**JPM NO** JR012.008

Borate RCS for SDM (FR-S.2)

**Revision #:** 1

**Review Date:** 1/27/2004

**Location:** Simulator

**Estimated Time (minutes):** 12.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

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**Initial Conditions:**

The plant was operating at 100% power when a small break LOCA occurred resulting in Safety Injection actuation. During the transient Bus 14 tripped and will not energize. E-0 was entered and has been completed to Step 27. The STA has determined that the IR SUR indications result in a YELLOW FR-S.2 condition.

**Initiating Cues :**

The CRF directs you to "Initiate Immediate Boration of RCS" per Step 2 of FR-S.2 while the rest of the crew continues in E-0.

**Description:** Borate RCS for SDM (CT FR-S.2--A)

**JPM Tasks**

**Task ID:** 012-002-05-01A

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRFR | FR-S.2 | RESPONSE TO LOSS OF CORE SHUTDOWN | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

Use IC-54 for JR012.008 (FR-S.2). Bus 14 deenergized, SI actuated, RCS pressure approx. 1600 psig. IR SUR meters (IND OVRD IND-NIS03 & NIS04) set to -0.05. (Check on MON points hwx06d020m and hwx06d021m.)

**Performance Checklist**

1 **Element :** CUE

**Conditions :** CUE: Give examinee copy of FR-S.2.

**Standards :**

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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2 **Element :** Check SI status.

**Conditions :**

**Standards :** Checks MCB indicators, recognizes SI Pumps on with no flow indicated. Goes to Step 2b.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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**Element :** Verify at least one charging pump running.

**Conditions :**

**Standards :** Check MCB indicating lights. Recognizes no Charging Pump running. Goes to step RNO.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*4 **Element :** CRITICAL Reset SI.

**Conditions :**

**Standards :** Depresses SI Reset pushbutton.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*5 **Element :** CRITICAL Start one charging pump.

**Conditions :**

**Standards :** Starts Charging Pump "B" or "C". Goes to Step 2c.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *6 | **Element :** CRITICAL<br>Start BA Transfer Pump. | **Conditions :** | **Standards :**<br>Starts BA Transfer Pump "B". |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *7 | **Element :** CRITICAL<br>Open MOV-350. | **Conditions :** | **Standards :**<br>Open valve using MCB switch. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 8 | **Element :**<br>Verify BA flow. | **Conditions :**<br>CUE: No further action. | **Standards :**<br>Checks MCB indicator FI-113. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

**JPM Questions**

**Question**

**Answer**

**References**

| Reference Type | Reference ID | Description | Ref Flag |
|---|---|---|---|

**JPM NO** JR005.009

Establish S/G Cooling per AP-RHR.1

**Revision #:** 1

**Review Date:** 1/28/2004

**Location:** Simulator

**Estimated Time (minutes):** 20.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

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**Initial Conditions:**

The "B" SI Pump impeller failed during an SI Accumulator level increase operation 80 hours ago. Repairs are under way, expected to be complete in approximately another 24 hours. Due to the length of time involved the plant has been taken to Mode 4 to satisfy ITS LCO 3.5.2, the Mode 4 requirement has been met 4 hours before the required Completion Time window. Procedure O-2.2 was used for the shutdown and was completed through Section 5.5.7 for going to Solid Plant Operations.

An Auxiliary Operator is available to enter Containment immediately if needed, there are no personnel in Containment at this time.

**Initiating Cues :**

A trip of RHR Pump "A" occurred and AP-RHR.1, LOSS OF RHR, is in progress. The procedure is complete up to step 10. You are to continue with AP-RHR.1 Step 10 and restore RCS cooling.

**Description:** Establish S/G Cooling (CT AP-RHR.1--B) (JR005.009)

**JPM Tasks**

**Task ID:** 005-001-04-01D

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRAP | AP-RHR.1 | LOSS OF RHR | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

Set simulator to IC-4, BOL 340/325#, solid plant with RHR Pump "A" in service.
Provide copy of O-2.2 (section 5.5.7 for going to Solid Plant Ops completed).
Insert MALF RHR01A, trip of RHR Pump "A".
Option 2 only: Insert MALF RHR01B Trip of "B" RHR pump
Freeze for turnover to examinee.

Options 1: Restore using RHR
2: Restore using S/G Cooling

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>Determine RHR Pump "B" is available. | **Conditions :** | **Standards :**<br>Check RHR pump lights. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 2 | **Element :**<br>Verify CCW System status. | **Conditions :**<br>Cue: CCW flow on FI-619 is 4200 gpm. | **Standards :**<br>Check at least one CCW pump running. MOVs 738A/738B throttled open. Call AO to check CCW flow. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| | **Element :**<br>Close HCV-624 and HCV-625. | **Conditions :** | **Standards :**<br>Same as Element. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 4 | **Element :**<br>Place HCV-626 in Manual and Closed. | **Conditions :** | **Standards :**<br>Same as Element. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *5 | **Element :** **CRITICAL**<br>Start "B" RHR Pump. | **Conditions :**<br>Option 1: Once cooling is restored.<br>CUE: No further actions.<br>Note: Option 1: Starting the RHR pump is critical.<br>Option 2: Making the correct procedure transition (to 11e) is critical | **Standards :**<br>Attempts to start pump.<br>Option 2: Recognizes that the pump tripped, uses RNO to go to step 11e.<br>Option 1: Pump restarts, adjusts 624, 625, 626 to restore RHR cooling. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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6 **Element :** Recognize no RHR Pump running for Step 11a.

**Conditions :**

**Standards :** Check RNO direction, go to Step 11e.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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7 **Element :** Recognize no RHR flow.

**Conditions :**

**Standards :** Check MCB indications for flow/pump running.
Go to RNO.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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8 **Element :** Start trending core exit thermocouples.

**Conditions :**

**Standards :** Checks trend of temperature on PPCS.
TC increasing, continues in procedure.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*9 **Element :** **CRITICAL** Recognize RCS closed.

