.

Standard: Candidate throttles 1N62-F170B to maintain main condenser pressure.

Cue:

Comment:

NOTE

Closing SJAE Xtie Line 12 Inch Inlet Throttle Vlv, 1N62-F601, will increase main
condenser pressure; opening SJAE Xtie Line 12 Inch Inlet Throttle Vlv, 1N62-F601, will
decrease main condenser pressure.

---

* **Step:** 12   Take SJAE CNDR A CNDS OUTLET VALVE, 1N21-F250A, to CLOSE.

Standard: Candidate closes 1N21-F250A.

Cue:

Comment:

Step: 13   At P845, place RECOMBINER A OR B INLET TEMP ALM SEL to
RECOMBINER B.

Standard: Candidate places recombiner inlet temperature alarm selector to
Recombiner B.

Cue:

Comment:

Step: 14   Verify Recombiner B Air Purge Filter Bypass, 1N64-F004B, closed.

Standard: Candidate verifies 1N64-F004B is closed.

Cue:

Comment:

* **Step:** 15 Throttle open Recombiner A Air Purge Filter Bypass,1N64-F004A, if necessary, to maintain Recombiner A catalyst temperature as indicated on RECOMBINER TEMPERATURE RECORDER, 1N64-R602, $\geq$300F. Do not exceed 4 psig as indicated on TRAIN A PREHEATER INLET PRESSURE, 1N64-R600A.

  Standard: Candidate throttles open 1N64-F004A to maintain temperature and pressure values.

  Cue: This completes this JPM

  Comment:

Stop Time: _____

Examinee: _____   SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: Perry   **JPM No:**   2004-301-2.f

Task Title: Respond to Stuck SRM during withdraw of Detectors

K/A Reference: 215004.A2.03

Recommended Testing Method:

Simulate   X   Actual

Classroom   Simulator   X   Plant

Task Standard: SRM C Bypassed, I&C Tech sent to de-energize SRM C.

Required Materials: SOI-C51(SRM)

General References: SOI-C51(SRM))
                           IOI-2, Section 4.3

Time Critical Task: NO

Validation Time:

READ TO THE EXAMINEE

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

Initial Conditions:

The reactor is in Hot Startup Mode per IOI-2, Section 4.3, "Hot Startup." Neutron flux is in Range 3 of the IRMs. Reactor engineers have confirmed a proper SRM/IRM overlap.

Initiating Cue:

Unit Supervisor directs you, the Reactor operator, to withdraw the SRMs in accordance with SOI-C51.

```
┌─────────────────────────────────────────────────────────────────┐
│                              NOTE                                 │
│ 1.  All steps and indications are at Unit Control Console,        │
│     1H13-P680-6C.                                                 │
│                                                                   │
│ 2.  Provide candidate a copy of SOI-C51 after candidate           │
│     demonstrates knowledge of how to get procedure.               │
└─────────────────────────────────────────────────────────────────┘
```

Start Time: _____

```
┌─────────────────────────────────────────────────────────────────┐
│                              NOTE                                 │
│ Candidate may verify that RETRACT PERMIT light is backlit.  This  │
│ indicates that SRM counts are ≥100 cps and a rod block will NOT   │
│ occur when the detector is withdrawn.                             │
└─────────────────────────────────────────────────────────────────┘
```

* **Step:** 1 Momentarily depress POWER ON to energize the drives.

    Standard: Candidate depress POWER ON pushbutton.

    Cue:

    Comment:

* **Step:** 2 Select all SRM detectors by momentarily depressing the following pushbuttons:
SRM A SELECT,   SRM B SELECT,
SRM C SELECT,   SRM D SELECT.

    Standard: Candidate depresses all SRM select pushbuttons.

    Cue:

    Comment: Candidate may select/withdraw SRMs in series or parallel.

* **Step:** 3 Momentarily depress DRIVE OUT/DRIVING OUT to begin withdraw of A, B, C and D SRMs.

    Standard: Candidate momentarily depresses PB to initiate SRM withdrawal.

    Cue:

    Comment: Candidate may select/withdraw SRMs in series or parallel.

