Simulator JPM
S1

Facility: Davis-Besse **Task No:** 004-051-01-0100

Task Title: Boron equalize Purification Demineralizer 3, isolate letdown

K/A Reference: (004) A4.06 3.6/3.1 **Job Performance Measure No**: S1 (NEW)

Examinee: ______________________

NRC Examiner: ______________________ **Date:** ______________

Method of testing:

Simulated Performance ___ Actual Performance _X_

Classroom ___ Simulator _X_ Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Task Standard:

- Line-up to boron equalize Purification Demineralizer 3
- Isolate letdown due to rising letdown pressure

Required Materials:
DB-OP-06001 Section 4.3 starting at step 4.3.11
DB-OP-06006 Section 3.14
DB-OP-02002 Annunciator 2-2-A Letdown Press Hi
DB-OP-02007 Annunciator 7-3-B CLN WST SYSTEM TRBL

General References:
None

Initiating Cue:
The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
Yes

Validation Time:
15 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Line-up to boron equalize Purification Demineralizer 3 then isolate letdown due to high letdown pressure

INITIAL CONDITION:

Mode 1

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Place Purification Demin 2 in service with Purification Demins 1 and 3 unisolated and in standby

Initialize Makeup Tank level at 80 inches and 35 psig. Letdown at 65-70gpm.

Ensure Batch Controller is "stopped" after each JPM reset

MALFUNCTIONS/FAILURE TO INSERT:

None

EXAMINER COPY

INITIAL CONDITIONS:

All plant systems are in a normal alignment

Purification Demineralizer 2 is in service

Purification Demineralizers 1 and 3 are in standby (**NOT** isolated)

The resin in Purification Demineralizer 3 has been replaced

INITIATING CUES:

The Unit Supervisor directs you to;

- Begin equalizing boron in Purification Demineralizer 3 in accordance with section 4.3 of DB-OP-06001, Boron Concentration Control beginning with step 4.3.11

- Stop equalizing PD #3 when Makeup Tank Level is at 65 inches

Makeup Tank level has been raised to 80 inches in preparation for PD #3 Boron Equalization

Chemistry does **NOT** require a sample

All steps have been completed and verified through step 4.3.10

(Provide examinee a copy of Section 4.3 starting with step 4.3.11 of DB-OP-06001 and Section 3.14 of DB-OP-06006)

CANDIDATE COPY

INITIAL CONDITIONS:

All plant systems are in a normal alignment

Purification Demineralizer 2 is in service

Purification Demineralizers 1 and 3 are in standby (**NOT** isolated)

The resin in Purification Demineralizer 3 has been replaced

INITIATING CUES:

The Unit Supervisor directs you to;

- Begin equalizing boron in Purification Demineralizer 3 in accordance with section 4.3 of DB-OP-06001, Boron Concentration Control beginning with step 4.3.11

- Stop equalizing PD #3 when Makeup Tank Level is at 65 inches

Makeup Tank level has been raised to 80 inches in preparation for PD #3 Boron Equalization

Chemistry does **NOT** require a sample

All steps have been completed and verified through step 4.3.10

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT critical unless denoted in the "Comments".

START TIME: ________

1. PERFORMANCE STEP: Divert Letdown to Cleanwaste
........C........

STANDARD: Depress CLN WST on HIS MU11, observe WHITE light goes OFF and AMBER light comes ON

COMMENT: The candidate should monitor letdown pressure as indicated on computer point P719

CUE: **None**

SAT UNSAT

---

2. PERFORMANCE STEP: Switch in-service Purification Demineralizers

STANDARD: Refer to section 3.14 of DB-OP-06006, Makeup Purification System

CUE: **If asked, Purification Demin 3 is NOT manually isolated**

SAT UNSAT

---

3. PERFORMANCE STEP: Place Purification Demineralizer 3 in service
........C........

STANDARD: Depress OPEN on HIS MU1903, observes GREEN light goes OFF and RED light comes ON

CUE: **None**

SAT UNSAT

---

4. PERFORMANCE STEP: Remove Purification Demineralizer 2 from service
........C........

STANDARD: Depress CLOSE on HIS MU10B, observes RED light goes OFF and GREEN light comes ON

CUE: **None**

SAT UNSAT

Alternate Path Starts here.