**Conditions :**

**Standards :** Check MCB indications.
Go to Step 12.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*10 **Element :** **CRITICAL** Monitor RCS temperature.

**Conditions :**

**Standards :** Recognize temperature increasing.
Recognize RCS closed.
Go to Step 13.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 11 | **Element :**<br>Check S/G level greater than 17%. | **Conditions :** | **Standards :**<br>Check MCB indications.<br>Verify greater than 17% level. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 12 | **Element :**<br>Check RCS pressure greater than 300 psig. | **Conditions :** | **Standards :**<br>Check MCB indications.<br>Verify greater than 300 psig. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 13 | **Element :**<br>Check RCP running. | **Conditions :** | **Standards :**<br>Check MCB pump indications. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *14 | **Element :** **CRITICAL**<br>Establish S/G cooling. | **Conditions :** | **Standards :**<br>Recognize steam dump not available.<br>Adjust at least one ARV to open. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *15 | **Element :** **CRITICAL**<br>Monitor RCS temperature stable or decreasing. | **Conditions :**<br>CUE: (When temperature is stabilized or decreasing in a controlled fashion) No further action. | **Standards :**<br>Checks MCB/PPCS indications.<br>Adjusts ARV(s) to stabilize or decrease temperature. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

**JPM Questions**

**Question**

**Answer**

**References**

| Reference Type | Reference ID | Description | Ref Flag |
|---|---|---|---|

**JPM NO** JR005.007

Initiate Containment Closure

**Revision #:** 0

**Review Date:** 1/27/2004

**Location:** Simulator

**Estimated Time (minutes):** 12.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

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**Initial Conditions:**

The plant is in a refueling outage. The RCS has been drained to 20 inches for RTD work per O-2.3.1. The RWST Gravity Fill, Charging Pump "A" and SI Pump "A" fill paths are available. O-2.3.1A is in effect with Main Purge operating per S-23.2.2 and the Equipment Hatch doors open for movement of maintenance equipment.

RHR Pump "A" was running and has just tripped, the operating shift is preparing to enter AP-RHR.2, LOSS OF RHR WHILE OPERATING AT RCS REDUCED INVENTORY CONDITION.

**Initiating Cues :**

You are the Control Operator. Other personnel will perform any actions necessary for the CRF and HCO positions. Monitor the plant and perform tasks as directed.

**Description:** Initiate Cnmt Closure (CT AP-RHR.2--A)

**JPM Tasks**

**Task ID:** 005-001-04-01B

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRAP | AP-RHR.2 | LOSS OF RHR WHILE OPERATING AT RCS REDUCED INVENTORY CONDITIONS | | ☐ |
| PRO | O-2.3.1A | CONTAINMENT CLOSURE CAPABILITY IN TWO HOURS DURING RCS REDUCED INVENTORY OPERATION | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

Need S-23.2.2 for Containment Purge completed through startup steps.
Need O-2.3.1A, OPEN PENETRATION FACT SHEET filled out for:
- Purge Supply (P-204) (Instructions say "Secure containment purge")
- Purge Exhaust (P-300) (Secure containment purge)
- Equipment Hatch Air Lock (list RP department as personnel to contact and list a phone number).

Start simulator in IC-1, loop level 20 inches.
Insert MALF RHR01B for RHR Pump "B" trip.
Insert MALF RHR01A for RHR Pump "A" trip.
Freeze simulator until after turnover to examinee.

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>CUE | **Conditions :**<br>CUE: Control Operator, I need you to Initiate Cnmt Closure per AP-RHR.2 . Refer to O-2.3.1A. | **Standards :**<br>Examinee should repeat back the direction. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 2 | **Element :**<br>Obtain the O-2.3.1A and the Open Penetration Fact Sheets. | **Conditions :**<br>NOTE: The order of performing the two Open Penetration Fact Sheets is not critical. | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| | **Element :** **CRITICAL**<br>Contact RP department to close the Equipment Hatch. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 4 | **Element :**<br>Stop Containment Purge Supply and Exhaust fans. | **Conditions :** | **Standards :**<br>Locates switch on back of MCB.<br>Secures "A" fans. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *5 | **Element :** **CRITICAL**<br>Close Cnmt Purge Supply Vlv, AOV-5869. | **Conditions :** | **Standards :**<br>Switch on MCB to close. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *6 | **Element :** **CRITICAL**<br>Close Cnmt Purge Exhaust Vlv, AOV-5879. | **Conditions :**<br>CUE: (Once all 3 critical tasks are done.) No further action. | **Standards :**<br>Switch on MCB to close. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

**JPM Questions**

**Question**

**Answer**

**References**

| Reference Type | Reference ID | Description | Ref Flag |
|---|---|---|---|

**JPM NO** JR010.003

Depressurize RCS Using N2

**Revision #:** 2

**Review Date:** 1/28/2004

**Location:** Simulator

**Estimated Time (minutes):** 10.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

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**Initial Conditions:**

The plant has experienced a SGTR, reactor trip and safety injection. The RCP's have been tripped and Instrument Air is not available to Containment. All required steps of E-0 have been completed. All steps of E-3 have been completed up to Step 22.

**Initiating Cues :**

Plant is in E-3, Step 22 recovering from a SGTR. The RCP's are tripped and Instrument Air is not available to Containment. Depressurize the RCS per Attachment N2 PORV's.

**Description:** Depressurize RCS using N2 (JR010.003)

**JPM Tasks**

**Task ID:** 010-013-01-01A

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRE | E-3 | STEAM GENERATOR TUBE RUPTURE | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

MALF SGN4A 750,0,0.
Complete all steps of E-0 and E-3 up to Step 22. Do not reset XY Relays and open AOV-5392 in Step 17.
Attachment N2 PORV'S required.