*   **Step:** 4   Momentarily depress DRIVE OUT/DRIVING OUT to stop SRM withdrawal when all selected SRM OUT lights are ON.

Standard: Candidate depresses PB to stop A, B and D SRM withdraw when A, B and D SRM OUT lights are on. Candidate should detect that C SRM OUT light is not lit. Reports same to SRO.

Cue: SRO acknowledges that SRM C appears to be stuck.

Comment:

Step: 5   De-select all selected SRM detectors by momentarily depressing the applicable pushbuttons:
SRM A SELECT   SRM B SELECT
                                 SRM D SELECT

Standard: SRM C is NOT de-selected.

Cue:

Comment:

START ALTERNATE PATH PORTION OF JPM HERE!

NOTE
SRM C will stick about half withdrawn. Candidate should recognize that SRM C count rate does not change during withdraw indicating a that SRM C is stuck.

---

*   **Step:** 6   Candidate verifies that SRM C is stuck.

Standard: Candidate verifies that SRM C is stuck.

Cue: As SRO, you concur with candidates conclusion that SRM C is stuck. Ask candidate for suggestions.

Comment: Section 7.3 of SOI-C51 gives instructions for stuck SRM detector.

*   **Step:** 7   Candidate suggests entering SOI-C51, Section 7.3, "Stuck SRM Detector."

Standard:

Cue: SRO concurs with decision to enter Stuck SRM detector procedure.

Comment:

Step: 8   Verify power available to the detector drive monitor as follows:
   a.   The POWER ON pushbutton is backlit green.
   b.   Disc 27; SRM & IRM DRIVE CONTROL CABINET, 1H22-P008, closed at Dist. Panel F1E14.
   c.   Drive fuses intact at 1H22-P008

Standard: Candidate verifies power available to detector drive motor.

Cue: As field operator, report that bkr 1H22-P008 at Dist. Panel F1E14 is closed and drive fuses at 1H22-P008 are intact.

Comment: Candidate should verify that step a above is met.

Step: 9   Attempt to drive detector in the opposite direction.
   1.   Momentarily depresses SELECT PB or verifies SRM C still selected.
   2.   Momentarily depresses DRIVE IN/DRIVING IN PB.

Standard: Candidate drives SRM C detector back to its full in position by selecting/verify selected SRM C and inserting SRM C.

Cue:

Comment: Simulator will allow SRM C to fully insert to original position.

Step: 10   Candidate discusses options with SRO:
   a.   Leave SRM C fully inserted,   <u>OR</u>
   b.   Attempt to withdraw SRM C again.

Standard:

Cue: As SRO, concur with second attempt to withdraw SRM C.

Comment:

Step: 11   Attempt to drive SRM C detector out.
1. Momentarily depresses SELECT PB or verifies SRM C still selected.
2. Momentarily depresses DRIVE OUT/DRIVING OUT PB.

Standard: Candidate drives SRM C detector back out by selecting/verify selected SRM C and withdrawing SRM C.

Cue:

Comment: Simulator will stick SRM C at about half withdrawn again.

*   **Step:** 12   Bypass SRM C to prevent a rod block/reactor trip by placing NEUTRON MONITOR BYPASS switch, 1C51A-S5, at Unit Control Console, 1H13-P680, in the to CH C position.

Standard: Candidate bypasses SRM C

Cue: If required, reactor engineer states to leave SRM in half withdrawn position in lieu of fully inserting.

Comment: Candidate to use section 7.1 of SOI-C51 procedure.

*   **Step:** 13   If the detector remains stuck during reactor startup, direct I&C to de-energize high voltage power supply.

Standard: Contacts I&C to de-energize high voltage power supply to SRM C.

Cue: As I&C Supervisor, I will send techs to Control room to be briefed on de-energizing SRM C high voltage power supply.

Comment:

This completes this JPM.

Stop time: _____

Simulator setup initial conditions:
 Reactor is in Mode 2 with neutron level at SRM/IRM overlap.