- **After MU10B is closed, MU 11 will FAIL as is.**
- **Letdown pressure will rise due to the in-service primary demin filter becoming clogged causing annunciator 7-3-B, CLN WST SYSTEM TRBL first. No action is required for 7-3-B.**
- **Then annunciator 2-2-A, Letdown Press Hi to alarm ~ 3 minutes later.**

---

5. PERFORMANCE STEP: Reference Alarm Response Procedure (ARP) for annunciator 7-3-B, CLN WST SYSTEM TRBL

STANDARD: Refers to ARP for annunciator 7-3-B, CLN WST SYSTEM TRBL

NOTE: Candidate may attempt to go back to original line-up. Attempt will fail since MU11 is Failed to the CLN WST position. If it is determined that MU11 is failed, the candidate may close MU2B (JPM Step 9).

CUE: **When ARP 7-3-B is located, then hand candidate a copy of DB-OP-02007 Annunciator 7-3-B, CLN WST SYSTEM TRBL**

If asked, "Continue with Purification Demin #3 Boron Equalization."

SAT UNSAT

---

6. PERFORMANCE STEP: Dispatch an operator to the Radwaste Control Panel to determine the cause of the alarm at Radwaste Alarm Panel 50

STANDARD: Contacts Zone 3 EO to investigate Alarm

CUE: **Role play as EO: Understand go to Radwaste Control Panel to determine cause of CLN WST SYSTEM TRBL.**

SAT UNSAT

---

7. PERFORMANCE STEP: Reference Alarm Response Procedure (ARP) for annunciator 2-2-A Letdown Press Hi

STANDARD: Refers to ARP for annunciator 2-2-A Letdown Press Hi

CUE: **When ARP 2-2-A is located, then hand candidate a copy of DB-OP-02002 Annunciator 2-2-A Letdown Press Hi**

SAT UNSAT

---

8. PERFORMANCE STEP: Verify MU 4, PRESSURE REDUCING VALVE, is closed.

   STANDARD: Verifies GREEN light ON, RED light OFF

   CUE: **None**

SAT UNSAT

9. PERFORMANCE STEP: CLOSE MU 6, LETDOWN FLOW CONTROL VALVE
   ....C........

   STANDARD: Adjust MU6 knob to zero letdown flow by rotating knob counterclockwise

   NOTE: Closing MU2B is also acceptable.

   CUE: **None**

SAT UNSAT

TERMINATING CUES: This JPM is complete (Terminated by the examiner)

Simulator JPM
S2

Facility: Davis-Besse **Task No:** 013-021-04-0100

Task Title: Reset an SFAS Level 2 Actuation with RCS Pressure < 1650 psig

K/A Reference: 013 A4.02 (4.3/4.4) **Job Performance Measure No**: S2 (JPM-164)

Examinee: ____________________

NRC Examiner: ____________________ **Date:** __________

Method of testing:

Simulated Performance ___ Actual Performance _X_

Classroom ___ Simulator _X_ Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Task Standard:
Block SFAS CH 1 RC Pressure Lo Trip and Reset Tripped Output modules in all 4 SFAS Channels

Required Materials:
Signed copy of DB-OP-06405 Section 3.7

General References:
None

Initiating Cue:
The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
No

Validation Time:
15 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Reset an SFAS Level 2 Actuation with RCS Pressure < 1650 psig

INITIAL CONDITION:

Mode 3 with RCS pressure ≈1500 psig

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Trip RC PRESSURE LO TRIP bistable in SFAS Channel 1

BLOCK and STOP both HPI Pumps

BLOCK and OPEN MU 3 and MU 2A

Stabilize PZR Level prior to each JPM such that RCS Pressure is stable or slowly lowering to prevent Auto Reset of SFAS