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>Review Attachment N2 PORV's. | **Conditions :**<br>Same as Element.<br>CUE: Give examinee attachment N2 PORV's. The CRF will inform you when to secure depressurization. | **Standards :** |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 2 | **Element :**<br>Verify Block Valve(s) open and operable | **Conditions :**<br>(Option 1) Both are operable, can use either PORV. | **Standards :** |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *3 | **Element :** **CRITICAL**<br>Place surge tank valve SOV-8616B to open | **Conditions :**<br>Obtain key from CRF. Use key to select open.<br>CUE: The CO is monitoring przr level. | **Standards :** |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *4 | **Element :** **CRITICAL**<br>Depressurize RCS. Place SOV-8619B to arm | **Conditions :**<br>Select Arm.<br>Note: If examinee questions the need to trip bistables, cue that it is not anticipated that PORVs will be open below 410 psig. | **Standards :** |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |

| | | | |
|---|---|---|---|
| *5 | **Element :** **CRITICAL**<br>Secure depressurize RCS<br>SOV-8619B to block | **Conditions :**<br>After the PORV has been open approximately 5 seconds.<br>CUE: The CRF informs you to secure the RCS depressurization.<br>Examinee takes SOV-8619B (8619A) to block | **Standards :**<br>Same as Element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 6 | **Element :**<br>Close SOV-8616B | **Conditions :**<br>CUE: No further actions. | **Standards :**<br>Same as Element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

**JPM NO** JR062.005

Transfer 4160V Auxiliary Loads

**Revision #:** 7

**Review Date:** 1/28/2004

**Location:** Simulator

**Estimated Time (minutes):** 12.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

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**Initial Conditions:**

The plant is doing a startup per O-1.2. We are presently approximately 20% power with O-1.2 complete thru Step 5.5.6.9.

**Initiating Cues :**

The CRF has directed you to transfer 4160V loads per Step 5.6 of O-1.2.

**Description:** Transfer 4160V Auxiliary Loads (JR062.005)

**JPM Tasks**

**Task ID:** 062-005-01-01A

## Task Standards

## Tools :

## Terminating Cues

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRO | O-1.2 | PLANT STARTUP FROM HOT SHUTDOWN TO FULL LOAD | | ☐ |

## Safety Considerations

## Consequences of Inadequate Performance:

## General Comments :

Setup simulator with T/G on line at approx. 20% power, increasing after a startup with copy of O-1.2 done through Step 5.5.6.7.

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>Review the procedure. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *2 | **Element :** **CRITICAL**<br>Turn Bus 11A Normal Feed synchroscope on. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *3 | **Element :** **CRITICAL**<br>Close Bus 11A Normal Feed. | **Conditions :** | **Standards :**<br>Same as element.<br>Verifies breaker closure. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 4 | **Element :**<br>Turn Bus 11A Normal Feed synchroscope off. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *5 | **Element :** **CRITICAL**<br>Open 4160V Bus 11A-12A Tie. | **Conditions :** | **Standards :**<br>Same as element.<br>Verifies breaker open. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| | **Element :** **CRITICAL**<br>Turn Bus 11B Normal Feed synchroscope on. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*7 **Element :** **CRITICAL**
Close Bus 11B 4160V Normal Feed.

**Conditions :**

**Standards :**
Same as element.
Verifies breaker closure.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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8 **Element :**
Turn Bus 11B Normal Feed synchroscope off.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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**Element :** **CRITICAL**
Open 4160V Bus 11B-12B Tie.

**Conditions :**

**Standards :**
Same as element.
Verifies breaker open.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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10 **Element :**
Verifies Annunciator J-13 is extinguished.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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11 **Element :**
Dispatches AO to reset Transformer Alarms L-20 and L-28.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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12 **Element :**
Properly completes procedural sign-offs.

**Conditions :**
TERMINATING CUE: No further action.

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

**JPM NO** JR015.002

Remove N-41 from Service

**Revision #:** 6

**Review Date:** 1/27/2004

**Location:** Simulator

**Estimated Time (minutes):** 14.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory** _____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES. ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING

**Initial Conditions:**

Power Range channel N-41 drifted low over a period of several minutes and has been declared inoperable. No plant transient has occurred. Procedure ER-NIS.3 has been implemented. No other channels have been defeated.

**Initiating Cues :**

The CRF has directed you to remove PR N-41 from service per ER-NIS.3. All notifications have been made and approvals received. No other instrumentation channels are defeated.

**Description:** Remove N-41 from Service (JR015.002)

**JPM Tasks**

**Task ID:** 015-007-01-01A

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRER | ER-NIS.3 | PR MALFUNCTION | | ☐ |

**Safety Considerations**

**Consequences of Inadequate Performance:**

**General Comments :**

Setup
IC-19
Rod in Manual
Insert Malfunction MALF NIS06A, 0 (Fail N-41 upper detector low)

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>Obtain current ER-NIS.3, review procedure.<br><br>**Comments :** | **Conditions :** | **Standards :**<br>Same as element. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 2 | **Element :**<br>Verify rods in manual, Tavg equal to Tref.<br><br>**Comments :** | **Conditions :**<br>CUE: Instructor will maintain control of Tavg during this evolution. | **Standards :**<br>Same as element. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *3 | **Element :** **CRITICAL**<br>Delete NIS Channel N-41 from PPCS if operable (can be performed any time during defeat).<br>1) Select group update<br>2) Select list server groups<br>3) Select NIS 1 from pick list<br>4) Turn scan processing OFF, the click set scan processing<br><br>**Comments :** | **Conditions :**<br>Time Critical must be completed within 15 minutes of start of JPM. | **Standards :**<br>Verify that NIS deleted from processing on PPCS. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *4 | **Element :** **CRITICAL**<br>Place Dropped Rod Mode switch to BYPASS.<br>(N-41A Drawer) | **Conditions :** | **Standards :**<br>Same as element.<br><br>Student should ask for a PEER CHECK<br><br>Dropped Rod Bypass local light lit.<br><br>Power Range-1 Rod Drop Bypass lit (MCB).<br><br>Annunciator E-7 lit. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

5 **Element :** Defeat Delta-T Turbine Runback/Rod Stop by placing Delta-T Defeat switch T/405E Delta-T Defeat to Loop A - Unit 1. (RIL Rack)

**Conditions :**

**Standards :** Identifies/selects proper channel; Loop A - Unit 1 in RIL Rack.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*6 **Element :** **CRITICAL** Place Overtemperature Trip bistable to Defeat in R-1 rack.

