| | JOB PERFORMANCE MEASURE (JPM) |
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**SITE:** **MONTICELLO**

**TASK TITLE:** INADVERTENT CONTROL ROD INSERTION

**JPM NUMBER:** JPM-B.1.a **REV.** 6

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR201.119

**K/A NUMBERS:** 201003 A3.01

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

**EVALUATION LOCATION:** In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 9 Minutes Time Critical: NO

Maximum Time for Completion: 18 Minutes Alternate Path / Faulted: YES

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

**JPM Number:** JPM-B.1.a

**JPM Title:** INADVERTENT CONTROL ROD INSERTION

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**SIMULATOR SETUP:**

- Initialize to IC-247
- Verify "CHFCRDIW>1" is assigned to Event Trigger No. 1 and that the Rod Movement Control Switch, S72-01 P14-11, is overridden to ON with Event Trigger No. 1.
- Obtain a Control Rod Position printout from the Process Computer and place on C-05.
- Have Control Room Log accessible.
- Ensure that a Control Rod OTHER than 30-19 is selected.
- Fill out 0074 as follows:
    - Write in COMMENTS, "Perform PART A, Steps 3-8 for CRD 30-19 for PMT."
    - Reason for Performing: Other X
    - Initial prerequisites.
    - NA all CRDs on Page 11, except 30-19.

**INITIAL CONDITIONS:**

- The plant is operating at 100% power.
- A PMT on CR 30-19 needs to be done following insert solenoid replacement. The isolation restoration is complete.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to perform the Weekly Control Rod Drive Exercise Test No. 0074 for CR 30-19 only, using the current rod position printout at the operator console. PART 'A' steps 1 and 2 have been completed.

JPM-B.1.a

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Simulator Setup**

**General References:** **B.05.05-05.G.1, Rev 6; Procedure 0074, Rev 42**

**Task Standards:** **Recovery from an Inadvertent Control Rod Insertion**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1**<br>**Critical Y** | Procedure 0074, STEP 3:<br>**NOTE:**<br>**Reactor Manual Control anomalies (i.e., the inability to select a rod on the first or subsequent tries, rod selects but spurious alarms are received) SHALL be considered abnormal conditions and recorded in Table 2, Control Rod Exercise Abnormalities.**<br><br>Select a withdrawn or partially withdrawn control rod by depressing the appropriate rod select pushbutton.<br><br>Verify that the selected rod select pushbutton is illuminated and the selected rod indicates selection on the full-core display. |
| **Standard:** | 1. Selects CRD 30-19.<br>2. Verifies select pushbutton illuminates AND rod is selected on full-core display. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical Y** | Procedure 0074, STEP 4:<br>**CAUTION:**<br>**PCRAT should be below the value indicated in PREREQUISITE 1 to perform STEPs 4 and 5 on partially withdrawn rods.**<br><br>Insert the selected rod one notch and verify the rod position indication for the selected control rod in the single rod and the four rod group display changes to the next lower latched position. |
| **Standard:** | 1. Operator inserts the selected control rod one (1) notch position by placing Rod Movement Control Switch to the ROD IN Position and then releases the switch.<br>2. Operator notes that CR 30-19 inserts more than the desired one (1) notch. |
| **Evaluator Note:** | Operator should observe the following:<br>1. Rod position indication changes on the four-rod, full-core, and possibly the RWM displays as rod is inserted.<br>2. Prior to rod movement, the CRDH System indications are normal. During and after the operator moves the control rod, he should verify the proper cycling of the RMCS lights located above the Rod Movement Control Switch on C-05 and proper CRDH pressures and flows. |
| **Evaluator Cue:** | **IF operator requests assistance (CRS or Nuc Eng), they are directed to follow the appropriate Ops Manual procedure(s).** |
| **Simulator Operator:** | 1. The simulator computer does not printout each CRD change. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical N** | B.05.05-05.G.1, STEP 1:<br>IF the control rod has been inserted one or more notches beyond its intended position and has been deselected,<br>OR the control rod has been inserted two or more notches beyond its intended position,<br>THEN notify the Superintendent of Nuclear Engineering,<br>AND inform appropriate personnel of the event per 4 AWI-04.08.01 (EVENT NOTIFICATIONS). |
| **Standard:** | 1. Obtains B.05.05-05.G.1 (RECOVERY FROM AN INADVERTENT CONTROL ROD INSERTION).<br>2. Operator verifies that the control rod inserted 2 notches and has not been deselected. (If the rod was deselected then the CRS should be notified.) |
| **Evaluator Cue:** | **If asked, CRS agrees with procedure. CRS will make necessary notifications.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical Y** | B.05.05-05.G.1, STEP 2:<br>IF the control rod is inserted three or fewer notches beyond its intended position, THEN use 3A-S2 (ROD MOVEMENT CONTROL SWITCH), to return the rod to its intended position. |
| **Standard:** | Operator withdraws CR using 3A-S2 (ROD MOVEMENT CONTROL SWITCH) one notch to return CR to its intended position. |
| **Evaluator Note:** | Operator should observe the following:<br>1. Rod position indication changes on the four-rod, full-core, and possibly the RWM displays as rod is withdrawn.<br>2. Prior to rod movement, the CRDH System indications are normal. During and after the operator moves the control rod, he should verify the proper cycling of the RMCS lights located above the Rod Movement Control Switch on C-05 and proper CRDH Pressures and flows. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical Y** | Procedure 0074, STEP 5:<br>**NOTE:**<br>**The RWM uses the Rod Select and Drive Signal to detect completion of the rod motion cycle. Because this signal does not always drop out long enough for the RWM to detect completion of the rod motion, allow enough time for the settle cycle to occur to ensure that all control rods are logged properly.**<br><br>Withdraw the selected rod one notch and verify the rod position indication for the selected control rod in the single rod and four rod display changes to the next higher latched position. |
| **Standard:** | 1. Operator withdraws CR using 3A-S2 (ROD MOVEMENT CONTROL SWITCH) one notch to return CR to its original position.<br>2. Verifies single rod and four rod group display correct position. |
| **Evaluator Note:** | Operator should observe the following:<br>1. Rod position indication changes on the four-rod, full-core, and possibly the RWM displays as rod is withdrawn.<br>2. Prior to rod movement, the CRDH System indications are normal. During and after the operator moves the control rod, he should verify the proper cycling of the RMCS lights located above the Rod Movement Control Switch on C-05 and proper CRDH Pressures and flows. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 6**<br>**Critical N** | Procedure 0074, STEP 6:<br>After completion of the first control rod, verify computer acknowledgement of the selected rod's change in position (alarm typer print-out of rod identification and position change). |
| **Standard:** | Computer acknowledgement of the selected rod's change in position. |
| **Evaluator Note:** | The simulator computer does not print out each CRD change. |
| **Evaluator Cue:** | **If the Operator looks at the computer printer, tell them the rod moved as per indication on C-05.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical N** | Procedure 0074, STEP 7:<br>**NOTE:**<br>**For the purposes of this procedure, drives which require drive pressure greater than 265 psid to insert or withdraw, all occurrences of double notching, and usually fast, slow or erratic drive speeds SHALL be considered an abnormal condition. (See BASES)**<br><br>IF an abnormal condition is detected as a result of exercising a rod,<br>THEN notify the Shift Supervisor,<br>AND record what the abnormality was (i.e., Double Notch insert, Double Notch withdraw, increased drive pressure to _____ psi) on Table 2 Control Rod Exercise Abnormalities. |
| **Standard:** | 1. Notifies the Control Room Supervisor of the abnormality.<br>2. Records the abnormal indication in Table 2, Control Rod Exercise Abnormalities. |
| **Evaluator Note:** | Operator should record the abnormal indication in the Control Room Log also. |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 8**<br>**Critical N** | Procedure 0074, STEP 8:<br>Acknowledge completion of the rod exercise on Table 1. |
| **Standard:** | Completes Table 1. |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- The plant is operating at 100% power.
- A PMT on CR 30-19 needs to be done following insert solenoid replacement. The isolation restoration is complete.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to perform the Weekly Control Rod Drive Exercise Test No. 0074 for CR 30-19 only, using the current rod position printout at the operator console. PART 'A' steps 1 and 2 have been completed.

| | JOB PERFORMANCE MEASURE (JPM) |
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**SITE:** **MONTICELLO**

**TASK TITLE:** REJECT WATER FROM RX VESSEL USING RWCU TO RADWASTE

**JPM NUMBER:** JPM-B.1.b **REV.** 0

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR204.106, NL204.107

**K/A NUMBERS:** 204000 A1.07

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

**EVALUATION LOCATION:** In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 5 Minutes Time Critical: _____

Maximum Time for Completion: 10 Minutes Alternate Path / Faulted _____

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

JPM-B.02.02-005, REJECT WATER FROM RX VESSEL USING RWCU TO RADWASTE, Rev. 0

**JPM Number:** JPM-B.02.02-005

**JPM Title:** REJECT WATER FROM RX VESSEL USING RWCU TO RADWASTE

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**SIMULATOR SETUP:**

- Initialize to IC-245 with the plant S/D ready for startup. Place the RWCU system in service with 70 gpm flow through each Filter Demineralizer. Reactor water temp is ambient.
- MSIVs are open.
- MO-2399 is fully open.
- MO-2401 is closed.
- MO-2404 is closed.
- RWCU F/D FCVs are set at 72.

**INITIAL CONDITIONS:**

- A Refueling outage is in progress with the vessel head removed. The Reactor is at ambient temperature. The RWCU system is in service. CRD system has just been started and RPV water level is slowly increasing.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to use RWCU to drain Reactor vessel water to the Waste Surge Tank at 30 gpm.