MALFUNCTIONS/FAILURE TO INSERT:

Deenergize RC2A4, SFAS Channel 2 RCS pressure transmitter: IMF L616T

EXAMINER COPY

INITIAL CONDITIONS:

A plant shutdown and cooldown were in progress to repair SFAS Channel 2 RCS pressure transmitter

SFAS Channel 2 RCS pressure transmitter has been deenergized

During the cooldown, SFAS Channel 1 tripped on low RCS Pressure prior to being Blocked, causing an actuation of SFAS Levels 1 and 2

INITIATING CUES:

The Unit Supervisor directs you to reset SFAS Channel 1 in accordance with Section 3.7 of DB-OP-06405, SFAS Procedure

(Provide the examinee a copy of Section 3.7 of DB-OP-06405)

CANDIDATE COPY

INITIAL CONDITIONS:

A plant shutdown and cooldown were in progress to repair SFAS Channel 2 RCS pressure transmitter

SFAS Channel 2 RCS pressure transmitter has been deenergized

During the cooldown, SFAS Channel 1 tripped on low RCS Pressure prior to being Blocked, causing an actuation of SFAS Levels 1 and 2

INITIATING CUES:

The Unit Supervisor directs you to reset SFAS Channel 1 in accordance with Section 3.7 of DB-OP-06405, SFAS Procedure

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT assumed unless denoted in the "Comments".

START TIME: ________

1. PERFORMANCE STEP: Obtain the door keys for all four SFAS channels

   STANDARD: SFAS cabinet keys obtained

   NOTE: It is desired NOT to sign the Key Log to help maintain exam security

   CUE: **If necessary, DO NOT SIGN KEY LOG for this JPM**

   ____
   SAT UNSAT

2. PERFORMANCE STEP: Verify power to SFAS channels to be reset

   STANDARD: Visual check of red power lights lit at top of SFAS Channel 1 cabinet

   CUE: **None**

   ____
   SAT UNSAT

3. PERFORMANCE STEP: Check the shutdown bypass power available green LEDs on SFAS Channel 1 cabinet are lit

   STANDARD: Visual check of green LED on each S/D bypass section

   CUE: **None**

   ____
   SAT UNSAT

4. PERFORMANCE STEP: Block the SFAS Channel 1 RC low pressure trip
   ....C........

   STANDARD: Verify RCS pressure is less than 1650 psig
   Depress the BLOCK pushbutton on the RC PRESSURE LO BLOCK bistable in SFAS Channel 1

   CUE: **None**

   ____
   SAT UNSAT

5. PERFORMANCE STEP: Reset the tripped output modules in all SFAS channels
........C........

STANDARD: Depress the RESET pushbutton on all tripped output modules in SFAS channel 1

CUE: **None**

SAT UNSAT

6. PERFORMANCE STEP: Reset the tripped output modules in all SFAS channels
........C........

STANDARD: Depress the RESET pushbutton on all tripped output modules in SFAS channel 2

CUE: **None**

SAT UNSAT

7. PERFORMANCE STEP: Reset the tripped output modules in all SFAS channels
........C........

STANDARD: Depress the RESET pushbutton on all tripped output modules in SFAS channel 3

CUE: **None**

SAT UNSAT

8. PERFORMANCE STEP: Reset the tripped output modules in all SFAS channels
........C........

STANDARD: Depress the RESET pushbutton on all tripped output modules in SFAS channel 4

CUE: **None**

SAT UNSAT

9. PERFORMANCE STEP: Verify status of 1/5 lights in each SFAS Channel

STANDARD: Visual check of Output Module 1/5 lights

COMMENT: 1/5 lights will be ON due to SFAS Channel 2 being tripped

CUE: **None**

____
SAT UNSAT

10. PERFORMANCE STEP: Verify SFAS cabinet doors closed and locked

STANDARD: Doors CLOSED and LOCKED

CUE: **None**

____
SAT UNSAT

11. PERFORMANCE STEP: Return the SFAS door keys

STANDARD: Door keys returned to key cabinet

CUE: **None**

____
SAT UNSAT

TERMINATING CUES: This JPM is complete (Terminated by the evaluator)