**Conditions :**

**Standards :** Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

7 **Element :** Checks F-23 lit.

**Conditions :**

**Standards :** Same as lement.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*8 **Element :** **CRITICAL** Place Overpower trip bistable to defeat in R-1 rack.

**Conditions :**

**Standards :** Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

9 **Element :** Checks F-32 lit and B/S status lights TC405A and TC405C lit.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*10 **Element :** **CRITICAL**
Place Upper Section Comparator Defeat switch to PRN-41 position.

**Conditions :**

**Standards :**
Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

11 **Element :**
Verifies Channel Defeat Upper Section lit.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*12 **Element :** **CRITICAL**
Place Lower Section Comparator Defeat switch to PRN-41 position.

**Conditions :**

**Standards :**
Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

13 **Element :**
Verifies Channel Defeat Lower Section lit.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*14 **Element :** **CRITICAL**
Place Power Mismatch Bypass switch to Bypass PRN-41.

**Conditions :**

**Standards :**
Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*15 **Element :** **CRITICAL**
Place Rod Stop Bypass to N-41.

**Conditions :**

**Standards :**
Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*16 **Element :** **CRITICAL**
Place Comparator Channel Defeat switch to N-41.

**Conditions :**

**Standards :**
Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

17 **Element :**
Verifies Comparator Defeat lit.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*18 **Element :** **CRITICAL**
Remove Instrument Power fuses for N-41.

**Conditions :**

**Standards :**
Same as element.

Student should ask for a PEER CHECK

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

**Element :**
Verifies E-18, E-19, E-21, E-27, E-28 lit.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

20 **Element :** Verifies B/S status lights NC41M, NC41N, NC41P, NC41R, NC41S lit.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

21 **Element :** Verify status lights on Power Range Drawer N-41A.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

22 **Element :** Verify status lights on N-41B drawer.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

23 **Element :** Notify I&C to install jumpers.

**Conditions :** CUE: No further action.

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

**JPM NO** JR006.001

Makeup to the "B" Accumulator from RWST
Option 1 No Faults
Option 2 Faulted (SI Pump Trip) Option 3 Alternate Path (High Press Alarm During Fill)
Estimated Time: Option 1: 10 mins Option 2: 15 mins Option 3: 20 mins.

**Revision #:** 12

**Review Date:** 2/6/2004

**Location:** Simulator

**Estimated Time (minutes):** 0.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

---

**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory** _____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

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**Initial Conditions:**

Accumulator "B" level has decreased to 56% with a resulting low pressure.

**Initiating Cues :**

Accumulator "B" is at 56% level. The CRF directs you to fill it to 70% using the "C" SI Pump per procedure S-16.13, RWST WATER MAKEUP TO THE ACCUMULATORS.

**Description:** Makeup to the "B" Accumulator from RWST (JR006.001)

**JPM Tasks**

**Task ID:** 006-003-01-04A

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRS | S-16.13 | RWST WATER MAKEUP TO ACCUMULATORS | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

OPTION 1:
Init in any at power IC. Insert MALF SIS5B=100gpm. Run until level <56% (MONV T:L934), then clear MALF. (Wait for sump pump annunciator C-18 to clear) (Steps 1-11)

OPTION 2:
Complete Option 1 setup, then insert MALF SIS 3C (pump trip) (Steps 13-27)

OPTION 3:
After draining, use S-16.2 to increase Accumulator press to just below the alarm (760 psig). Secure N2 fill lineup (Steps 28-58) (NOTE: Operator may vent the accumalator first based on judgement that it will exceed 760psig)

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>OPTION 1<br><br>**Comments :** | **Conditions :** | **Standards :** |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 2 | **Element :**<br>Obtain a copy of procedure S-16.13 and review precautions and notes.<br><br>**Comments :** | **Conditions :** | **Standards :**<br>Same as element. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 3 | **Element :**<br>Verify open Suction from RWST, MOV-825A and MOV-825B.<br><br>**Comments :** | **Conditions :** | **Standards :**<br>Same as element. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 4 | **Element :**<br>Verify open Recirc Valves to RWST, MOV-897 and MOV-898.<br><br>**Comments :** | **Conditions :** | **Standards :**<br>Same as element. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *5 | **Element :** **CRITICAL**<br>Open "B" Accumulator Fill Valve.<br><br>**Comments :** | **Conditions :** | **Standards :**<br>Open AOV-835B. |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| | **Element :**<br>Notify AO of impending start of "C: Pump. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

7 **Element :** N/A Steps 5.6, 5.7 and 5.8.1

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*8 **Element :** **CRITICAL** Starts "C" SI Pump.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

**Element :** Verify pump discharge pressure approx. 1500 psi on PI-923.

**Conditions :**

**Standards :** Observes PI-923.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*10 **Element :** **CRITICAL** When desired level is obtained, stop operating pump and place in auto.

**Conditions :**

**Standards :**
- At >57% and <75% level stop pump.

- Observes accumulator pressure during fill to ensure precaution 4.2 satisfied.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*11 **Element :** **CRITICAL** Close Accumulator Fill Valve.