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Simulator Setup**

**General References:** **B.02.02-05.G.1, Rev 20**

**Task Standards:** **Aligning RWCU to Divert Excess Water to the Waste Surge Tank for Reactor Water level control.**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1**<br>**Critical N** | Locates procedure B.02.02-05.G.1 (REACTOR VESSEL DRAINING DURING COLD SHUTDOWN CONDITIONS). |
| **Standard:** | Locates appropriate procedure. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical N** | B.02.02-05.G.1, STEP 1:<br>Ensure one of the following:<br>• Reactor vessel head is off, OR<br>• Reactor vessel is vented per C.3 (SHUTDOWN PROCEDURE). |
| **Standard:** | Determines Reactor vessel head is off. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical N** | B.02.02-05.G.1, STEP 2:<br>Verify CLOSED Bkr B-3201, MO-2401 RWCU Excess Flow RO Bypass 480V Supply. |
| **Standard:** | 1. Directs APEO to verify breaker B-3201 is closed.<br>2. Operator should note that the green open light for MO-2401 is ON. |
| **Evaluator Cue:** | **As APEO, report breaker B-3201 is closed.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical Y** | B.02.02-05.G.1, STEP 3:<br>OPEN MO-2401, RWCU Discharge Orifice Bypass. |
| **Standard:** | 1. Opens MO-2401 using HS-12A-S1.<br>2. Operator should observe that the valve position indication changes from green to red. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical Y** | B.02.02-05.G.1, STEP 5.a:<br>IF draining to Radwaste,<br>THEN perform the following:<br>a. OPEN MO-2405, RWCU Dump to WCT or WST. |
| **Standard:** | 1. Opens MO-2405 using HS-12A-S3.<br>2. Operator should observe that the valve position indication changes from green to red. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 6**<br>**Critical Y** | B.02.02-05.G.1, STEP 5.b:<br>OPEN AO-2591, RWCU Inl to Waste Surge<br>OR OPEN AO-2592, RWCU Inl to WC Tk. |
| **Standard:** | Directs Radwaste Operator to open AO-2591. |
| **Evaluator Cue:** | **Report as Radwaste Operator, AO-2591 is open.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical Y** | B.02.02-05.G.1, STEP 7:<br>OPEN CV-2403, Dump Flow, using hand control on Panel C-04, AND establish the desired flowrate. |
| **Standard:** | OPENS MO-2403 by turning the knob on FC-12-143 to obtain 30 gpm. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 8**<br>**Critical N** | B.02.02-05.G.1, STEP 8:<br>Verify that flow through each filter/demin does not exceed 85 gpm. |
| **Standard:** | Verifies that FILTER A and FILTER B flow as indicated on both FI-12-141A and FI-12-141B, respectively, is less than 85 gpm. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 9**<br>**Critical N** | B.02.02-05.G.1, STEP 9:<br>Monitor water levels in the reactor. |
| **Standard:** | Determines another operator will monitor water level. |
| **Evaluator Cue:** | Another operator will monitor Reactor Water level. |
| **Evaluator Note:** | With the Reactor Head removed, all installed water level monitor instruments would be pegged high. A temporary Rx water level gauge would be set up in the control room. The candidate should realize that the temporary gauge is need to monitor Rx water level. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- A Refueling outage is in progress with the vessel head removed. The Reactor is at ambient temperature. The RWCU system is in service. CRD system has just been started and RPV water level is slowly increasing.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to use RWCU to drain Reactor vessel water to the Waste Surge Tank at 30 gpm.

| | JOB PERFORMANCE MEASURE (JPM) |
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**SITE:** **MONTICELLO**

**TASK TITLE:** SRV OPERABILITY CHECK WITH STUCK OPEN SRV

**JPM NUMBER:** JPM-B.03.03-003 **REV.** 0

**RELATED PRA INFORMATION:** None

**TASK NUMBERS:** CR999.218

**K/A NUMBERS:** 239002 A4.01; A2.03

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [x]

**EVALUATION LOCATION:** In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: NO

Maximum Time for Completion: 30 Minutes Alternate Path / Faulted: YES

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

**JPM Number:** JPM-B.1.c

**JPM Title:** SRV OPERABILITY CHECK WITH STUCK OPEN SRV

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**SIMULATOR SETUP:**

- Initialize to IC-249.
- Verify RHR is in Torus Cooling mode.
- Verify 1-1/2 Main Turbine Bypass valves are open.
- Verify that the stuck open SRV G malfunction will be removed when Lo-Lo Set Logic HS is placed in BYPASS.
- Fill in Test 0112 as follows:
    - Sign Shift Supv approval on cover sheet.
    - Write in the comments section “Perform SRV E, G and H only in that order.”
    - Reason for Performing STEP 3.e, 3.g and 3.h.
    - Initial prerequisites.
    - Initial STEPS 1 and 2.
    - N/A the following STEPS: 6 through 21.f (SRV A through D)
    - N/A the following STEPS: 26 through 29.f (SRV F)

**INITIAL CONDITIONS:**

- Reactor is at power. Reactor pressure is approximately 150 psig. Approximately 1 1/2 Turbine Bypass valves are open. RHR is in Torus Cooling mode.

**INITIATING CUES (IF APPLICABLE):**

- Shift Supv directs you to perform Test No. 0112 on SRV E, G, and H only. He would like the SRVs tested in that order even though the procedure allows any order.
- Another Operator has already walked down the Torus area to ensure that no one is working in the area.
- Other operators will assist you in the control room as you specifically request.

**Provide the operator with a marked up copy of Test No. 0112.**

JPM-B.1.c

**JPM PERFORMANCE INFORMATION**

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

**Required Materials:** **See Simulator Setup**

**General References:** **Test No. 0112, Rev 22**

**Task Standards:** **Perform SRV Operability and Position Indication Check on SRV-2-71E, G and H in accordance with Test No. 0112.**
**Respond appropriately to a stuck open SRV.**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1** **Critical N** | Announce over plant page that SRV testing is about to commence. |
| **Standard:** | Makes plant announcement. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical N** | Perform the following to minimize level and power swings due to subsequent SRV cycling:<br>a. PLACE Vessel Level (Feedwater) Low Flow Valve Control, 6-85, on Panel C-05 to manual.<br>b. Instruct operator to stay at Panel C-05 for duration of test to monitor and manually control Reactor level using Low Flow Valve. |
| **Standard:** | 1. Informs the CRS that RPV level control must be placed in manual with the Feedwater Low Flow Control valve and that another operator must remain at the C-05 Panel for the remainder of the test. |
| **Evaluator Note:** | Use the simulator operator to maintain RPV level control. |
| **Evaluator Cue:** | **After the candidate has placed the Low Flow Valve in Manual, inform him that another operator is stationed to respond as necessary.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical N** | Verify one of the following is operable and in service to continuously monitor suppression pool temperature:<br>a. Division 1 or Division 2 of SPOTMOS.<br>b. Temperature recorder TR-23-115; HPCI, RHR, Fuel Pool, Torus, Drywell Temperatures Recorder (Panel C-21), points 18 and 19. |
| **Standard:** | Operator verifies at least 1 division of SPOTMOS is functioning or TR-23-115 is operating. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical Y** | At Panel C-03, PLACE handswitch 2E-S4E, RV2-71E Relief Valve E, to OPEN. |
| **Standard:** | Opens RV2-71E using handswitch 2E-S4E. |
| **Evaluator Note:** | Candidate may request another operator be stationed at the Turbine Bypass Valves to determine Turbine Bypass Valve position. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical N** | Verify the following:<br>a. Red and amber lights ON. |
| **Standard:** | 1. Verifies red light is on,<br>AND<br>2. Verifies amber light is on. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 6**<br>**Critical N** | b. Turbine bypass valves respond by starting to close. |
| **Standard:** | Verifies bypass valve closes down. |
| **Evaluator Note:** | This is usually done by a third operator stationed at panel C-07 |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical N** | **NOTE: A change of about 10% or more in bypass valve position indicates unrestricted SRV flow.**<br><br>c. SRV discharge flow is unrestricted. |
| **Standard:** | Verifies bypass valve position decreases 10% or more. |
| **Evaluator Note:** | This is usually done by a third operator stationed at panel C-07. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 8**<br>**Critical N** | d. Annunciator 5-A-46 (SRV OPEN) is in ALARM. |
| **Standard:** | Verifies Annunciator 5-A-46 is in Alarm. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 9**<br>**Critical Y** | At Panel C-03, PLACE handswitch 2E-S4E to AUTO. |
| **Standard:** | Places handswitch 2E-S4E to AUTO. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 10**<br>**Critical N** | Verify the following:<br>a. Green indicating light ON. |
| **Standard:** | Verifies the green indicating light is on. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 11**<br>**Critical N** | b. Red and amber lights OFF. |
| **Standard:** | 1. Verifies the red indicating light is off,<br>AND<br>2. Verifies the amber indicating light is off. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 12**<br>**Critical N** | c. Annunciator 5-A-46 is RESET. |
| **Standard:** | Verifies Annunciator 5-A-46 is reset. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 13**<br>**Critical N** | d. Turbine bypass valves return to original position. |
| **Standard:** | Verifies with third operator that Turbine Bypass Valves return to original position. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 14**<br>**Critical N** | **NOTE: There may be a short time delay from when an alarm is received/reset until it prints on printer.**<br><br>e. Printout of PCS Alarm Printer lists opening and closing times of SRV "E" (computer point APR004). |
| **Standard:** | 1. Verifies computer printout opening time,<br>AND<br>2. Verifies computer printout closing time. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 15**<br>**Critical N** | **NOTE: A decrease in SRV discharge line temperature following closure of the SRV may not be seen until adequate time has passed for heat decay. Therefore, this step need not be completed before testing is started on another SRV.**<br><br>f. Temperature recorder TR-2-166, Safety Relief Valve Tailpipe Temperature (Panel C-21), printout shows that SRV "E" discharge line temperature increased when valve was opened then decreased after it was closed. |
| **Standard:** | 1. Verifies temperature increase on TR-2-166,<br>AND<br>2. Verifies temperature decrease on TR-2-166. |
| **Evaluator Cue:** | If candidate waits to see tailpipe temperature decrease, state that he is to continue with the next SRV and come back to the recorder later. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 16**<br>**Critical Y** | At Panel C-03, PLACE handswitch 2E-S4G, RV-2-71G Relief Valve G, to OPEN. |
| **Standard:** | Opens RV2-71G using handswitch 2E-S4G. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 17**<br>**Critical N** | Verify the following:<br>a. Red and amber lights ON. |
| **Standard:** | 1. Verifies red light is on,<br>2. AND<br>3. Verifies amber light is on. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 18**<br>**Critical N** | b. Turbine bypass valves respond by starting to close. |
| **Standard:** | Verifies bypass valve closes down. |
| **Evaluator Note:** | This is done by a third operator. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 19**<br>**Critical N** | **NOTE: A change of about 10% or more in bypass valve position indicates unrestricted SRV flow.**<br>c. SRV discharge flow is unrestricted. |
| **Standard:** | Verifies bypass valve position decreases 10% or more. |
| **Evaluator Note:** | This is done by a third operator. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 20**<br>**Critical N** | d. Annunciator 5-A-46 (SRV OPEN) is in ALARM. |
| **Standard:** | Verifies Annunciator 5-A-46 is in Alarm. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 21**<br>**Critical Y** | At Panel C-03, PLACE handswitch 2E-S4G, RV-2-71G Relief Valve G, to AUTO. |
| **Standard:** | Places handswitch 2E-S4G to AUTO. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 22**<br>**Critical Y** | Verify the following:<br>a. Green indicating light ON. |
| **Standard:** | Determines that the green indicating light is did NOT come ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 23**<br>**Critical Y** | b. Red and amber lights off. |
| **Standard:** | Determines that the Red and amber lights did NOT go OFF. |
| **Evaluator Note:** | The candidate may also use Annunicator 5-A-46 and the Turbine bypass valves to determine that the SRV G did not go close. Failing to notice one indicator that the SRV is still open is not a critical step. However, failure to recognize that the SRV is stuck open is a critical step. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 24**<br>**Critical N** | Place the handswitch for the affected SRV to the OPEN position and then return it to the normal position. |
| **Standard:** | Places handswitch 2E-S4G to OPEN and than back to AUTO |
| **Evaluator Note:** | The candidate is now performing the immediate actions for a stuck open relief valve. The steps are found in C.4-B.03.03.A. The candidate may perform the immediate steps from memory or he may elect to obtain the procedure first. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 25**<br>**Critical N** | IF SRV E, G, or H open, THEN perform the following:<br><br>a. Place their respective switches (2E-S4E, 2E-S4G, and 2E-S4H on C-03) to CLOSE. |
| **Standard:** | Places handswitch 2E-S4G to CLOSE. Candidate determines that valve is still open. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 26**<br>**Critical Y** | b. Place DIV II Lo-Lo SET LOGIC switch (HS-S3B) on Control Room Panel C-253D in BYPASS |
| **Standard:** | • Places HS-S3B to BYPASS.<br>• Observes Green light for SRV G ON and Red and Amber light OFF.<br>• Verifies turbine bypass valve returns to normal<br>• Verifies that Annunciator 5-A-46 resets.<br>• Determines that valve is closed. |
| **Evaluator Note:** | Missing one or two indications that valve is closed is not critical. However, if he fails to place the switch in BYPASS or to recognize the valve is closed, he has failed the a critical step. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 27**<br>**Critical N** | Notifies CRS. Discontinues procedure. |
| **Standard:** | • Notifies the CRS of the stuck open SRV.<br>• Discontinues procedure.<br>• May indicate that he would mark up the procedure and make a comment in the comment section and/or initiate a condition report. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