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: <u>Perry</u>　　　**JPM No:** <u>2004-301-2.g</u>

Task Title: Start RHR Pump "B" in Suppression Pool Cooling

K/A Reference: <u>219000.K3.01</u>

Recommended Testing Method:

Simulate <u>X</u>　　　Actual <u>　　　</u>

Classroom <u>　　　</u>　　　Simulator <u>X</u>　　　Plant <u>　　　</u>

Task Standard: Start "B" Train in SPC Mode

Required Materials: SOI-E12

General References: SOI-E12
JPM E12-03

Time Critical Task: NO

Validation Time: <u>　　　　　</u>

READ TO THE EXAMINEE

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

Initial Conditions:

The plant was at 100% power when 1B21F051A inadvertently opened. Actions have been taken in accordance with ONI-B21 SRV INADVERTENT OPENING / STUCK OPEN. Currently, the plant is being operated in accordance with IOI-3 and PEI-T23. ESW loop B and ECC B are in service.

Initiating Cue:

The Unit Supervisor directs you, the Reactor Operator, to place RHR "B" in Suppression Pool Cooling in accordance with SOI-E12, Section 4.4 and restore Suppression Pool temperature to < 90⁄.

Start Time: _____

Step: 1   Notify HP that a Suppression Pool evolution will be conducted, so the survey frequency may be increased as necessary.

Standard: Notifies HP of Suppression Pool cooling evolution starting.

Cue: As HP, acknowledge that survey frequency will be increased.

Comment:

Step: 2   Unless specifically directed otherwise per another approved instruction, verify Emergency Service Water System Loop B in operation per SOI-P45/49.

Standard: Identifies that ESW loop B was lined up per initial condition.

Cue: If asked, tell candidate to review initial conditions.

Comment:

Step: 3   Verify Emergency Closed Cooling System Loop A(B) in operation per SOI-P42.

Standard: Identifies that ECCS loop B was lined up per initial condition.

Cue: If asked, tell candidate to review initial conditions.

Comment:

Step: 4   Place RHR B OUT OF SERVICE switch, 1E12A-S43B, in INOP.

Standard: Candidate places E12A-S43B in INOP and acknowledges annunciator.

Cue:

Comment:

Step: 5   Confirm RHR B HX'S OUTLET VALVE, 1E12-F003B, is full open.

Standard: Candidate confirms F003B valve is full open.

Cue:

Comment:

* **Step:** 6 Close RHR A(B) HX'S BYPASS VALVE, 1E12-F048B, by holding its control switch in CLOSE.

Standard: Candidate closes F048B valve.

Cue:

Comment:

* **Step:** 7 Throttle RHR A(B) HX'S OUTLET VALVE, 1E12-F003B, by holding its control switch in CLOSE for 18 to 20 seconds.

Standard: Operator throttles 1E12-F003B closed for 18 to 20 seconds.

Cue:

Comment:

* **Step:** 8 Take RHR PUMP B, 1E12-C002B, control switch to START.

Standard: Candidate starts B RHR pump. Observes amps and discharge pressure.

Cue:

Comment:

Step: 9 Perform Section 7.5.2, Alternate Keep Fill Shutdown if Alternate Keep Fill was in use.

Standard: Candidate N/As step.

Cue: Alternate Keep Fill was not in use.

Comment:

Step: 10   Record appropriate Maintenance Rule status in Plant
Narrative Log.

Standard: Candidate attempts to make entry into Narrative Log.

Cue: Another Operator will make this log entry. Continue on with
evolution.

Comment:

*   **Step:** 11   Take RHR B Test Valve to Supr Pool, 1E12-F024B control
switch to open.

Standard: Candidate OPENs F024B valve

Cue:

Comment:

Step: 12   Verify RHR PUMP B MIN FLOW VALVE, 1E12-F064B, closes
when RHR B PUMP FLOW, 1E12-R603B, is greater than
1650 gpm.

Standard: Candidate verifies F064B valve closes when flow rate greater
than 1650 gpm.

Cue:

Comment: RHR B PUMP FLOW, 1E12-R603B, should stabilize between
6000 and 7000 gpm.

Step: 13   If performing a startup to Test Mode....

Standard: Candidate recognizes that RHR pump started for Suppression
Pool cooling and not in Test Mode. N/A s step 14.