**Conditions :** CUE: No further action.

**Standards :** Closes AOV-835B,.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

12 **Element :** ***** **Conditions :** ***** **Standards :** *****

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☒

---

13 **Element :** OPTION 2 **Conditions :** **Standards :**

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

14 **Element :** Obtain copy of procedure S-16.13 and review precautions and notes. **Conditions :** **Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

15 **Element :** Verify open Suction from RWST, MOV-825A and MOV-825B. **Conditions :** **Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

16 **Element :** Verify open Recirc Valves to RWST, MOV-897 and MOV-898. **Conditions :** **Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*17 **Element :** **CRITICAL** Open "B" Accumulator Fill Valve. **Conditions :** **Standards :** Open AOV-835B.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

18 **Element :** Notify AO of impending start of "C" SI Pump.
**Conditions :**
**Standards :** Same as element.
**Comments :**
**Satisfactory** ☐ **Unsatisfactory** ☐

---

19 **Element :** N/A steps 5.6, 5.7 and 5.8.1
**Conditions :**
**Standards :** Same as element.
**Comments :**
**Satisfactory** ☐ **Unsatisfactory** ☐

---

*20 **Element :** CRITICAL Starts "C" SI Pump.
**Conditions :**
**Standards :** Same as element.
**Comments :**
**Satisfactory** ☐ **Unsatisfactory** ☐

---

*21 **Element :** CRITICAL Observes trip of "C" SI Pump.
**Conditions :** Observes trip of pump. Notifies supervision. CUE: (If necessary) Use the "B" pump to fill the accumulators.
**Standards :** Same as element.
**Comments :**
**Satisfactory** ☐ **Unsatisfactory** ☐

---

22 **Element :** Notify AO of impending start of "B" pump.
**Conditions :**
**Standards :** Same as element.
**Comments :**
**Satisfactory** ☐ **Unsatisfactory** ☐

---

*23 **Element :** CRITICAL Starts "B" SI Pump.
**Conditions :**
**Standards :** Same as elment.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

24 **Element :**
Verify pump discharge pressure 1500 psi on PI-923.

**Conditions :**

**Standards :**
Observes PI-923.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*25 **Element :** **CRITICAL**
When desired level is obtained, stop operating pump and place in auto.

**Conditions :**

**Standards :**
- At >57% and <75% level stop pump.

- Observes accumulator pressure during fill to ensure precaution 4.2 satisfied.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*26 **Element :** **CRITICAL**
Close Accumulator Fill Valve.

**Conditions :**

**Standards :**
Closes AOV-835B.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

27 **Element :**
Initiate A-52.4 on "C" SI pump.

**Conditions :**
CUE: No further actions.

**Standards :**
Not necessary to fill out procedure.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

28 **Element :**
OPTION 3

**Conditions :**

**Standards :**

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

29 **Element :** Obtain a copy of procedure S-16.13 and review precautions and notes.

**Conditions :**

**Standards :** Same as element

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

30 **Element :** Verify open Suction from RWST, MOV-825A and MOV-825B.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

31 **Element :** Verify open Recirc Valves to RWST, MOV-897 and MOV-898.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*32 **Element :** CRITICAL Open "B" Accumulator Fill Valve.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

33 **Element :** Notify AO of impending start of "C" Pump.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

34 **Element :** N/A steps 5.6, 5.7 and 5.8.1.

**Conditions :**

**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

| | | | |
|---|---|---|---|
| *35 | **Element :** CRITICAL<br>Starts "C" SI Pump | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 36 | **Element :**<br>Verify pump discharge pressure approx. 1500 psi on PI-923. | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *37 | **Element :** CRITICAL<br>Stop filling when High Pressure Alarm actuates. | **Conditions :**<br>High Pressure Alarm 760 psi, stop filling prior to 800 psig. | **Standards :**<br>Stop "C" SI Pump. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *38 | **Element :** CRITICAL<br>Close AOV-835B | **Conditions :** | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 39 | **Element :**<br>Observe Precaution 4.2 or Alarm Response Alarm Response for High Pressure (C-12) | **Conditions :**<br>Goes to S-16.18 to reduce Accumulator Pressure | **Standards :**<br>Goes to S-16.18. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 40 | **Element :**<br>Review Initial Conditions of S-16.18 | **Conditions :**<br>CUE: Accumulator lineup is normal (if needed). | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

41 **Element :** Observe Precautions.
**Conditions :**
**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

42 **Element :** Verify Valve Lineup
- AOV 846 closed
- SOV-8604A closed
- SOV-8604B closed

**Conditions :**
**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

43 **Element :** N/A Step 5.5 - 5.5.6
**Conditions :**
**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

44 **Element :** Verify AOV-834A closed.
**Conditions :**
**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*45 **Element :** **CRITICAL** Open AOV-834B
**Conditions :**
**Standards :** Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*46 **Element :** **CRITICAL** Throttle open HCV-945
**Conditions :** Slowly opens to depressurize to ~ 740 psig, does not go below 700 psig.
**Standards :** Throttles open HCV-945. Closes when pressure decrease to desired value.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*47 **Element :** **CRITICAL**
Close AOV-834B

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

48 **Element :**
Verify Accumulator Pressure is > 700 psi

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

**Element :**
Obtain copy of procedure S-16.13 and review precautions and notes. (Note: May use original S-16.13 and repeat steps)

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

50 **Element :**
Verify open Suction from RWST, MOV-825A and MOV-825B.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

51 **Element :**
Verify open Recirc Valves to RWST, MOV-897 and MOV-898.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*52 **Element :** CRITICAL
Open "B" Accumulator Fill Valve.

**Conditions :**

**Standards :**
Open AOV-835B.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

53 **Element :**
Notify AO of impending start of "C" SI Pump.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

54 **Element :**
N/A steps 5.6, 5.7 and 5.8.1.

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*55 **Element :** CRITICAL
Starts "C" SI pump

**Conditions :**

**Standards :**
Same as element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

56 **Element :**
Verify pump discharge pressure 1500 psi on PI-923.

**Conditions :**

**Standards :**
Observes PI-923.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*57 **Element :** CRITICAL
When desired level is obtained, stop operating pump and place in auto.

**Conditions :**

**Standards :**
- At >57% and <75% level stop pump.

- Observes accumulator pressure during fill to ensure precaution 4.2 satisfied.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*58 **Element :** **CRITICAL**
Close Accumulator Fill Valve.