**Terminating Cues:** **Pre-Approved Prompt. Inform Candidate that the task is complete.**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- Reactor is at power. Reactor pressure is approximately 150 psig. Turbine Bypass valves are approximately 1 1/2 open. RHR is in Torus Cooling mode.

**INITIATING CUES (IF APPLICABLE):**

- Shift Supv directs you to perform Test No. 0112 on SRV E, G, and H only. He would like the SRVs tested in that order even though the procedure allows any order.
- Another Operator has already walked down the Torus area to ensure that no one is working in the area.
- Other operators will assist you in the control room as you specifically request.

| | JOB PERFORMANCE MEASURE (JPM) |
|---|---|

**SITE:** **MONTICELLO**

**TASK TITLE:** FLUSH NO. 11 CORE SPRAY LOOP

**JPM NUMBER:** JPM-B.1.d **REV.** 5

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR209.112

**K/A NUMBERS:** 209001 A4.05

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

**EVALUATION LOCATION:** In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: NO

Maximum Time for Completion: 30 Minutes Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

JPM-B.1.d

**JPM Number:** JPM-B.1.d

**JPM Title:** FLUSH NO. 11 CORE SPRAY LOOP

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**SIMULATOR SETUP:**

- Initialize to IC-245 with the Reactor in Cold Shutdown, the Torus available for flushing and No. 11 Core Spray Loop available for operation. Reactor water level is 55".
- Complete the following for procedure 0255-03-IA-2A:
  - Sign for CRS approval to commence with date and time.
  - Write "Complete PART A" in the Comments section on the cover page.
  - Check "Other" for reason for performing procedure on page 3.
  - Initial all prerequisites except for #8 (12 Core Spray loop available for operation); N/A this step.
  - Place "N/A" in PART B steps on pages.

**INITIAL CONDITIONS:**

- The Reactor is shutdown with Reactor coolant temperature < 212°F. Reactor water level is 55". Core Spray Loop "A" has been recently filled and vented subsequent to outage maintenance. The Torus is available for flushing. The reactor head is removed. Steam line plugs are installed.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to flush the "A" Loop of Core Spray per B.03.01-05.G.1 (11 CORE SPRAY LOOP FLUSHING).

JPM-B.1.d

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Simulator Setup**

**General References:** **B.03.01-05.G.1, Rev 11; 0255-03-IA-2A, Rev 19**

**Task Standards:** **Flush No. 11 Core Spray Loop with CST Water**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

| | |
|---|---|
| **Performance Step: 1** **Critical N** | Locates procedure B.03.01-05.G.1 (11 CORE SPRAY LOOP FLUSHING). |
| **Standard:** | 1. Locates appropriate procedure.<br>2. Determines that this task is being performed with procedure 0255-03-IA-2A. |
| **Evaluator Note:** | **Candidate will go to B.03.01-05.G.1 which directs** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 2**<br>**Critical N** | Refers to procedure 0255-03-IA-2A (CORE SPRAY – SHUTDOWN VALVE OPERABILITY TEST). |
| **Standard:** | Locates appropriate procedure. |
| **Evaluator Cue:** | **Hand the candidate a copy of procedure 0255-03-IA-2A.** |
| **Evaluator Note:** | **If excessive time is taken, inform applicant that all precautions and prerequisites are satisfied.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 3**<br>**Critical N** | Verify one of the following is OPEN:<br>a. CST-6-1, 11 CST Out, OR<br>b. CST-6-2, 12 CST Out. |
| **Standard:** | Directs the Radwaste Operator to verify that CST 6-1 or CST 6-2 is OPEN. |
| **Simulator Operator:** | Open CST-6-1 or CST-6-2 |
| **Evaluator Cue:** | **CST 6-1 OR CST 6-2 is open.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 4**<br>**Critical N** | Place 14A-S5A, 11 Core Spray Pump, in Pull-to-lock. |
| **Standard:** | Places 14A-S5A, 11 Core Spray Pump, control switch in Pull-to-lock. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 5**<br>**Critical Y** | **NOTE: Annunciator 3-A-54 (CORE SPRAY SUCT VLV 1741 CLOSED) will be in alarm while MO-1741 is closed.**<br><br>Using Key 15, CLOSE MO-1741, 11 CS Pump Torus Suction. |
| **Standard:** | 1. Places Key 15 in the CLOSE position.<br>2. Verifies green light is on and red light is not lit. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 6**<br>**Critical Y** | CAUTION<br>CST water will flow to the Torus if MO-1741 is not closed before CS-3-1 is opened.<br><br>OPEN CS-3-1, 11 CS Pump CST Suction. |
| **Standard:** | Directs Reactor Building APEO to open CS 3-1. |
| **Simulator Operator:** | Open CS-3-1 to 100%. |
| **Evaluator Cue:** | **CS 3-1 is open.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 7**<br>**Critical N** | Place 14A-S5A in AUTO. |
| **Standard:** | Places 14A-S5A, 11 Core Spray Pump, control switch in AUTO. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 8**<br>**Critical N** | Verify CLOSED MO-1753, 11 Core Spray Injection Inboard. |
| **Standard:** | Verifies MO-1753 is closed by observing the green light is lit and the red light is not lit. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 9**<br>**Critical N** | Verify OPEN MO-1751, 11 Core Spray Injection Outboard. |
| **Standard:** | Verifies MO-1751 is open by observing the red light is lit and the green light is not lit. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 10**<br>**Critical N** | Verify PI-14-48A (C-03), Div I CS Pump Pressure, indicates ≥ 30 psig. |
| **Standard:** | Verifies that PI-14-48A on Panel C-03 indicated greater than 30 psig. |
| **Evaluator Note:** | **Gauge is X-10 scale.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 11**<br>**Critical N** | Verify PI-14-36A (local), Div I CS Pump Suction Pressure, indicates ≥ 3 psig. |
| **Standard:** | Directs the RBO to verify PI-14-36A greater than 3 psig. |
| **Evaluator Cue:** | **Div I CS Pump suction pressure is 5 psig.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 12**<br>**Critical Y** | Position HS-7189 Test Instrument Selector Switch-ECCS Loop A Flow in the CS position. |
| **Standard:** | Places HS-7189 in the CS position. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 13**<br>**Critical N** | IF the reactor head is installed,<br>THEN reduce reactor water level to approximately +30" as indicated on LI-2-3-86 (or equivalent). |
| **Standard:** | Determines that the reactor head is removed per the initial conditions and places a "N/A" for this step. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 14**<br>**Critical Y** | START P-208A, 11 CS Pump. |
| **Standard:** | Starts 11 Core Spray Pump using handswitch HS-14A-S5A.<br><br>(Non-Critical Portion of Standard)<br><br>Operator should observe the following:<br>a. Pump run indication changes from green to red.<br>b. Pump discharge pressure as indicated on PI-14-48A increases to approximately 375 psig.<br>c. C03-A-21, CORE SPRAY I HI PRESS VLV LEAKAGE, alarms.<br>d. C03-A-41, AC INTERLOCK, alarms. |
| **Evaluator Note:** | **Main Steam Line plugs are installed.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 15**<br>**Critical Y** | OPEN MO-1749, 11 CS Test Return to Torus. |
| **Standard:** | Opens MO-1749 using handswitch HS-14A-S4A.<br><br>(Non-Critical Portion of Standard)<br><br>Operator should observe the following:<br>a. Valve position indication changes from green to red.<br>b. System flow as indicated on FI-14-50A increases to about 4000 gpm.<br>c. System pressure as indicated on PI-14-48A decreases to approximately 270 gpm.<br>d. C03-A-21, CORE SPRAY I HI PRESS VLV LEAKAGE, clears. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 16**<br>**Critical Y** | After approximately 15 seconds, CLOSE MO-1749. |
| **Standard:** | Closes MO-1749 using handswitch HS-14A-S4A<br><br>(Non-Critical Portion of Standard)<br>(The 15 seconds is not a critical task.)<br><br>Operator should observe the following:<br>a. Valve position indication changes from red to green.<br>b. System flow as indicated on FI-14-50A decreases to zero.<br>c. System pressure as indicated on PI-14-48A increases to approximately 375 gpm.<br>d. C03-A-21, CORE SPRAY I HI PRESS VLV LEAKAGE, alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 17**<br>**Critical Y** | Throttle OPEN MO-1753, 11 CS Injection Inboard, until FI-7189, CS LOOP A FLOW, indicates at least 12.37 mV (3615 gpm). Record mV reading and hour and minute. |
| **Standard:** | 1. Throttles Opens MO-1753 using handswitch HS-14A-S1A, until flow indicates at least 12.37 mV.<br>2. Records the mV reading and the hour and minute.<br><br>(Non-Critical Portion of Standard)<br><br>Operator should observe the following:<br>a. Valve position indication goes dual (red and green).<br>b. Reactor water level starts to increase.<br>c. Injection Testable Check Valve AO-14-13A position indication changes from green to red.<br>d. C03-A-21, CORE SPRAY I HI PRESS VLV LEAKAGE, clears. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 18**<br>**Critical Y** | After approximately 1 minute, CLOSE MO-1753. |
| **Standard:** | Closes MO-1753 using HS-14A-S1A.<br><br>(Non-Critical Portion of Standard)<br><br>Operator should observe the following:<br>a. Vessel water level increases while MO-1753 is open.<br>b. System flow on FI-14-50A decreases to zero.<br>c. Injection Testable Check Valve AO-14-13A position indication changes from red to green.<br>d. C03-A-21, CORE SPRAY I HI PRESS VLV LEAKAGE, alarms. |
| **Evaluator Note:** | A calibrated stopwatch is not required. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 19**<br>**Critical Y** | STOP P-208A, 11 Core Spray pump. |
| **Standard:** | Stops 11 CS Pump using handswitch HS-14A-S5A.<br><br>(Non-Critical Portion of Standard)<br><br>Operator should observe the following:<br>a. Pump run indication changes from red to green.<br>b. Pump discharge pressure as indicated on PI-14-48A decreases very slowly to approximately 30 psig.<br>c. C03-A-14, CORE SPRAY PUMP 11 OL/MAN-OVRD, alarms momentarily then clears.<br>d. C03-A-41, AC INTERLOCK, clears. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 20**<br>**Critical N** | Place 14A-S5A in Pull-to-lock. |
| **Standard:** | Places 14A-S5A, 11 Core Spray Pump, control switch in Pull-to-lock. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 21**<br>**Critical N** | CLOSE CS-3-1, 11 CS Pump CST Suction. |
| **Standard:** | Directs the Reactor Building APEO to close CS-3-1. |
| **Simulator Operator:** | Close CS-3-1. |
| **Evaluator Cue:** | **CS-3-1 is closed.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 22**<br>**Critical N** | OPEN MO-1741, verify alarm C-03-A-54 is clear, AND remove Key 15. |
| **Standard:** | 1. Opens MO-1741 by placing handswitch HS-14A-S3A to the open position.<br>2. Removes Key 15. |
| **Evaluator Note:** | Have candidate give the key to the evaluator. Place the key back in MO-1741. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 23**<br>**Critical N** | Place 14A-S5A in AUTO. |
| **Standard:** | Places 14A-S5A, 11 Core Spray Pump, control switch in AUTO. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