____
END TIME

Simulator JPM
S3

Facility: Davis-Besse **Task No:** 076-003-04-0100

Task Title: Perform Attachment 15 of DB-OP-02511, Loss of Service Water

K/A Reference: 076 A2.01 (3.5/3.7) **Job Performance Measure No**: S3 (JPM-083)

Examinee: ______________________

NRC Examiner: ______________________ **Date:** ____________

Method of testing:

Simulated Performance ___ Actual Performance X

Classroom ___ Simulator X Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Task Standard:
Isolate TPCW SW Header, start Emergency Instrument Air Compressor (EIAC) and Lockout Station Air Compressors (SAC) 1 and 2

Required Materials:
DB-OP-02511 Attachment 15

General References:
None

Initiating Cue:
The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
No

Validation Time:
10 min

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:
Service Water Non-Seismic Line Rupture

INITIAL CONDITION:
Mode 3 with the Reactor and Turbine tripped
MDFP in-service
Service Water Pumps 1 & 2 in-service
Service Water Train 2 on Primary

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:
Verify SW 1399 open and SW 1395 closed
Run Schedule for each JPM

MALFUNCTIONS/FAILURE TO INSERT:
Fail Service Water Side 1 pressure (PT2808) – KEP8E
Fail CT 2955 closed – KEP8E

EXAMINER COPY

INITIAL CONDITIONS:

The plant is in Mode 3

The Motor Driven Feed Pump is on

Service Water Pumps 1 and 2 are in service with Loop 2 providing primary loads

INITIATING CUES:

The following alarm has just been received:

- Computer alarm P945, SW HDR 1 PRESS (LOW)

An equipment operator reports a SW pipe rupture at the Turbine Plant Cooling Water Heat Exchangers

The Unit Supervisor directs you to perform Attachment 15 of DB-OP-02511, Loss of Service Water Pumps/System

(Provide the trainee a copy of Attachment 15 of DB-OP-02511)

CANDIDATE COPY

INITIAL CONDITIONS:

The plant is in Mode 3

The Motor Driven Feed Pump is on

Service Water Pumps 1 and 2 are in service with Loop 2 providing primary loads

INITIATING CUES:

The following alarm has just been received:

- Computer alarm P945, SW HDR 1 PRESS (LOW)

An equipment operator reports a SW pipe rupture at the Turbine Plant Cooling Water Heat Exchangers

The Unit Supervisor directs you to perform Attachment 15 of DB-OP-02511, Loss of Service Water Pumps/System

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT assumed unless denoted in the "Comments".

START TIME: _______

1. PERFORMANCE STEP: Verify SW 1399 is closed
........C........

STANDARD: Push CLOSE pushbutton on HIS 1399, SW Header 1 to TPCW Hx, observes RED light goes OFF and GREEN light comes ON

CUE: **None**

SAT UNSAT

2. PERFORMANCE STEP: Verify SW 1395 is closed

STANDARD: Check SW 1395 CLOSED using HIS 1395, SW Header 2 to TPCW Hx, observes GREEN light ON

CUE: **None**

SAT UNSAT

3. PERFORMANCE STEP: Verify CT 2955, is closed

STANDARD: Check CT 2955 CLOSED using HIS 2955, TPCW Hx Supply From Circ Water, observes GREEN light ON

CUE: **None**

SAT UNSAT

4. PERFORMANCE STEP: Verify SW 78, Service Water Header from TPCW Heat Exchanger Isolation, is closed

STANDARD: Direct an Equipment Operator to verify SW 78 is closed

CUE: **EO reports, “SW78 has been Closed.”**

SAT UNSAT

5. PERFORMANCE STEP: Place the EIAC in service
........C........

NOTE: EIAC has a 10 second start delay

STANDARD: Rotate EIAC handswitch HIS 813 to ON, observe GREEN light goes OFF and RED light comes ON

CUE: **(If asked) A temporary diesel air compressor is NOT available**

If necessary, acknowledge Emergency Instrument Air Compressor did not start.