Cue:

Comment:

*   **Step:** 14   If performing a startup to Suppression Pool Cooling, throttle RHR B HX'S OUTLET VALVE, 1E12-F003B, until RHR B PUMP FLOW, 1E12-R603B, is 7100-7300 gpm when RHR B TEST VALVE TO SUPR POOL, 1E12-F024B, is full open.

      Standard: Candidate throttles F003B valve until 7100 - 7300 gpm flow rate is established with F024B valve full open.

           Cue:

      Comment:

           Step: 15   Operate per Section 5.3, Suppression Pool Cooling/Test Mode Operations for RHR B.

      Standard:

           Cue: Another Operator will continue to operate RHR pump B in Suppression Pool Cooling. This JPM is complete.

      Comment:

Stop Time: _____

Simulator Setup Instructions:
Reset the Simulator to IC-19 EOL.
Open one (1) SRV F051B and allow Suppression Pool temperature to increase to >95. Reduce reactor power to 90% power.
When pool temperature is >95⁄, close the SRV, and place its control switch to OFF.
Startup ESW Loop "B" ESW and "B" ECC Pump.
Snap to an available IC.

May be able to perform this JPM concurrent with JPM B.1.g., "Stuck open SRV"

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: _____Perry_____   **JPM No:** _____2004-301-2.h_____

Task Title: Attempt to Close a Stuck Open SRV

K/A Reference: ____239002.A2.01____

Recommended Testing Method:

Simulate ___X___   Actual _____

Classroom _____   Simulator ___X___   Plant _____

Task Standard: Close SRV by removing fuses

Required Materials: ONI B21-1

General References: ONI B21-1

Time Critical Task: NO

Validation Time: _____

<u>READ TO THE EXAMINEE</u>

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

Initial Conditions:

1B21F051A is stuck open, Division 1 solenoid light is energized, tail pipe temperature is rising, suppression pool level and temperature slowly rising. ONI B21-1 has been entered. Containment has been evacuated.

Initiating Cue:

Unit Supervisor directs you, the Reactor operator, to perform immediate and supplemental actions of ONI-B21-1 to close SRV 1B21F051A.

NOTE

Steps 3.1 and 3.2 have been addressed from initial conditions.

Start Time: _____

Step: 3.3   **ATTEMPT** to close the SRV 1B21F051A by placing both of the associated SRV control switches from AUTO to OFF at the following panels:
- ECCS Benchboard (1H13-P601.)
- ADS Relay Panel Division 2 (1H13-P631.)

Standard: Places both SRV control switches from AUTO to OFF

Cue:

Comment: Candidate should recognize that SRV 1B21F051A has <u>NOT</u> closed.

COMMENCE ALTERNATE PATH PORTION OF JPM

Step: 4.1   **CYCLE** the associated SRV control switch at 1 1H13-P601 in the following sequence:
- 4.1.1 **PLACE** control switch in AUTO
- 4.1.2 **PLACE** control switch in OPEN
- 4.1.3 **PLACE** control switch in AUTO
- 4.1.4 **PLACE** control switch in OFF

Standard: Candidate places SRV 1B21F051A control switch in AUTO, OPEN, AUTO then OFF positions.

Cue:

Comment: Candidate should recognize that SRV 1B21F051A has <u>NOT</u> closed.

* **Step:** 4.2   **REFER TO** Attachments 1 and 2, and **REMOVE** the applicable control power fuses at 1H13-P628 and P631 to de-energize the SRV 1B21F051A solenoid.

Standard: Candidate is to **identify** and **remove** fuses F19 and F83A (left panel) and fuses F6 and F84A (right panel).

Cue:

Comment: Candidate should recognize that SRV 1B21F051A is CLOSED.

CUE: SRO reports that SRV 1B21F051A indicates CLOSED.

Step: 4.3   **CONFIRM** the Main Generator output has returned to normal.

Standard: Candidate may confirm that main generator output has returned to normal.

Cue:

Comment: This is an Optional step.

CUE: THIS COMPLETES THIS JPM

Initial Conditions: Reactor Power <90%

This JPM is modified from bank, and alternate path.

Simulator Operator: Input failure: SRV 1B21F051A sticks open. Remove fault when SRV 1B21F051A fuses are removed.