| | |
|---|---|
| **Performance Step: 24**<br>**Critical N** | As required, reduce torus water level. |
| **Standard:** | Determines if torus water level needs to be reduced. |
| **Evaluator Cue:** | **Inform the candidate that another operator will perform steps 16-18.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- The Reactor is shutdown with Reactor coolant temperature < 212°F. Reactor water level is 55". Core Spray Loop "A" has been recently filled and vented subsequent to outage maintenance. The Torus is available for flushing. The reactor head is removed. Steam Line plugs are installed.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to flush the "A" Loop of Core Spray per B.03.01-05.G.1 (11 CORE SPRAY LOOP FLUSHING).

| | JOB PERFORMANCE MEASURE (JPM) |
|---|---|

**SITE:** **MONTICELLO**

**TASK TITLE:** RESET A GROUP 2 ISOLATION

**JPM NUMBER:** JPM-B.1.e **REV.** 0

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR200.158

**K/A NUMBERS:** 223002 A4.03

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

**EVALUATION LOCATION:** In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 15 Minutes Time Critical: NO

Maximum Time for Completion: 30 Minutes Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

JPM-B.1.e

**JPM Number:** JPM-B.1.e

**JPM Title:** RESET A GROUP 2 ISOLATION

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**SIMULATOR SETUP:**

- Initialize to IC-248. The plant is shutdown from an inadvertent Group I isolation and a Reactor low water level condition has caused a Group 2 isolation. The condition should be cleared and steps 1 through 4 of C.4-B.04.01.B, Part A, have been completed.
- Verify the Purge Switch on the TIP Cabinet is ON.

**INITIAL CONDITIONS:**

- The plant has experienced a transient that caused Reactor water level to decrease to minus 20 (-20) inches and then return to normal. All plant actions have occurred as expected. Reactor water level has been restored and the Group 2 isolation is ready to be reset. Steps 1 through 4 of C.4-B.04.01.B, Part A, have been completed.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor has requested that you perform the reset actions for the Group 2 identified in Ops Man C.4-B.04.01.B, Part A.

JPM-B.1.e

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Simulator Setup**

**General References:** **C.4-B.04.01.B, Part A, Rev 18**

**Task Standards:** **Reset a Group 2 Isolation**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1**<br>**Critical Y** | C.4-B.04.01.B, Part A, STEP 5.a:<br>WHEN the cause of the isolation is corrected,<br>THEN reset the Group 2 signal as follows:<br>a. Momentarily place the GROUP 2/SCTMT ISOLATION RESET switch on Panel C-04 to the following positions:<br>1) INBD<br>2) OUTBD |
| **Standard:** | Momentarily places the GROUP 2/SCTMT ISOLATION RESET switch to the INBD and OUTBD position. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical Y** | C.4-B.04.01.B, Part A, STEP 6:<br>Depress the TIP ISOLATION LOGIC RESET pushbutton on Panel C-13. |
| **Standard:** | Depresses the TIP ISOLATION LOGIC RESET pushbutton. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical N** | C.4-B.04.01.B, Part A, STEP 6.a:<br>Verify both Purge lights are ON. |
| **Standard:** | Verifies both Purge lights are ON. |
| **Evaluator Note:** | The simulator only models one TIP system. |
| **Evaluator Cue:** | **Both Purge lights are ON.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical Y** | C.4-B.04.01.B, Part A, STEP 7:<br>Place the following valve handswitches on C-04 in the AUTO/OPEN position:<br>a. 16A-S18, AO-2541A/B DW FLOOR DRAIN ISOLATION<br>b. 16A-S19, AO-2561 A/B DW EQUIP DRAIN ISOLATION |
| **Standard:** | Places handswitches for AO-2541 and AO-2561 to the AUTO/OPEN position and observes position indicating lights: red comes on and green goes off. |
| **Evaluator Note:** | Annunicator 004-B-03 “DRYWELL SUMP VALVES CLOSED” will clear following this step. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical Y** | C.4-B.04.01.B, Part A, STEP 8:<br>Place the following switches on C-26 in AUTO/OPEN position:<br>a. HS-3307 SV-3307 Sample Point 2 (DW) OTBD Isol<br>b. HS-3311 CV-3311 Sample Point 4 (Torus) OTBD Isol<br>c. HS-3313 CV-3313 Sample Return OTBD Isol<br>d. HS-3308 CV-3308 Sample Point 2 (DW) INBD Isol<br>e. HS-3312 CV-3312 Sample Point 4 (Torus) INBD Isol<br>f. HS-3314 CV-3314 Sample Return INBD Isol |
| **Standard:** | Places handswitches in the AUTO/OPEN position and observes the red light comes on and the green light goes off. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 6**<br>**Critical N** | C.4-B.04.01.B, Part A, STEP 9:<br>Notify Shift Chemist to restore Drywell CAM to service. |
| **Standard:** | Directs the Shift Chemist to restore Drywell CAM to service. |
| **Evaluator Cue:** | **Acknowledge the order as the Shift Chemist to restore the Drywell CAM to service.** |
| **Evaluator Note:** | Annunciator 4-B-22 “DRYWELL CAM TROUBLE” will clear when the Shift Chemist places the Drywell CAM in service. Direct the Simulator Operator to clear 4-B-22 5 minutes after acknowledging the order. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical N** | C.4-B.04.01.B, Part A, STEP 10:<br>IF RHR System was operating in Shutdown Cooling when the isolation occurred, THEN RESET isolation by using the following pushbuttons:<br>a. 10A-S24B, MO-2015 SHUTDOWN COOLING GROUP 2 ISOLATION RESET<br>b. 10A-S24A, MO-2014 SHUTDOWN COOLING GROUP 2 ISOLATION RESET |
| **Standard:** | Determines that RHR was not operating in Shutdown Cooling when the isolation occurred. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- The plant has experienced a transient that caused Reactor water level to decrease to minus 20 (-20) inches and then return to normal. All plant actions have occurred as expected. Reactor water level has been restored and the Group 2 isolation is ready to be reset. Steps 1 through 4 of C.4-B.04.01.B, Part A, have been completed.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor has requested that you perform the reset actions for the Group 2 identified in Ops Man C.4-B.04.01.B, Part A.

| | JOB PERFORMANCE MEASURE (JPM) |
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**SITE:** **MONTICELLO**

**TASK TITLE:** IRM FUNCTIONAL

**JPM NUMBER:** JPM-B.1.g **REV.** 7

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR215.105

**K/A NUMBERS:** 215003 A4.07

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

**EVALUATION LOCATION:** In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 20 Minutes Time Critical: NO

Maximum Time for Completion: 40 Minutes Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

JPM-B.1.g

**JPM Number:** JPM-B.1.g

**JPM Title:** IRM FUNCTIONAL

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**SIMULATOR SETUP:**

- Initialize to IC-245 with the Reactor shutdown and temperature <212°F.
- Verify Mode Switch in SHUTDOWN.
- Select control rod 22-27 on selection matrix.
- Insert Override LO Digital Output 10 A1A2DS3-B (P08-02) to OFF (IRM Upscale High-High alarm light on C-36).
- Verify RPS scram channels are reset, RPS scram lights are light and the ROD OUT PERMIT light is lit.
- Fill out Test 0042 as follows:
  - Sign Shift Supv approval on cover sheet.
  - Write in Comments: "Perform STEPS 1 through 19 for IRM Channel 11 only for training".
  - Reason for Performing: Other _X_
  - N/A STEP 20 for IRM 11 and all steps for other IRM channels.

**INITIAL CONDITIONS:**

- The Reactor is shutdown and temperature is <212°F. The Reactor Mode switch is in SHUTDOWN.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to perform IRM Functional Test No. 0042 on IRM Channel No. 11 only.
- No one is in the drywell and the IRM cables are not tied back.
- SRM/IRM Non-Coincident Scram Shorting Links have not been removed.