____
SAT UNSAT

---

6. PERFORMANCE STEP: Stop and Lockout Station Air Compressor 2
........C........

STANDARD: Place the control switch HIS 1494 for SAC 2 in LOCKOUT, observe RED light goes OFF, GREEN and AMBER (lockout) lights come ON

CUE: **None**

____
SAT UNSAT

---

7. PERFORMANCE STEP: Lockout Station Air Compressor 1
........C........

STANDARD: Place the control switch HIS 812 for SAC 1 in LOCKOUT, observe RED light is OFF, GREEN light is ON, and AMBER (lockout) light comes ON

CUE: **None**

____
SAT UNSAT

TERMINATING CUES: This JPM is complete. (Terminated by the evaluator)

____
END TIME

Simulator JPM
S4

Facility: Davis-Besse **Task No:** 005-012-04-0100

Task Title: Start Decay Heat Removal Pump 1 following a loss of DHR

K/A Reference: (005) A2.04 2.9/2.9 **Job Performance Measure No**: S4 (JPM288)

Examinee: ______________________

NRC Examiner: ______________________ **Date:** ____________

Method of testing:

Simulated Performance ___ Actual Performance _X_

Classroom ___ Simulator _X_ Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Task Standard:
Place Decay Heat Pump 1 in service
Throttle DH1B, in response to high flow, due to DH14B, DH Cooler 1 Outlet valve failing open

Required Materials:
DB-OP-02527, Attachment 1
DB-OP-02003, 3-2-H

General References:
None

Initiating Cue:
The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
Yes

Validation Time:
20 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Place Decay Heat Pump 1 in service
Throttle DH1B, in response to high flow, due to DH14B, DH Cooler 1 Outlet valve failing open

INITIAL CONDITION:

Mode 5

DH Loop 1 in STBY DH Mode per DB-OP-06012, DH and LPI Operating Procedure, Section 3.5

DH Pump 2 was in service per DB-OP-06012, DH and LPI Operating Procedure, Section 3.8 (DH Loop 2 STBY DH Mode Section 3.6 completed prior to placing in service)

Decay Heat Pump 2 tripped

DH11 and DH12 open with control power removed

CC1467 closed

CCW non-essential header is being supplied from CCW Loop 1

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Isolate CCW loads or throttle CC172, DH Cooler Outlet as required to maintain Loop 1 CCW flow less than 7800 gpm when CC1467 is opened per ATT 1 Step 6.3

Ensure Annunciator 3-2-H LP INJ 1 FLOW HI will come in when DH14B fails open,
it has a variable setpoint (3750 gpm per DB-OP-06904)

Hang information tags indicating open on DH1517 and DH1518

MALFUNCTIONS/FAILURE TO INSERT:

When DH Pump 1 is started, DH Cooler 1 outlet valve, DH14B, will fail open

REQUIRED MATERIALS:

DB-OP-02527, Attachment 1
DB-OP-02003, 3-2-H

EXAMINER COPY

INITIAL CONDITIONS:

Mode 5

Decay Heat Pump 2 breaker AD112 tripped due to a 50/51 Instantaneous Overcurrent

INITIATING CUES:

The Command SRO directs you to perform Attachment 1, Starting Decay Heat Pump 1 of DB-OP-02527, Loss of Decay Heat Removal

There were NO signs of cavitation on either DH Pump

(Provide examinee a copy of DB-OP-02527 Attachment 1)

CANDIDATE COPY

INITIAL CONDITIONS:

Mode 5

Decay Heat Pump 2 breaker AD112 tripped due to a 50/51 Instantaneous Overcurrent

INITIATING CUES:

The Command SRO directs you to perform Attachment 1, Starting Decay Heat Pump 1 of DB-OP-02527, Loss of Decay Heat Removal

There were NO signs of cavitation on either DH Pump

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT critical unless denoted in the "Comments".