Stop Time: _____

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: _____ Perry _____ **JPM No:** _____ 2004-301-2.i _____

Task Title: Vent the Primary Containment through RHR

K/A Reference: _____ 223001.A2.06 _____

Recommended Testing Method:

Simulate ___X___   Perform _____

Classroom _____   Simulator _____   Plant ___X___

Task Standard: Steps 5.1 & 5.6 of PEI-SPI 7.1 complete; step 2.1.4 of PEI-SPI 7.4 complete.

Required Materials: PEI-SPI 7.1 and PEI-SPI 7.4

General References: PEI-SPI 7.1 and PEI-SPI 7.4

Time Critical Task: NO

Validation Time: _____

Initial Conditions:

READ TO THE EXAMINEE

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

Initiating Cue:

You have been assigned to support venting of the Containment through using RHR Containment Spray Loop A. RHR A is shutdown and is NOT required to maintain adequate core cooling. Coordinate with the Main Control Room and perform the applicable steps of PEI-SPI 7.1 and PEI-SPI 7.4 that are external to the Main Control Room.

Start Time: _____

Step: 1   Proceeds to OSC PEI File Cabinet (CC 599' D/01) and
                     simulates obtaining the GOG and Valve Lock keys.

Standard: Simulates obtaining one IB GOG key and one P54 valve Lock
                     key.

Cue:

Comment:

* **Step:** 5.1   **IF** FHB Southeast Man-door IB 316 is **NOT** open, **THEN AT**
(PEI-SPI 7.1)   FHB 620' M/10, outside southeast corner of the FHB,
                     PERFORM the following to open FHB Southeast Man-door IB
                     316:
                         .1 UNLOCK and OPEN FHB Southeast Man-door
                             IB 316.
                         .2 SECURE FHB Southeast Man-door IB 316 open using
                             the pre-staged PEI cinder block.

Standard: Southeast Man-door IB 316 open.

Cue: When the applicant completes the step correctly, "The door is
                     open."

Comment:

NOTE TO EVALUATOR

Steps 5.2 through 5.5 of PEI-SPI 7.1 are not applicable to this JPM.

* **Step:** 5.6   **AT** IB 599' J/08, **UNLOCK** and **OPEN** FPCC to Unit 1 RHR
(PEI-SPI 7.1)   Supply Isol G41-F559A.

Standard: G41-F559A open.

Cue: When the applicant completes the step correctly, G41-F559A
                     is open.

Comment:

NOTE TO EVALUATOR

Steps 1.0 through 2.13 of PEI-SPI 7.4 are not applicable to this JPM.

*	**Step:** 2.14 (PEI-SPI 7.4)	**AT** AX 599' C/07(C/03), above the RHR A(B) HX Room door, **UNLOCK** and **OPEN** RHR A(B) FPCC Supplement Cooling Discharge Vlv 1E12-F099A(B).

Standard: RHR A FPCC Supplement Cooling Discharge Valve 1E12-F099A is open.

Cue: When the applicant completes the step correctly, "1E12-F099A is open."

Comment: End of JPM.

Stop Time: _____

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____ Date: _____

Facility: <u>   Perry   </u>   **JPM No:**   <u>   2004-301-2.j   </u>

Task Title: Shed Non-essential DC Loads

K/A Reference: <u>   295003.A1.04   </u>

Recommended Testing Method:

Simulate   <u> X </u>   Perform   <u>   </u>

Classroom <u>   </u>   Simulator <u>   </u>   Plant <u> X </u>

Task Standard: Completion of Steps 1-4 of ONI-R10, Attachment D-2.

Required Materials: ONI-R10, Attachment D-2

General References: ONI-R10, Attachment D-2

Time Critical Task:

Validation Time: <u>   </u>

Initial Conditions:

READ TO THE EXAMINEE

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

Initiating Cue:

A Station Blackout has occurred. Division 1 Emergency Diesel Generator is not available and preparations are underway to restore Division 2 Emergency Diesel Generator to service. De-energize non-essential DC loads in accordance with section 1.0, steps 1.1 through 1.4, of ONI-R10 Attachment D-2.

NOTE TO EVALUATOR

To limit the time for completion of this JPM, only the first four steps of attachment D-2 are performed. If asked about the remaining steps inform the candidate that another operator has been assigned to complete them.