**Conditions :**
CUE No further action.

**Standards :**
Closes AOV-835B.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

**JPM NO** JR029.001

Startup the Containment Mini Purge

**Revision #:** 1

**Review Date:** 1/28/2004

**Location:** Simulator

**Estimated Time (minutes):** 8.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

---

**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

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**Initial Conditions:**

A routine Cnmt entry is required tomorrow.

**Initiating Cues :**

The Shift Supervisor directs you to place Mini Purge System in service. A Containment Mini-Purge Release has been initiated and SS & RP approvals have been received.

**Description:** Startup the Containment Mini Purge (JR029.001)

**JPM Tasks**

**Task ID:** 029-007-01-01A

**Task Standards**

**Tools :**

**Terminating Cues**

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRS | S-23.2.3 | CONTAINMENT MINI-PURGE SYSTEM OPERATION | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

Verify Mini-Purge is secured in IC, may be performed at any operating IC.
Fill out a S-23.2.3 with the initial conditions signed off.
Option 2: When Mini Purge is started, ramp R-14 up to 3E5 CPM MALF RMS02D, 3E5, 120 sec ramp.

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :** Procedure | **Conditions :** CUE: Hand student a copy of S-23.2.3 completed up to Step 5.1 | **Standards :** |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 2 | **Element :** Reviews precautions. | **Conditions :** | **Standards :** Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 3 | **Element :** Verify Mini Purge Roof Vent Isolation Valve, V-7479, locked closed. | **Conditions :** CUE: Report V-7479 locked closed. | **Standards :** Direct AO to verify. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *4 | **Element :** **CRITICAL** Open Mini Purge Exhaust Valve, AOV-7970. | **Conditions :** | **Standards :** Shift switch to open. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *5 | **Element :** **CRITICAL** Open Mini Purge Exhaust Valve, AOV-7971. | **Conditions :** | **Standards :** Rotate switch to open. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| | **Element :** **CRITICAL** Open Mini Purge Supply Valve, AOV-7478. | **Conditions :** | **Standards :** Rotate switch to open. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*7 **Element :** **CRITICAL**
Open Mini Purge Supply Valve, AOV-7445.

**Conditions :**

**Standards :**
Rotate switch to open.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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8 **Element :**
Observe note before 5.1.6.

**Conditions :**

**Standards :**

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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**Element :** **CRITICAL**
Start "A" Mini Purge Supply and verify Containemnt pressure increase.

**Conditions :**
CUE: Containment pressure has increased slighly and stabilized.

**Standards :**
Rotate switch to run.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

10 **Element :**
Recognize R-14 Alarm.

**Conditions :**

**Standards :**
Acknowledges alarms.
Refers to precaution in S-23.2.3. or AR for R-14 alarms.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*11 **Element :** **CRITICAL**
Determine Mini-Purge. Must be shutdown.

**Conditions :**

**Standards :**
Same as Element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

*12 **Element :** CRITICAL
Stop Mini-Purge Blower 1A.

**Conditions :**

**Standards :**
Same as Element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*13 **Element :** CRITICAL
Closes supply valves 7478 and 7445.

**Conditions :**

**Standards :**
Same as Element.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*14 **Element :** CRITICAL
Closes exhaust valves 7970 and 7971.

**Conditions :**

**Standards :**
Same as Element.
CUE: No further actions.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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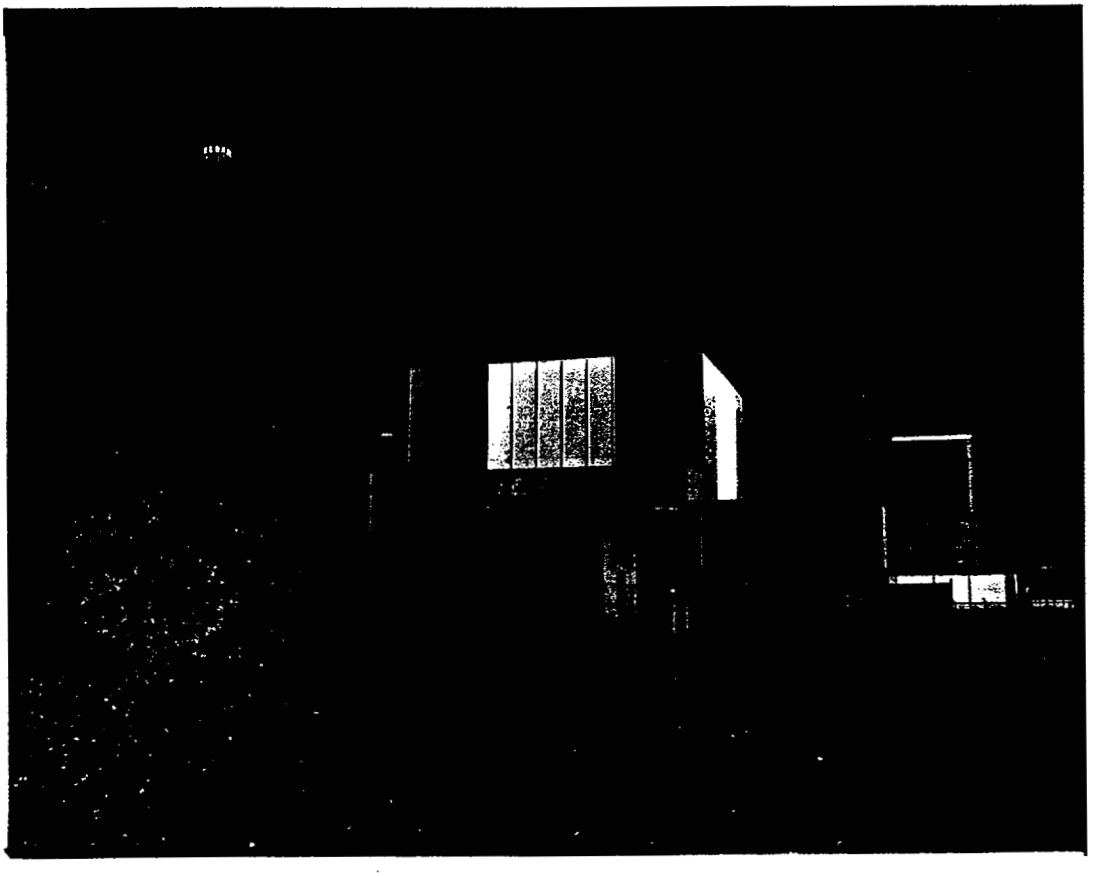
# Book 7
# In Plant JPMs