**Provide the operator with a copy of Test No. 0042.**

JPM-B.1.g

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Simulator Setup**

**General References:** **Test No. 0042, Rev 9**

**Task Standards:** **Perform IRM Functional Test No. 0042 on IRM Channel No. 11**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1**<br>**Critical Y** | Test No. 0042, STEP 1:<br>Place the REACTOR MODE switch in START & HOT STBY or REFUEL (Panel C-05). |
| **Standard:** | Places the Reactor Mode switch in REFUEL. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical N** | Test No. 0042, STEP 2:<br>Verify the following initial conditions:<br><br>**GENERAL NOTE:**<br>**Sub-steps 2.a. through 2.c. may be done in any order.**<br><br>a. Test channel is selected for recording.<br>b. Both RPS channels are RESET.<br>c. ROD OUT PERMIT indicating light ON (Panel C-05). |
| **Standard:** | 1. Verifies IRM Channel No. 11 is selected for recording by checking selector switch is selected to IRM on recorder NR-7-46A.<br>2. Verifies both RPS channels RESET by observing RPS Group A and RPS Group B Solenoid lights are ON.<br>3. Verifies that the ROD OUT PERMISSIVE indicating light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical Y** | Test No. 0042, STEP 3:<br>Place IRM MODE switch to STANDBY, AND verify the following:<br><br>**GENERAL NOTE:**<br>**Sub-steps 3.a. through 3.g. may be done in any order.** |
| **Standard:** | Places No. 11 IRM FUNCTION switch S-1 to STANDBY. |
| **Evaluator Note:** | Only IRM No. 11 is simulated. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical N** | Test No. 0042, STEP 3.a:<br>Annunciator 5-A-21 (IRM A HI HI/INOP) is in ALARM,<br>OR annunciator 5-A-29 (IRM B HI HI/INOP) is in ALARM. |
| **Standard:** | Verifies that 5-A-21 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical N** | Test No. 0042, STEP 3.b:<br>IRM INOP indicating light is ON (Panel C-36). |
| **Standard:** | Verifies No. 11 IRM INOP light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 6**<br>**Critical N** | Test No. 0042, STEP 3.c:<br>IRM HIGH HIGH OR INOP indicating light is ON (Panel C-05). |
| **Standard:** | Verifies that No. 11 IRM HIGH HIGH OR INOP light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical N** | Test No. 0042, STEP 3.d:<br>ROD OUT PERMIT indicating light is OFF (Panel C-05). |
| **Standard:** | Verifies ROD OUT PERMIT light is OFF. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 8**<br>**Critical N** | Test No. 0042, STEP 3.e:<br>Annunciator 5-B-4 (REACTOR AUTO SCRAM CHANNEL A) is in ALARM, OR annunciator 5-B-5 (REACTOR AUTO SCRAM CHANNEL B) is in ALARM. |
| **Standard:** | Verifies that 5-B-4 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 9**<br>**Critical N** | Test No. 0042, STEP 3.f:<br>Annunciator 5-B-3 (REACTOR NEUTRON MONITOR SCRAM TRIP) is in ALARM. |
| **Standard:** | Verifies that 5-B-3 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 10**<br>**Critical N** | Test No. 0042, STEP 3.g:<br>Computer point NUI006 (IRM SYSTEM INOPERABLE) displays TRBL. |
| **Standard:** | Verifies alarm display on SPDS CRT or VT-320 console or typed out on printer. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 11**<br>**Critical Y** | Test No. 0042, STEP 4:<br>Place IRM MODE switch to ZERO 1. |
| **Standard:** | Places IRM switch S-1 to ZERO 1. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 12**<br>**Critical Y** | Test No. 0042, STEP 5:<br>Place the IRM RANGE SWITCH to position 2 or more. |
| **Standard:** | Places No. 11 IRM RANGE SWITCH in position 2 or above. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 13**<br>**Critical N** | Test No. 0042, STEP 6.a:<br>Verify the following:<br><br>**GENERAL NOTE:**<br>**Sub-steps 6.a. through 6.l. may be done in any order.**<br><br>Annunciator 5-A-21 (IRM A HI HI/INOP) is in ALARM, OR annunciator 5-A-29 (IRM B HI HI/INOP) is in ALARM. |
| **Standard:** | Verifies that 5-A-21 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 14**<br>**Critical N** | Test No. 0042, STEP 6.b:<br>IRM INOP indicating light is ON (Panel C-36). |
| **Standard:** | Verifies No. 11 IRM INOP light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 15**<br>**Critical N** | Test No. 0042, STEP 6.c:<br>IRM HIGH HIGH OR INOP indicating light is ON (Panel C-05). |
| **Standard:** | Verifies that No. 11 IRM HIGH HIGH OR INOP light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 16**<br>**Critical N** | Test No. 0042, STEP 6.d:<br>ROD OUT PERMIT indicating light is OFF (Panel C-05). |
| **Standard:** | Verifies ROD OUT PERMIT light OFF. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 17**<br>**Critical N** | Test No. 0042, STEP 6.e:<br>Annunciator 5-B-4 (REACTOR AUTO SCRAM CHANNEL A) is in ALARM, OR annunciator 5-B-5 (REACTOR AUTO SCRAM CHANNEL B) is in ALARM. |
| **Standard:** | Verifies that 5-B-4 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 18**<br>**Critical N** | Test No. 0042, STEP 6.f:<br>Annunciator 5-B-3 (REACTOR NEUTRON MONITOR SCRAM TRIP) is in ALARM. |
| **Standard:** | Verifies that 5-B-3 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 19**<br>**Critical N** | Test No. 0042, STEP 6.g:<br>Computer point NUI006 (IRM SYSTEM INOPERABLE) displays TRBL. |
| **Standard:** | Verifies alarm display on SPDS CRT or VT-320 console or typed out on printer. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 20**<br>**Critical N** | Test No. 0042, STEP 6.h:<br>IRM DOWNSCALE indicating light is ON (Panel C-36). |
| **Standard:** | Verifies IRM DOWNSCALE light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 21**<br>**Critical N** | Test No. 0042, STEP 6.i:<br>IRM DNSCL indicating light is ON (Panel C-05). |
| **Standard:** | Verifies IRM DOWNSCALE light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 22** | Test No. 0042, STEP 6.j: |
| **Critical N** | IRM recorder indicating ≤ 3/125. |
| **Standard:** | Verifies No. 11 IRM recorder NR-7-46A indicates ≤ 3/125. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 23** | Test No. 0042, STEP 6.k: |
| **Critical N** | Computer point NUI005 (IRM DOWNSCALE ALARM) displays DNSC. |
| **Standard:** | Verifies alarm display on SPDS CRT or VT-320 console or typed out on printer. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 24** | Test No. 0042, STEP 6.l: |
| **Critical N** | Annunciator 5-A-5 (IRM DOWNSCALE) is in ALARM. |
| **Standard:** | Verifies that 5-A-5 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 25**<br>**Critical Y** | Test No. 0042, STEP 7:<br>Place IRM MODE switch to ZERO 2, AND verify the following:<br><br>**GENERAL NOTE:**<br>**Sub-steps 7.a. through 7.l. may be done in any order.** |
| **Standard:** | Places No. 11 IRM FUNCTION switch S-1 to ZERO 2. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 26**<br>**Critical N** | Test No. 0042, STEP 7.a:<br>Annunciator 5-A-21 (IRM A HI HI/INOP) is in ALARM, OR annunciator 5-A-29 (IRM B HI HI/INOP) is in ALARM. |
| **Standard:** | Verifies that 5-A-21 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 27**<br>**Critical N** | Test No. 0042, STEP 7.b:<br>IRM INOP indicating light is ON (Panel C-36). |
| **Standard:** | Verifies No. 11 IRM INOP light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 28**<br>**Critical N** | Test No. 0042, STEP 7.c:<br>IRM HIGH HIGH OR INOP indicating light is ON (Panel C-05). |
| **Standard:** | Verifies that No. 11 IRM HIGH HIGH OR INOP light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 29**<br>**Critical N** | Test No. 0042, STEP 7.d:<br>ROD OUT PERMIT indicating light is OFF (Panel C-05). |
| **Standard:** | Verifies ROD OUT PERMIT light is OFF. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 30**<br>**Critical N** | Test No. 0042, STEP 7.e:<br>Annunciator 5-B-4 (REACTOR AUTO SCRAM CHANNEL A) is in ALARM, OR annunciator 5-B-5 (REACTOR AUTO SCRAM CHANNEL B) is in ALARM. |
| **Standard:** | Verifies that 5-B-4 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 31**<br>**Critical N** | Test No. 0042, STEP 7.f:<br>Annunciator 5-B-3 (REACTOR NEUTRON MONITOR SCRAM TRIP) is in ALARM. |
| **Standard:** | Verifies that 5-B-3 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 32**<br>**Critical N** | Test No. 0042, STEP 7.g:<br>Computer point NUI006 (IRM SYSTEM INOPERABLE) displays TRBL. |
| **Standard:** | Verifies alarm display on SPDS CRT or VT-320 console or typed out on printer. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 33**<br>**Critical N** | Test No. 0042, STEP 7.h:<br>IRM DOWNSCALE indicating light is ON (Panel C-36). |
| **Standard:** | Verifies IRM DOWNSCALE light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 34**<br>**Critical N** | Test No. 0042, STEP 7.i:<br>IRM DNSCL indicating light is ON (Panel C-05). |
| **Standard:** | Verifies IRM DOWNSCALE light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 35**<br>**Critical N** | Test No. 0042, STEP 7.j:<br>IRM recorder indicating ≤ 3/125. |
| **Standard:** | Verifies No. 11 IRM recorder NR-7-46A indicates ≤ 3/125. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 36**<br>**Critical N** | Test No. 0042, STEP 7.k:<br>Computer point NUI005 (IRM DOWNSCALE ALARM) displays DNSC. |
| **Standard:** | Verifies alarm display on SPDS CRT or VT-320 console or typed out on printer. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 37**<br>**Critical N** | Test No. 0042, STEP 7.l:<br>Annunciator 5-A-5 (IRM DOWNSCALE) is in ALARM. |
| **Standard:** | Verifies that C05-A-5 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 38**<br>**Critical Y** | Test No. 0042, STEP 8:<br>Place IRM MODE switch to 125, AND verify the following:<br><br>**GENERAL NOTE:**<br>**Sub-steps 8.a. through 8.h. may be done in any order.** |
| **Standard:** | Places IRM FUNCTION switch S-1 to 125. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 39**<br>**Critical N** | Test No. 0042, STEP 8.a:<br>Annunciator 5-A-13 (IRM HI) is in ALARM. |
| **Standard:** | Verifies that 5-A-13 alarms. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 40**<br>**Critical N** | Test No. 0042, STEP 8.b:<br>IRM UPSCALE HIGH indicating light is ON (Panel C-36). |
| **Standard:** | Verifies IRM UPSCALE HIGH light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 41**<br>**Critical Y** | Test No. 0042, STEP 8.c:<br>IRM UPSCALE HIGH HIGH indicating light is ON (Panel C-36). |
| **Standard:** | Verifies IRM UPSCALE HIGH HIGH light is ON. Determines light is NOT ON. |
| **Evaluator Cue:** | **(If operator attempts to check light bulb): The light bulb has been replaced and is still not on.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 42**<br>**Critical N** | Test No. 0042, STEP 8.d:<br>IRM HIGH indicating light is ON (Panel C-05). |
| **Standard:** | Verifies IRM HIGH light is ON. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 43**<br>**Critical N** | Test No. 0042, STEP 8.e:<br>IRM HIGH HIGH OR INOP indicating light is ON (Panel C-05). |
| **Standard:** | Identifies that this light is ON due to the INOP function caused by the position of the MODE SWITCH. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 44**<br>**Critical N** | Notifies the Control Room Supervisor and/or I&C Engineer of function failure. |
| **Standard:** | Notifies the appropriate personnel. |
| **Evaluator Note:** | 1. Operator may ensure that Tech Specs are not violated.<br>2. Use the following cue only if the operator noticed the light was not on in step 41. If that critical step was missed, then allow the operator to continue with the procedure. |
| **Evaluator Cue:** | **Control Room Supervisor directs the operator to stop the test. Make appropriate entry on the results of test.. Shift Supervision will notify I&C and the system engineer. Leave switches and IRMs as they are to aid in trouble-shooting.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