Start Time: _____

* **Step:** 1.1   **VERIFY** the following Brkrs OPEN at Distribution Panel ED1A06 (CC 638): Disc. 1, Disc 2, Disc 9, Disc 11, Disc 12, Disc 14, Disc 16, Disc 22, Disc 26, and Disc 28.

     Standard: Simulates opening Disc. 1, Disc 2, Disc 9, Disc 11, Disc 12, Disc 14, Disc 16, Disc 22, Disc 26, and Disc 28 at Distribution Panel ED1A06 (CC 638).

     Cue: If asked about Division 1 Diesel Generator status, report back that Division 1 Diesel Generator is not available.

     Comment:

* **Step:** 1.2   **VERIFY** the following Brkrs OPEN at 120V AC Vital Distribution Panel V-1-A (CC 638 Behind Unit 1 Computer Room): Disc 1, Disc 3, Disc 9, Disc 10, Disc 11, Disc 14, and Disc 20.

     Standard: Simulates opening Disc 1, Disc 3, Disc 9, Disc 10, Disc 11, Disc 14, and Disc 20 at 120V AC Vital Distribution Panel V-1-A (CC 638 Behind Unit 1 Computer Room).

     Cue: If asked whether to de-energize the Maintenance and Calibration System (Disc 20), report back that the Maintenance and Calibration System is not needed for operations at this time.

     Comment:

*   **Step:** 1.3   **VERIFY** the following Brkrs OPEN at Distribution Panel
                ED1B06 (CC 638): Disc 26.

   Standard: Simulates opening Disc 26 at Distribution Panel ED1B06 (CC
                638).

      Cue: If asked about Division 2 Diesel Generator status, report back
                that preparations for starting Division 2 Diesel Generator are
                in progress.

   Comment:

*   **Step:** 1.4   **VERIFY** the following Brkrs OPEN at Distribution Panel
                ED1B08 (CC 638): Disc 1, Disc 2, Disc 14, Disc 16, and Disc
                26.

   Standard: Simulates opening Disc 1, Disc 2, Disc 14, Disc 16, and Disc
                26 at Distribution Panel ED1B08 (CC 638).

      Cue: When step is complete inform candidate that the JPM is
                complete.

   Comment:

Stop Time: _____

Examinee: _____   SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____

Facility: <u>Perry</u>   **JPM No:** <u>2004-301-2.k</u>

Task Title: Place a Nuclear Closed Cooling Water Heat Exchanger in Service.

K/A Reference: <u>400000.A2.03</u>

Recommended Testing Method:

Simulate <u>X</u>   Perform <u>   </u>

Classroom <u>   </u>   Simulator <u>   </u>   Plant <u>X</u>

Task Standard: NCC Heat Exchanger is simulated being placed into service.

Required Materials:

General References: SOI-P43

Time Critical Task: NO

Validation Time: <u>   </u>

Initial Conditions: N/A

READ TO THE EXAMINEE

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

Initiating Cue:

A plant startup is in progress. NCC Heat Exchanger B was removed from service due to low heat load, but heat loading has now increased. Maintenance has reinstalled the access port end bell covers and the tagout has been cleared. Place NCC Heat Exchanger B in service.

Start Time: _____

Step: 5.3.1.b   Verify NCC Hx C(A,B) SW Drain, P41-F526C(A,B), is closed.

Standard: Simulates closing P41-F526B.

Cue: If CW rotation is simulated, valve movement is indicated. After several turns, indicate no further valve movement is observed.

Comment: Step 5.3.1.a completed per initiating cue.

Step: 5.3.1.c   Verify NCC Hx C(A,B) SW Vent, P41-F525C(A,B), is closed.

Standard: Simulates closing P41-F525B.

Cue: If CW rotation is simulated, valve movement is indicated. After several turns, indicate no further valve movement is observed.

Comment:

*   **Step:** 5.3.1.d   Slowly open NCC Hx C(A,B) SW Inlet, P41-F523C(A,B).

Standard: Simulates throttling open of P41-F523B then fully opens valve when flow noise ceases.