**JPM NO** JC061.005

Reset TDAFW Pump Turbine Trip/Throttle Valve

**Revision #:** 6

**Review Date:** 1/29/2004

**Location:** In Plant

**Estimated Time (minutes):** 6.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

THE EVALUATOR WILL EXPLAIN THE JPM INITIAL CONDITIONS AND PROVIDE CLARIFICATION AS REQUIRED. THE EXAMINEE MAY USE ANY CONTROLLED COPY REFERENCES THAT ARE NORMALLY AVAILABLE IN THE CONTROL ROOM, INCLUDING LOGS. MAKE ALL WRITTEN REPORTS, ORAL REPORTS, AND LOG ENTRIES AS IF THE EVOLUTION WAS ACTUALLY BEING PERFORMED. THE EVALUATOR WILL BE TAKING NOTES. ASK FOR CLARIFICATION OF JPM REQUIREMENTS PRIOR TO THE BEGINNING

**Initial Conditions:**

The plant has experienced a control complex fire and the Shift Supervisor has implemented ER-FIRE.1, ALTERNATIVE SHUTDOWN FOR CONYTROL COMPLEX FIRE. The reactor was tripped, the MSIVs were closed. the turbine generator was verified tripped and the RCPs were tripped.

**Initiating Cues :**

The plant has experienced a control complex fire and the Shift Supervisor has implemented ER-FIRE.1, ALTERNATIVE SHUTDOWN FOR CONTROL COMPLEX FIRE. You have your equipment from the Appendix R Locker. Upon verifying the TDAFW Pump governor reset, you discover it tripped. Reset the TDAFW Pump governor IAW ER-FIRE.1 ATT 6. SIMULATE ONLY> Do not manipulate any plant equipment.

**Description:** Reset TDAFW Pump Turbine Trip/Throttle Valve 1) No Fault, 2) Faulted:Trip Hoc

**JPM Tasks**

**Task ID:** 061-012-04-01A

**Task Standards**

In accordance with the procedure

**Tools :**

Safety Glasses

Hard Hat

Hearing Protection

**Terminating Cues**

Trainee Says Task is Completed
Task Completion

**References :**

| ID | Description | Review Date | Ref Flag |
|---|---|---|---|
| | | | ☐ |

**Safety Considerations**

**Consequences of Inadequate Performance:**

Failure to provide adequate heat sink during a plant fire.

**General Comments :**

Supply copy of ER-FIRE.1.

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>NOTE/CUE | **Conditions :**<br>INSTRUCTOR NOTE: Start at the TDAFW Pump.<br><br>CUE: DC Oil Pump is running. | **Standards :** |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *2 | **Element :** **CRITICAL**<br>Pull out plunger handle (YELLOW) until bellows stem engages plunger rod. | **Conditions :**<br>CUE: Bellows stem has engaged plunger rod. | **Standards :**<br>Locate handle, simulate pulling out. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 3 | **Element :** **CRITICAL**<br>Turn Trip Throttle Valve handwheel in clockwise direction until latching lever reaches end of travel. | **Conditions :**<br>CUE: Latching lever is at end of travel. | **Standards :**<br>Locate and simulate turning valve. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *4 | **Element :** **CRITICAL**<br>Verify trip hook engaged. | **Conditions :**<br>OPTION #1 CUE: Trip hook has engaged latching lever.<br><br>OPTION #2 CUE: Trip hook is not engaged. | **Standards :** |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| | **Element :** **CRITICAL**<br>(FOR OPTION #2)<br>Depress and hold down main trip valve (ORANGE) until trip hook engages latching lever. | **Conditions :**<br>CUE: Trip hook has engaged latching lever. | **Standards :**<br>Locate and simulate pressing down. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *6 | **Element :** **CRITICAL**<br>Reset Trip Throttle Valve by turning handwheel in CCW direction until valve is fully open. | **Conditions :**<br>CUE: Valve no longer turns in that direction. | **Standards :**<br>Locate and simulate opening. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| 7 | **Element :**<br>Notify SS reset complete. | **Conditions :**<br>TERMINATING CUE: No further actions required. | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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**JPM NO** JC063.001

Align TSC DC Supply to MAIN FUSE CABINET 1B

**Revision #:** 5

**Review Date:** 1/27/2004

**Location:** In Plant

**Estimated Time (minutes):** 35.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

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**Initial Conditions:**

The plant experienced a Cable Tunnel fire. The shift has implemented ER-FIRE.2.

**Initiating Cues :**

The Shift Supervisor directs you to align TSC DC supply to Main Fuse Cabinet 1B per Step 2.5.2 of Attacment 8 of ER-FIRE.2.

**Description:** Align TSC DC Supply to Main Fuse Cabinet 1B (JC063.001)

**JPM Tasks**

**Task ID:** 063-010-01-04A

**Task Standards**

In accordance with the procedure

**Tools :**

Key

Hearing Protection

Safety Glasses

Hard Hat

Appendix R Tool Pouch

Safety Shoes

**Terminating Cues**

Task Completion

Trainee Says Task is Completed

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| PRER | ER-FIRE.2 | ALTERNATE SHUTDOWN FOR CABLE TUNNEL FIRE | | ☐ |

**Safety Considerations :**

**Consequences of Inadequate Performance:**

**General Comments :**

Copy of Attachment 8 of ER-FIRE.2.