**Terminating Cues:** **PRE-APPROVED PROMPT: Inform the candidate that this completes the JPM.**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- The Reactor is shutdown and temperature is <212°F. The Reactor Mode switch is in SHUTDOWN.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to perform IRM Functional Test No. 0042 on IRM Channel No. 11 only.
- No one is in the drywell and the IRM cables are not tied back.
- SRM/IRM Non-Coincident Scram Shorting Links have not been removed.

| | JOB PERFORMANCE MEASURE (JPM) |
|---|---|

**SITE:** **MONTICELLO**

**TASK TITLE:** DEPRESSURIZE THE SCRAM AIR HEADER

**JPM NUMBER:** JPM-B.2.a **REV.** 0

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR314.105, NL314.101

**K/A NUMBERS:** 295037 EA1.03

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [X] Perform: [ ]

**EVALUATION LOCATION:** In-Plant: [X] Control Room: [ ]

Simulator: [ ] Other: [ ]

Lab: [ ]

Time for Completion: 20 Minutes Time Critical: NO

Maximum Time for Completion: 40 Minutes Alternate Path / Faulted: YES

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

**JPM Number:** JPM-C.5-3101-007

**JPM Title:** DEPRESSURIZE THE SCRAM AIR HEADER

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**PLANT SETUP:**

- None

**INITIAL CONDITIONS:**

- The Reactor was manually scrammed due to loss of both Recirc pumps at 100% power. Eight control rods are at position 48 with their associated blue scram lights off. Annunciator SCRAM PILOT HEADER HI/LOW PRESSURE (5-B-22) is NOT in alarm.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to depressurize the scram air header using C.5-3101.

**ALL OPERATOR ACTIONS ARE TO BE SIMULATED!**

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Plant Setup**

**General References:** **C.5-3101, Rev 3**

**Task Standards:** **Depressurize the Scram Air Header as per C.5-3101, Part B.**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1**<br>**Critical Y** | Locates procedure C.5-3101, ALTERNATE ROD INSERTION, and Key 26 for ASDS Panel C-292. |
| **Standard:** | 1. Locates Key 26. |
| **Evaluator Note:** | Key 26 is in the EOP file drawer in the Control Room or in the Key box by the window of the Work Execution Center (WEC) |
| **Evaluator Cue:** | **1. Provide operator with a copy of procedure.**<br>**2. Inform operator not to open EOP file drawer.**<br>**3. Simulate giving operator Key 26 after he identifies a correct location.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 2**<br>**Critical N** | C.5-3101, Part B, STEP 1.a:<br>IF the scram air header is to be depressurized from the ASDS panel,<br>THEN perform the following:<br><br>Verify the following switches in NORMAL on ASDS panel:<br>• SRV DIV II TRANSFER SWITCH<br>• RHR B TRANSFER SWITCH<br>• CORE SPRAY B TRANSFER SWITCH<br>• NO. 12 DIESEL GEN TRANSFER SWITCH |
| **Standard:** | Verifies all of the transfer switches are in NORMAL. |
| **Evaluator Cue:** | **1. All switches are as you see them.**<br>**2. If asked, inform them the amber light above the Rod Insert Air Header dump valve is NOT on.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 3**<br>**Critical Y** | C.5-3101, Part B, STEP 1.b:<br>Place the MASTER ASDS TRANSFER SWITCH to TRANSFER. |
| **Standard:** | Places the MASTER ASDS TRANSFER SWITCH to TRANSFER using key No. 26. |
| **Evaluator Cue:** | **Switch is in TRANSFER position. Right light is lit.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 4**<br>**Critical Y** | C.5-3101, Part B, STEP 1.c:<br>Place the ROD INSERTION (DUMP AIR HEADER) to INSERT. |
| **Standard:** | Places the ROD INSERTION (DUMP AIR HEADER) to INSERT and release. |
| **Evaluator Cue:** | **Initially, the candidate will see that Green light is lit and the Amber and Red lights are off.**<br>**After candidate places the switch to insert, no changes in lights will occur. Green light remains lit and Amber and Red lights are still off.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 5**<br>**Critical Y** | C.5-3101, Part B, STEP 1.d:<br>Verify amber light above ROD INSERTION DUMP AIR HEADER switch comes on. |
| **Standard:** | Determines that the amber light above the ROD INSERTION DUMP AIR HEADER switch does not come on and that the scram air header will have to be depressurized locally. |
| **Evaluator Cue:** | **Amber light is OFF. Red light is off.**<br><br>**IF Control Room is called to check status of control rods then reply that, "Control rods have not moved and 5-B-22 'SCRAM PILOT HEADER HI/LO PRESS' is NOT in alarm".** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 6**<br>**Critical N** | C.5-3101, Part B, STEP 1.e:<br>WHEN control rods no longer move inward,<br>THEN place the MASTER ASDS TRANSFER SWITCH to NORMAL. |
| **Standard:** | Returns the MASTER ASDS TRANSFER SWITCH to NORMAL.<br>OR<br>Contacts CRS to determine if STEP 1.e should be completed. |
| **Evaluator Note:** | Candidate may not return the MASTER ASDS TRANSFER SWITCH to NORMAL. |
| **Evaluator Cue:** | **If asked as CRS, inform the candidate to place the MASTER ASDS TRANSFER SWITCH to NORMAL.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 7**<br>**Critical N** | C.5-3101, Part B, STEP 2.a:<br>IF the scram air header is to be depressurized locally,<br>AND the reactor building is accessible,<br>THEN perform the following:<br><br>Verify the scram air header is pressurized (local pressure indicator PI-3-229). |
| **Standard:** | Locates PI-3-229 and observes pressure. |
| **Evaluator Cue:** | **1. If the CRS is called to determine if the remainder of procedure is to be performed, state: "Follow the procedure." If the candidate states that he will locally depressurize the scram header, state that as the CRS you concur.**<br>**2. If asked if Reactor building is accessible, state: "The reactor building is accessible."**<br>**3. Pressure on PI-3-229 is as read.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 8**<br>**Critical Y** | C.5-3101, Part B, STEP 2.b:<br>CLOSE AI-15, SCRAM AIR FILTER INLET. |
| **Standard:** | Closes AI-15. |
| **Evaluator Cue:** | **AI-15 Handwheel moves in clockwise direction, stem moves in, meets resistance, and is tight.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 9**<br>**Critical Y** | C.5-3101, Part B, STEP 2.c:<br>Remove the Scram Air Hdr Disconnect Coupling. |
| **Standard:** | Disconnects the Scram Air Header Disconnect Coupling. |
| **Evaluator Note:** | Dedicated wrenches are staged at the scram air header vicinity. |
| **Evaluator Cue:** | **Wrench turns coupling in counter-clockwise direction until coupling is removed. You hear air bleed-off through coupling and PI-3-229 now indicates 0 psig.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 10**<br>**Critical N** | C.5-3101, Part B, STEP 2.d:<br>WHEN the control rods no longer move inward,<br>THEN restore the Scram air Header by performing the following:<br>1. Reconnect the Scram Air Header Disconnect Coupling.<br>2. OPEN AI-15, SCRAM AIR FILTER INLET. |
| **Standard:** | 1. Asks if control rods are moving inward.<br>2. Connects the Scram Air Header Disconnect Coupling.<br>3. Opens AI-15. |
| **Evaluator Cue:** | **1. Evaluator reports all control rods have fully inserted.**<br>**2. Wrench is turning Coupling in the clockwise direction, resistance felt, coupling tight.**<br>**3. AI-15 moves CCW, stem moving outward, resistance felt and valve is tight. PI-3/229 indicates 69 psig.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- The Reactor was manually scrammed due to loss of both Recirc pumps at 100% power. Eight control rods are at position 48 with their associated blue scram lights off. Annunciator SCRAM PILOT HEADER HI/LOW PRESSURE (5-B-22) is NOT in alarm.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to depressurize the scram air header using C.5-3101.

| | JOB PERFORMANCE MEASURE (JPM) |
|---|---|

**SITE:** **MONTICELLO**

**TASK TITLE:** STARTUP THE REACTOR PROTECTION MOTOR GENERATORS

**JPM NUMBER:** JPM-B.2.b **REV.** 6

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** NL212.101

**K/A NUMBERS:** 212000 K1.04, 2.1.30

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [X] Perform: [ ]

**EVALUATION LOCATION:** In-Plant: [X] Control Room: [ ]

Simulator: [ ] Other: [ ]

Lab: [ ]

Time for Completion: 10 Minutes Time Critical: NO

Maximum Time for Completion: 20 Minutes Alternate Path / Faulted NO

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

JPM-B.2.b

**JPM Number:** JPM-B.2.b

**JPM Title:** STARTUP THE REACTOR PROTECTION MOTOR GENERATORS

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**PLANT SETUP:**

- None

**INITIAL CONDITIONS:**

- Reactor is in cold shutdown with a Refuel Outage in progress. "A" RPS is de-energized awaiting restoration of No. 11 RPS MG set, which has just been released by the electricians following PM completion. The RPS MG Set Supply Breaker (BKR-1107) is already closed. CB1A is closed and CB2A is open in Cable Spreading room.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to startup No. 11 RPS MG Set and place it on RPS Bus A.