START TIME: ________

1. PERFORMANCE STEP: Verify closed DH14B, DH CLR 1 OUTLET

   STANDARD: Press AUTO for DH14B using HIS DH14B. Rotate knob to Close DH14B using HIC DH14B. Observe GREEN light ON, RED light OFF

   COMMENT: DH14B will already be closed per standby lineup

   CUE: **If asked, Instrument Air is in a normal lineup**

   SAT UNSAT

2. PERFORMANCE STEP: Verify closed DH13B DH CLR 1 BYPASS

   STANDARD: Press AUTO for DH13B using HIS DH13B. Rotate knob to Close DH13B using HIC DH13B. Observe GREEN light ON, RED light OFF

   COMMENT: DH13B will already be closed per standby lineup

   CUE: **None**

   SAT UNSAT

NOTE: Decision step here to vent pump based on cavitation. The initial cue states no evidence of cavitation on either pump, so venting is NOT required. The Candidate should GOTO Step 6.0.

3. PERFORMANCE STEP: Verify DH1517 is open

   STANDARD: Verify DH1517 DH PUMP 1 SUCTION, is open using HIS 1517 per Operations Information Tag providing valve position

   CUE: **None**

   SAT UNSAT

4. PERFORMANCE STEP: Verify DH Drop Line valves are open using HIS DH11 and HIS DH12

STANDARD: Verify DH Drop Line valves are open using HIS DH11 and HIS DH12

CUE: **None**

SAT UNSAT

---

5. PERFORMANCE STEP: Verify Decay Heat Train 1 CCW/SW cooling is available
........C........

STANDARD: Observes CCW Pump 1 in service. Amps indicated. RED light ON
Open CC1467 using HIS1467. RED light ON, GREEN light OFF
Observes SWP 1 in service. Amps indicated. RED light ON

COMMENT: Opening CC1467 is the only Critical portion of this step

CUE: **If asked, CC172 has been throttled to maintain CCW flow <7800 gpm**

If asked, DH Pump 1 will NOT be placed on DH/LPI Injection line 2

SAT UNSAT

---

6. PERFORMANCE STEP: Verify DH1B is open

STANDARD: Observes HIS DH1B RED light ON, GREEN light OFF

CUE: **None**

SAT UNSAT

Alternate Path Starts here. When Decay Heat Pump 1 is started, DH14B will fail open. Annunciator 3-2-H LP INJ 1 FLOW HI will alarm. Alarm procedure DB-OP-02003 will be referred to and will direct throttling of DH1B to 3000 gpm.

---

7. PERFORMANCE STEP: Start Decay Heat Pump 1
........C........

STANDARD: Rotate HIS DH6B to start. Observe Decay Heat Pump 1 amps increase.
Observe RED light ON, GREEN light OFF. Release HIS DH6B.

CUE: **If alarm procedure DB-OP-02003 is referred to provide guidance for annunciator 3-2-H**

SAT UNSAT

---

8. PERFORMANCE STEP: Respond to Annunciator 3-2-H, LP INJ 1 FLOW HI

STANDARD: Refer to DB-OP-02003, Annunciator 3-2-H LP INJ 1 FLOW HI
Recognize DH14B has failed open

COMMENT: Annunciator 3-1-H LP INJ 1 FLOW LO should have been expected.

CUE: **When found, hand candidate a copy of DB-OP-02003, Annunciator 3-2-H LP INJ 1 FLOW HI**

If asked, EO reports DH14B can NOT be operated manually, indicates full open locally

____
SAT UNSAT

---

9. PERFORMANCE STEP: Throttle flow with DH1B
........C........

STANDARD: Press HISDH1B-2 ON to turn on DH1B control power.