Cue: If CCW rotation is simulated, then valve movement is indicated and flow noise is heard (the amount of flow noise will increase as the valve is opened further). When satisfied that the candidate has demonstrated appropriate caution in opening the valve, inform the candidate that several minutes have passed and that the flow noise has ceased. After candidate simulates full opening of valve, indicate that the valve is full open.

Comment:

Step: 5.3.1.e   Vent the NCC Hx through NCC Hx C(A,B) SW Vent, P41-F525C(A,B), until air free water appears then close the valve.

Standard: Simulates opening of P41-F525B, waiting for air free water, then closing of P41-525B.

Cue: After CCW rotation is simulated, indicate that a solid stream of water is flowing from the vent line. After CW rotation is simulated, indicate water flow has ceased and that no further valve movement is observed.

Comment:

Step: 5.3.2.a   Verify NCC Hx C(A,B) Drain, P43-F523C(A,B), is closed.

Standard: Simulates closing P43-F523B.

Cue: If CW rotation is simulated, valve movement is indicated. After several turns, indicate no further valve movement is observed.

Comment:

Step: 5.3.2.b   Verify NCC Hx C(A,B) Vent, P43-F519C(A,B), is closed.

Standard: Simulates closing P43-F519B

Cue: If CW rotation is simulated, valve movement is indicated. After several turns, indicate no further valve movement is observed.

Comment:

*   **Step:** 5.3.2.c   Slowly open NCC Hx C(A,B) Inlet Isolation, P43-F529C(A,B).

     Standard: Simulates throttling open of P43-F529B then fully opens valve when flow noise ceases.

      Cue: If CCW rotation is simulated, then valve movement is indicated and flow noise is heard (the amount of flow noise will increase as the valve is opened further). When satisfied that the candidate has demonstrated appropriate caution in opening the valve, inform the candidate that several minutes have passed and that the flow noise has ceased. After candidate simulates full opening of valve, indicate that the valve is full open.

     Comment:

     Step: 5.3.3   Open NCC Hx C(A,B) Vent, P43-F519C(A,B), until a solid stream of water issues from the vent, then close the valve and reinstall the cap.

     Standard: Simulates opening of P43-F519B, waiting for air free water, then closing of P43-519B.

      Cue: After CCW rotation is simulated, indicate that a solid stream of water is flowing from the vent line. After CW rotation is simulated, indicate water flow has ceased and that no further valve movement is observed.

     Comment:

*   **Step:**   At local panel 1H51-P1151, verify HEAT EXCHANGER OUTLET TEMPERATURE CONTROLLER, P43-R045C(A,B), set at the desired temperature within the limits of P&L 2.0.5.

     Standard: Simulates setting temperature controller to approximately 85°F.

      Cue: Indicate a setpoint of approximately 85°F.

     Comment:

*   **Step:** 5.3.5   Open NCC Hx C(A,B) Outlet Isolation, P43-F530C(A,B).

  Standard: Simulates opening of P43-F530B.

  Cue: If CCW rotation is simulated, then valve movement is indicated and flow noise is heard (the amount of flow noise will increase as the valve is opened further). When satisfied that the candidate has demonstrated appropriate caution in opening the valve, inform the candidate that no further valve movement is observed.

  Comment:

*   **Step:** 5.3.6   Open NCC Hx C(A,B) SW Outlet, P41-F527C(A,B).

  Standard: Simulates opening of P41-F527B.

  Cue: If CCW rotation is simulated, then valve movement is indicated and flow noise is heard (the amount of flow noise will increase as the valve is opened further). When satisfied that the candidate has demonstrated appropriate caution in opening the valve, inform the candidate that no further valve movement is observed.

  Comment:

  Step: 5.3.7   Notify Chemistry to ensure NCC water chemistry is within specified limits.

  Standard: Simulates notifying chemistry.

  Cue: Acknowledge notification.

  Comment:

Stop Time: _____

Examinee: _____ SRO/RO (circle one)

Examiner: _____

Date Performed: _____

Start Time: _____   Stop: _____   Time to Complete: _____

Follow-up Questions: (Include Question and Response)

Result: Satisfactory/Unsatisfactory (circle one)

Examiner's Signature: _____   Date: _____