**ALL OPERATOR ACTIONS ARE TO BE SIMULATED!**

JPM-B.2.b

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Plant Setup**

**General References:** **B.09.12-05.D.1, Rev 8**

**Task Standards:** **Startup the No. 11 RPS MG Set**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

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| **Performance Step: 1** **Critical N** | Locate procedure B.09.12-05.D.1, MG SET STARTUP. |
| **Standard:** | Locates appropriate procedure. |
| **Evaluator Cue:** | **Provide the operator with a copy of the procedure.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical Y** | B.09.12-05.D.1, STEP 1:<br>Place OFF-ON switch at MG set control panel ON. |
| **Standard:** | Turns the No. 11 RX PROTECTION MG SET OFF-ON switch clockwise to the ON position. |
| **Evaluator Note:** | 1. Candidate should get permission from the Control Room prior to removing the access cover.<br>2. Candidate should remove access cover from No. 11 RX PROTECTION MG SET control panel to allow access to controls.<br>3. Candidate should observe that the red POWER ON light is lit. |
| **Evaluator Cue:** | **The cover plate is removed and the red POWER ON light is lit.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical Y** | B.09.12-05.D.1, STEP 2:<br>Press drive motor START button. |
| **Standard:** | Momentarily depresses No. 11 RX PROTECTION MG SET START pushbutton. |
| **Evaluator Cue:** | **You hear the motor starting.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical N** | B.09.12-05.D.1, STEP 3:<br>Verify drive motor starts. |
| **Standard:** | Verifies drive motor has started. |
| **Evaluator Note:** | Operator should observe local volt meters. |
| **Evaluator Cue:** | **Drive motor is running. AC VOLTS meter indication is increasing.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical N** | B.09.12-05.D.1, STEP 4:<br>If necessary, press the drive motor START button again to establish generator voltage. |
| **Standard:** | Verifies voltage is indicated on AC VOLTS meter. |
| **Evaluator Cue:** | **If operator requests, AC VOLTS meter is reading 121 VAC.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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|---|---|
| **Performance Step: 6**<br>**Critical Y** | B.09.12-05.D.1, STEP 5:<br>CLOSE generator output breaker, CB/G-4A. |
| **Standard:** | Closes the No. 11 RX PROTECTION MG SET GENERATOR OUTPUT breaker by pushing it upward to the ON position. |
| **Evaluator Note:** | Operator should verify the red POWER IN light on EPA-153 is lit. |
| **Evaluator Cue:** | **The white line on the GENERATOR OUTPUT breaker is exposed.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical Y** | B.09.12-05.D.1, STEP 6:<br>To reset and close the output breakers on the EPA units associated with each MG Set, perform the following in the order written:<br>a. IF starting up MG Set A,<br>THEN CLOSE breaker on EPA-153,<br>AND CLOSE breaker on EPA-154.<br>b. IF starting up MG Set B,<br>THEN CLOSE breaker on EPA-156,<br>AND CLOSE breaker on EPA-175. |
| **Standard:** | 1. Closes EPA-153 output breaker by pushing it down to reset the breaker then upward to the ON position.<br>2. Closes EPA-154 output breaker by pushing it down to reset the breaker then upward to the ON position. |
| **Evaluator Note:** | 1. Upon closing the output breaker for EPA-153, the operator should verify:<br>a. The red POWER OUT light on EPA-153 is lit<br>AND<br>b. The red POWER IN light on EPA-154 is lit.<br>2. Upon closing the output breaker for EPA-154, the operator should verify the red POWER OUT light on EPA-154 is lit. |
| **Evaluator Cue:** | 1. When the operator looks at EPA prior to operating it, inform them the breaker is in the middle position.<br>**2. The red POWER OUT light is lit on EPA-153 and the red POWER IN light is lit on EPA-154.**<br>**3. The red POWER OUT light is lit on EPA-154.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 8**<br>**Critical N** | B.09.12-05.D.1, STEP 8:<br>To reset and close the output breakers on the EPA units associated with the alternate source, perform the following in the order written:<br>a. CLOSE breaker on EPA-157.<br>b. CLOSE breaker on EPA-158. |
| **Standard:** | Determines this step is not necessary. |
| **Evaluator Note:** | The operator should determine it is not necessary to complete this step of the procedure due to initiating cue. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- Reactor is in cold shutdown with a Refuel Outage in progress. "A" RPS is de-energized awaiting restoration of No. 11 RPS MG set, which has just been released by the electricians following PM completion. The RPS MG Set Supply Breaker (BKR-1107) is already closed. CB1A is closed and CB2A is open in Cable Spreading room.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor directs you to startup No. 11 RPS MG Set and place it on RPS Bus A.

| | JOB PERFORMANCE MEASURE (JPM) |
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**SITE:** **MONTICELLO**

**TASK TITLE:** MANUAL INITIATION OF THE EFT EMERGENCY HIGH RAD MODE

**JPM NUMBER:** JPM-B.2.c **REV.** 0

**RELATED PRA INFORMATION:** NONE

**TASK NUMBERS:** CR288.111

**K/A NUMBERS:** 288000 A2.04

**APPLICABLE METHOD OF TESTING:**

Discussion: [ ] Simulate/walkthrough: [X] Perform: [ ]

**EVALUATION LOCATION:**

In-Plant: [X] Control Room: [ ]

Simulator: [ ] Other: [ ]

Lab: [ ]

Time for Completion: 20 Minutes Time Critical: NO

Maximum Time for Completion: 40 Minutes Alternate Path / Faulted: YES

**TASK APPLICABILITY:** SRO/RO

Additional signatures may be added as needed.

**Developed by:** _____
Instructor Date

**Validated by:** _____
Validation Instructor Date
(See JPM Validation Checklist, Attachment 1)

**Approved by:** _____
Training Supervisor Date

JPM-B.2.c

**JPM Number:** JPM-B.2.c

**JPM Title:** MANUAL INITIATION OF THE EFT EMERGENCY HIGH RAD MODE

**Examinee:** _____ **Evaluator:** _____

**Job Title:** _____ **Date:** _____

**Start Time** _____ **Finish Time** _____

**PERFORMANCE RESULTS:** **SAT:** ☐ **UNSAT:** ☐

| **COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).** |
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**EVALUATOR'S SIGNATURE:** _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.*

**PLANT SETUP:**

- None

**INITIAL CONDITIONS:**

- An accident has occurred resulting in a high radiation condition in the Reactor Building. Annunciator 4-A-11, REACTOR BUILDING HI RADIATION, is in alarm.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor has directed you to manually initiate the EFT Emergency High Radiation Mode of the CRV/EFT System per B.08.13-05.H.1.