**Performance Checklist**

1 **Element :** INSTRUCTOR

**Conditions :** Hand student Attachment 8 of ER-FIRE.2. Inform student that obtaining keys will not be necessary. Simulate having the necessary keys.

**Standards :**

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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*2 **Element :** **CRITICAL** Place Battery B Main Disconnect to OFF.

**Conditions :** CUE: Disconnect is off.

**Standards :** Locate disconnect in the B Battery Room and position to OFF.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

3 **Element :** Verify Pos. #3 CP TSC-VITAL BATT INTERTIE A2Y-600 is in the ON position.

**Conditions :** CUE: Intertie is on.

**Standards :** Locate intertie in Battery B Main Fuse Cabinet Sect II and verify on.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

---

*4 **Element :** **CRITICAL** Unlock and place TSC/BATTERY B fused disconnect panel switch to ON.

**Conditions :** CUE: Switch is on.

**Standards :** Locate switch in the B Battery Room and place to ON.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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5 **Element :** Verify TSC/BATT A/B fused disconnect switch in ON.

**Conditions :** CUE: Switch is in ON.

**Standards :** Locate switch in TSC Battery Room and verify switch is on.

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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| | | | |
|---|---|---|---|
| *6 | **Element :** CRITICAL<br>Insert interlock key into the B Battery position. | **Conditions :**<br>CUE: Key is inserted in "B" position. | **Standards :**<br>Locate TSC/BATTERY A/B throwover panel and insert key in "B" Battery position. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *7 | **Element :** CRITICAL<br>Place the B key switch in service. | **Conditions :**<br>CUE: "B" key switch is in service. | **Standards :**<br>Unlocks "B" switch. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| *8 | **Element :** CRITICAL<br>Place the B manual throwover switch in CLOSED. | **Conditions :**<br>CUE: Switch is closed. | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

| | | | |
|---|---|---|---|
| 9 | **Element :**<br>Notify SS that TSC Battery is tied to the B Train DC Dist. System. | **Conditions :**<br>CUE: No further actions. | **Standards :**<br>Same as element. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

**JPM Questions**

**Question**

**Answer**

**References**

| Reference Type | Reference ID | Description | Ref Flag |
|---|---|---|---|

**JPM NO** JC103.007

Perform ATTACHMENT CI/CVI

**Revision #:** 0

**Review Date:** 1/28/2004

**Location:** In Plant

**Estimated Time (minutes):** 20.00

**Candidate:** _____

**Evaluator:** _____

**Actual Time:** _____

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**Trainee Performance:** **Satisfactory** _____ **Unsatisfactory**_____

**Trainee:** _____

**Instructor:** _____

**Submitted By** _____ **Date** _____

**Reviewed By** _____ **Date** _____

NOTE

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**Initial Conditions:**

The plant has experienced a Safety Injection. While performing action steps of E-0, REACTOR TRIP OR SAFETY INJECTION, it was found that the Containment Isolation Valves were not properly lined up.

**Initiating Cues :**

The plant is in the actions steps of E-0. Several Containment Isolation Valves have failed, you have been directed using the CI/CVI Attachment to isolate the failed valves using the alternate isolation valves.

Valves that have failed to close:
AOV-539 PRT to Gas Analyzer
MOV-814 CCW to Rx Support Cooler
AOV-1723 CNMT Sump A Pump Discharge
AOV-1728 CNMT Sump A Pump Discharge

**Description:** Perform ATTACHMENT CI/CVI (JC103.007)

**JPM Tasks**

**Task ID:** 103-007-05-04

## Task Standards

In accordance with the procedure

## Tools :

## Terminating Cues

**References :**

| ID | | Description | Review Date | Ref Flag |
|---|---|---|---|---|
| NLOQR | SECTION VI | Primary Side Operator | | ☐ |
| PRATT | ATT-3.0 | ATTACHMENT CI/CVI | | ☐ |

## Safety Considerations :

## Consequences of Inadequate Performance:

Failure to isolate CNMT penetration could result in an uncontrolled release of radioactive material to the environment.

## General Comments :

Supply copy of Att-3.0 CI/CVI
Supply key 59 for the H2 Monitors (get from SS)
Notify SS that the door to the "A" H2 monitor will be opened for this JPM.

**Performance Checklist**

| | | | |
|---|---|---|---|
| 1 | **Element :**<br>NOTES | **Conditions :**<br>NOTE: Sequence is not critical.<br><br>CUE: Give copy of the attachment to the student and key 59. | **Standards :** |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 2 | **Element :**<br>Proceed to Aux. Building Middle Level | **Conditions :** | **Standards :**<br>Same as element. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| | **Element :** **CRITICAL**<br>Close valve V-546. | **Conditions :**<br>CUE: Valve no longer turns in that direction. | **Standards :**<br>Locate valve, simulate closing. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *4 | **Element :** **CRITICAL**<br>Close V-815A. | **Conditions :**<br>CUE: Valve no longer turns in that direction. | **Standards :**<br>Locate valve. Simulate closing. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| 5 | **Element :**<br>Proceed to Aux. Building Waste Disposal Panel. | **Conditions :** | **Standards :**<br>Same as element. |
| | **Comments :** | | |
| | **Satisfactory** ☐ | **Unsatisfactory** ☐ | |
| *6 | **Element :** **CRITICAL**<br>Place switches for AOV-1723/1728 to close. | **Conditions :**<br>CUE: Valve indicates closed (green light on) | **Standards :**<br>Locate switches. Simulate closing. |

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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7 **Element :** Notifies Control Room.

**Conditions :** CUE: No further action.

**Standards :**

**Comments :**

**Satisfactory** ☐ **Unsatisfactory** ☐

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**JPM Questions**

**Question**

**Answer**

**References**

| Reference Type | Reference ID | Description | Ref Flag |
|---|---|---|---|