**ALL OPERATOR ACTIONS ARE TO BE SIMULATED!**

JPM-B.2.c

**JPM PERFORMANCE INFORMATION**

**DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.**

**Required Materials:** **See Plant Setup**

**General References:** **B.08.13-05.H.1, Rev 6**

**Task Standards:** **Simulate Initiation of EFT Emergency High Radiation Mode**

**Start Time:** _____

**NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e. the examinee looks or asks for the indication).**

**NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.**

| | |
|---|---|
| **Performance Step: 1**<br>**Critical N** | Locates procedure B.08.13-05.H.1, Detection of Radiation Outside or Within the Control Room |
| **Standard:** | Locates appropriate procedure. |
| **Evaluator Cue:** | **Provide the candidate with a copy of the procedure.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 2**<br>**Critical N** | B.08.13-05.H.1, STEP 1<br>IF annunciators 20-B-4, 242-A-4, or 242-A-6 were received,<br>THEN verify the following radiation monitors have initiated:<br>a. RM-9021A<br>b. RM-9021B |
| **Standard:** | Determines based on initial conditions that the above listed annunciators are not in alarm. |
| **Evaluator Cue:** | **If the candidate decides to check the status of each of the listed annunciators then inform them that they are not in alarm.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 3**<br>**Critical Y** | B.08.13-05.H.1, STEP 2<br>IF manual initiation into the High Radiation mode is desired,<br>THEN momentarily place the following radiation monitors in CHECK:<br>a. RM-9021A (Panel C-257)<br>b. RM-9021B (Panel C-258) |
| **Standard:** | Places RM-9021A and RM-9021B in CHECK. |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 4**<br>**Critical Y** | B.08.13-05.H.1, STEP 3<br>Using DPI-9319, Control Room (East dP), and DPI-6013, Control Room to Admin/CSR/RX Bldg (South dP), verify the Control Room is at a positive pressure with respect to all adjacent areas. |
| **Standard:** | Determines that a positive pressure does not exist between the Control Room and the Admin Building. |
| **Evaluator Cue:** | **When DPI-9319 is checked, simulate or state the following:**<br>**1. Control Room to Turb BLDG d/p = +0.25 inches of water**<br>**2. Control Room to Admin BLDG d/p = -0.20 inches of water**<br><br>**When DPI-6013 is checked, simulate or state the following:**<br>**1. Control Room to Reactor BLDG d/p = +0.25 inches of water**<br>**2. Control Room to CBL SPDG Rm d/p = +0.25 inches of water**<br>**3. Control Room to Library = -0.20 inches of water**<br>**4. Control Room to 3rd FLR HVAC = -0.20 inches of water** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 5**<br>**Critical Y** | B.08.13-05.H.1, STEP 4<br>Using DPI-9323, EFT Admin/EFT/Outside (East dP), and DPI-6014, EFT to Admin/TRB/HTB Bldg (West dP), verify the EFT Building is at a positive pressure with respect to all adjacent areas. |
| **Standard:** | Determines that a positive pressure does not exist between the EFT Building and the Admin Building. |
| **Evaluator Cue:** | **When DPI-9323 is checked, simulate or state the following:**<br>**1. EFT to EFT 3rd FLR d/p = +0.25 inches of water**<br>**2. EFT to Admin BLDG d/p = -0.20 inches of water**<br>**3. EFT to Outside d/p = +0.25 inches of water**<br><br>**When DPI-6014 is checked, simulate or state the following:**<br>**1. EFT to Turbine BLDG d/p = +0.25 inches of water**<br>**2. EFT to HTG BLR RM d/p = +0.25 inches of water**<br>**3. EFT to Admin BLDG d/p = -0.20 inches of water** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 6**<br>**Critical N** | B.08.13-05.H.1, STEP 5<br>IF positive pressure cannot be obtained,<br>THEN perform the following in any order:<br>a. Verify VD-9212B, Supply Air from V-EAC-14A&B to Bat Rm, is closed<br>IF damper is not closed,<br>THEN close the blocking plate in the 250 Vdc Battery Room. |
| **Standard:** | Determines that VD-9212B is closed. |
| **Evaluator Cue:** | **Inform the candidate that the red light for VD-9212B on Panel C-264B is OFF and the green light is ON.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 7**<br>**Critical N** | B.08.13-05.H.1, STEP 5.b<br>Verify V-SF-20, Supply Fan Admin Addition, is OFF (EFT 3rd Floor). |
| **Standard:** | Verifies V-SF-20 is OFF. |
| **Evaluator Note:** | The candidate may determine that this step is not applicable for the conditions given and request CRS permission to N/A the step. |
| **Evaluator Cue:** | **1. Inform the candidate that HS-9318 is in the OFF position.**<br>**2. If requested, inform the candidate to N/A the step.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 8**<br>**Critical Y** | B.08.13-05.H.1, STEP 5.c<br>Verify the following Administration Building units have tripped:<br>1) V-AC-11, Admin Bldg HVAC Unit |
| **Standard:** | 1. Determines that V-AC-11 is running. (Non-critical standard)<br>2. Places hand switch 42-1408/CS to the OFF position. (Critical standard) |
| **Evaluator Cue:** | **Give the following initial cues for the fan running if item is checked:**<br>**1. Hand switch 42-1408/CS is in the ON position.**<br>**2. Room noise is as you hear it.**<br>**3. Fan belt is moving.**<br>**4. Fan shaft is rotating.**<br>**5. Vibrations are felt on the fan.**<br>**Give the following cues when the HS is placed in OFF.**<br>**1. Hand switch 42-1408/CS is in the OFF position if item is checked:**<br>**2. Room noise diminishes.**<br>**3. Fan belt stops moving.**<br>**4. Fan shaft stops rotating.**<br>**5. Vibrations are no longer felt on the fan.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 9**<br>**Critical Y** | B.08.13-05.H.1, STEP 5.c.2)<br>V-AC-13, Computer Room H&V Unit |
| **Standard:** | 1. Determines that V-AC-13 is running. (Non-critical standard)<br>2. Places hand switch 42-1409/CS to the OFF position. (Critical standard) |
| **Evaluator Cue:** | **Give the following initial cues for the fan running if item is checked:**<br>**1. Hand switch 42-1409/CS is in the ON position.**<br>**2. Room noise is as you hear it.**<br>**3. Fan belt is moving.**<br>**4. Fan shaft is rotating.**<br>**5. Vibrations are felt on the fan.**<br>**Give the following cues when the HS is placed in OFF if item is checked:**<br>**1. Hand switch 42-1409/CS is in the OFF position.**<br>**2. Room noise diminishes.**<br>**3. Fan belt stops moving.**<br>**4. Fan shaft stops rotating.**<br>**5. Vibrations are no longer felt on the fan.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 10**<br>**Critical N** | B.08.13-05.H.1, STEP 5.c.3)<br>V-EF-31, Admin Bldg Exhaust Fan |
| **Standard:** | 1. Determines that V-EF-31 is not running.<br>2. May place hand switch 42-1401/CS to the OFF position. |
| **Evaluator Note:** | V-EF-31 trips on interlock with V-AC-11 and therefore will not be running if checked after V-AC-11 is tripped. If checked before V-AC-11 is tripped, the fan will be running.<br>Candidate may still place the control switch to OFF to verify the fan is secured. |
| **Evaluator Cue:** | **Give the following initial cues for the fan running if item is checked:**<br>**1. Hand switch 42-1401/CS is in the AUTO position.**<br>**2. Room noise is as you hear it.**<br>**3. Fan belt is moving.**<br>**4. Fan shaft is rotating.**<br>**5. Vibrations are felt on the fan.**<br>**Give the following cues when the HS is placed in OFF if item is checked:**<br>**1. Hand switch 42-1401/CS is in the OFF position.**<br>**2. Room noise diminishes.**<br>**3. Fan belt stops moving.**<br>**4. Fan shaft stops rotating.**<br>**5. Vibrations are no longer felt on the fan.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 11**<br>**Critical N** | B.08.13-05.H.1, STEP 5.c.4)<br>V-EF-36, Control Room Kitchen Exhaust Fan |
| **Standard:** | 1. Determines that V-EF-36 is running. |
| **Evaluator Cue:** | **Pre-approved prompt. "The operators in the Control Room will secure V-EF-36. Continue with the procedure."** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 12**<br>**Critical Y** | B.08.13-05.H.1, STEP 5.c.5)<br>V-MZ-7, Admin Bldg 1st Addition H&V Unit (S-1) |
| **Standard:** | 1. Determines that V-MZ-7 is running. (Non-Critical standard)<br>2. Places hand switch for V-MZ-7 to the OFF position. (Critical standard) |
| **Evaluator Cue:** | **Give the following initial cues for the fan running if item is checked:**<br>**1. Hand switch for V-MZ-7 is in the AUTO position.**<br>**2. D/p indications for inlet filters are as you see them.**<br>**3. Fan noise is as you hear it.**<br>**4. Fan shaft is rotating.**<br>**5. Fan belts are moving.**<br>**6. Vibrations are felt on the fan.**<br>**Give the following cues when the HS is placed in OFF if item is checked:**<br>**1. Hand switch for V-MZ-7 is in the OFF position.**<br>**2. D/p indications for inlet filters are zero.**<br>**3. Fan noise diminishes.**<br>**4. Fan shaft is stops rotating.**<br>**5. Fan belts stop moving.**<br>**6. Vibrations are no longer felt on the fan.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 13**<br>**Critical Y** | B.08.13-05.H.1, STEP 5.c.6)<br>V-EF-47, Admin Bldg Addition Fan (E-1) |
| **Standard:** | 1. Determines that V-EF-47 is running. (Non-critical standard)<br>2. Pushes STOP push button for V-EF-47. (Critical standard) |
| **Evaluator Cue:** | **Give the following initial cues for the fan running if item is checked:**<br>**1. Vibrations are felt on the fan.**<br>**Give the following cues after the PB is pushed if item is checked:**<br>**1. Vibrations are no longer felt on the fan.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 14**<br>**Critical N** | B.08.13-05.H.1, STEP 5.c.7)<br>V-RF-6, Admin Bldg 1st Addition Recirc (RE-1) |
| **Standard:** | 1. Determines that V-RF-6 is not running.<br>2. May place the handswitch for V-RF-6 to the OFF position. |
| **Evaluator Note:** | V-RF-6 trips on interlock with V-MZ-7 and therefore will not be running if checked after V-MZ-7 is tripped. If checked before V-RF-6 is tripped, the fan will be running.<br>Candidate may still place the control switch to OFF to verify the fan is secured. |
| **Evaluator Cue:** | **Give the following initial cues for the fan running if item is checked:**<br>**1. Fan belt is moving.**<br>**2. Fan shaft is rotating.**<br>**3. Vibrations are felt on the fan.**<br>**Give the following cues when the HS is placed in OFF if item is checked:**<br>**1. Fan belt stops moving.**<br>**2. Fan shaft stops rotating.**<br>**3. Vibrations are no longer felt on the fan.** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 15**<br>**Critical Y** | B.08.13-05.H.1, STEP 5.d<br>**NOTE: HS-9346 is located in the Admin Bldg 1st addition HTV Room just above the V-AC-14 night set back panel.**<br><br>Trip V-AC-14, Admin Bldg 2nd Addition H&V Unit (S-2), by placing HS-9346, V-AC-14 Remote Shutdown, in OFF. |
| **Standard:** | Places hand switch HS-9346 to the OFF position. |
| **Evaluator Note:** | V-AC-14 is located on the roof of the second addition to the administrative building and is remote from HS-9346. There is no way to observe the unit to verify that it is shutdown from the 3rd floor HVAC room. |
| **Evaluator Cue:** | **Initially inform candidate that toggle switch HS-9346 is in the ON position. After he simulates placing it in the OFF position, state "The switch is in the OFF position."** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 16**<br>**Critical N** | B.08.13-05.H.1, STEP 5.e<br>Verify the following Turbine Building units have tripped:<br>1) V-MZ-1, Turb Bldg 951 NW H&V Unit |
| **Standard:** | Determines V-MZ-1 is tripped. |
| **Evaluator Note:** | Steps 16, 17, 18 and 19 are completed via the phone with the Control Room. These indications are located on Control Room Panel C-20. |
| **Evaluator Cue:** | **Pre-approved prompt. "You may call the control room operators to verity turbine building fans have tripped."**<br><br>**When he calls the control room inform the candidate of the following:**<br>**1. Red light is OFF**<br>**2. Green light is ON** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 17**<br>**Critical N** | B.08.13-05.H.1, STEP 5.e.2)<br>V-MZ-4, TB 951 SW H&V Unit |
| **Standard:** | Determines V-MZ-4 is tripped. |
| **Evaluator Note:** | These indications are located on Control Room Panel C-20. |
| **Evaluator Cue:** | **Inform the candidate of the following:**<br>**1. Red light is OFF**<br>**2. Green light is ON** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 18**<br>**Critical N** | B.08.13-05.H.1, STEP 5.e.3)<br>V-MZ-5, TB 951 N H&V Unit |
| **Standard:** | Determines V-MZ-5 is tripped. |
| **Evaluator Note:** | These indications are located on Control Room Panel C-20. |
| **Evaluator Cue:** | **Inform the candidate of the following:**<br>**1. Red light is OFF**<br>**2. Green light is ON** |
| **Performance:** | **SATISFACTORY** _____ **UNSATISFACTORY** _____ |
| **Comments:** | _____ |

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| **Performance Step: 19**<br>**Critical N** | B.08.13-05.H.1, STEP 5.e.4)<br>V-MZ-6, Turb Bldg 931 E H&V Unit |
| **Standard:** | Determines V-MZ-6 is tripped. |
| **Evaluator Note:** | These indications are located on Control Room Panel C-20. |
| **Evaluator Cue:** | **Inform the candidate of the following:**<br>**1. Red light is OFF**<br>**2. Green light is ON** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

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| **Performance Step: 20**<br>**Critical N** | B.08.13-05.H.1, STEP 5.f<br>IF V-EF-33, Admin Bldg H&V Rm & Cable Spreading Rm Exhaust Fan is not running and can't be started,<br>THEN STOP V-AH-6, Admin H&V Equip Rm/Cable Spreading Rm H&V Unit. |
| **Standard:** | Determines V-EF-33 is running. |
| **Evaluator Note:** | Candidate may go back and check d/p indications. Inform the candidate that all d/p indications are reading +0.25 inches of water, if checked. |
| **Evaluator Cue:** | **Inform the candidate of the following:**<br>**1. Hand switch for V-EF-33 is in the ON position.**<br>**2. Fan noise is as you hear it.**<br>**3. Fan shaft is rotating.**<br>**4. Fan belts are moving.**<br>**5. Vibrations are felt on the fan.** |
| **Performance:** | **SATISFACTORY _____ UNSATISFACTORY _____** |
| **Comments:** | _____ |

**Terminating Cues:** **Operator informs the evaluator that the task is complete.**

**DO NOT PROMPT!**

**Stop Time:** _____

# TURNOVER SHEET

**INITIAL CONDITIONS:**

- An accident has occurred resulting in a high radiation condition in the Reactor Building. Annunciator 4-A-11, REACTOR BUILDING HI RADIATION, is in alarm.

**INITIATING CUES (IF APPLICABLE):**

- The Control Room Supervisor has directed you to manually initiate the EFT Emergency High Radiation Mode of the CRV/EFT System per B.08.13-05.H.1.

**ALL OPERATOR ACTIONS ARE TO BE SIMULATED!**