Press close to throttle DH1B using HIS DH1B to obtain 3000 GPM or less

(DB-PF-06703 curves CC6.2 and CC6.4 not applicable)
(Not required to <u>REFER TO</u> DB-OP-06912 for JPM)

CUE: **None**

____
SAT UNSAT

TERMINATING CUES: This JPM is complete (Terminated by the examiner)

____
END TIME

Simulator JPM
S5

Facility: Davis-Besse **Task No:** 000-058-05-0100

Task Title: Manually start Containment Spray pumps 1 and 2

K/A Reference: 026 A2.03 4.1/4.4 **Job Performance Measure No:** S5 (JPM-289)

Examinee: ______________________________

Examiner: ______________________________ **Date:** ________________

Method of testing:

Simulated Performance ___ Actual Performance X

Classroom ___ Simulator X Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues.

Task Standard:
Start both Containment Spray Pumps and open their respective discharge valves
Stop CTMT Spray pump 2 and close it's discharge valve when leak develops

Required Materials:
DB-OP-06013 Section 5.2 and 5.3
DB-OP-02003 for alarm 3-4-J

General References:
None

Initiating Cue:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Time Critical Task:
No

Alternate Path:
Yes

Validation Time:
15 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Start both Containment Spray Pumps
Stop CTMT Spray pump 2 and close its discharge valve when leak develops

INITIAL CONDITION:

A LOCA has occurred. Containment pressure has exceeded the SFAS Level 4 setpoint and containment spray pumps have not started.

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Insert malfunction that inhibits start of both containment spray pumps and opening of CS discharge valves. Both containment spray pump discharge valves, (CS1530 and CS1531) are closed.

MALFUNCTIONS/FAILURE TO INSERT:

Insert pipe rupture in Train 2 Containment Spray Header when Containment Spray Pump 2 is started

REQUIRED MATERIALS:

DB-OP-06013 Section 5.2 and 5.3
DB-OP-02003 for alarm 3-4-J

EXAMINER COPY

INITIAL CONDITIONS:

A LOCA has occurred. Containment pressure has exceeded the SFAS Level 4 setpoint and the containment spray pumps have not started

INITIATING CUES:

The Unit Supervisor has directed you to manually start Containment Spray pumps 1 and 2 and spray containment in accordance with DB-OP-06013, Section 5.2 and 5.3

(Provide examinee a copy of DB-OP-06013, Section 5.2 and 5.3)

CANDIDATE COPY

INITIAL CONDITIONS:

A LOCA has occurred. Containment pressure has exceeded the SFAS Level 4 setpoint and the containment spray pumps have not started

INITIATING CUES:

The Unit Supervisor has directed you to manually start Containment Spray pumps 1 and 2 and spray containment in accordance with DB-OP-06013, Section 5.2 and 5.3

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT critical unless denoted in the "Comments".

START TIME: _______

Note 1: Unrelated secondary plant annunciators should be cued, “The BOP Reactor Operator will respond to secondary plant annunciators.”

Note 2: Spray pumps can be started in either sequence.
If CTMT Spray Pump 2 is selected to be started first, go to step 5.

---

1. PERFORMANCE STEP: Verify DH7B, BWST ISOLATION VALVE, is OPEN

   STANDARD: Observes DH7B RED light ON, GREEN light OFF

   CUE: **None**

   SAT UNSAT

---

2. PERFORMANCE STEP: OPEN CS1530, CTMT SPRAY DISCH
   ....C........

   STANDARD: Presses OPEN on HIS 1530. Observes RED light ON, GREEN light OFF

   CUE: **None**

   SAT UNSAT

---

3. PERFORMANCE STEP: Start CTMT SPRAY PUMP 1
   ....C........

   STANDARD: Rotates HIS 1533 to Start and releases. Observes amp increase, RED light ON and GREEN light OFF.

   CUE: **None**

   SAT UNSAT

---

4. PERFORMANCE STEP: Verify flow indicated on FI1547, CS PUMP 1 DISCH FLOW

STANDARD: Observe flow indication between 1100 GPM and 1900 GPM. Acknowledge Alarms 3-1-J, CS PMP 1 DISCH FLOW LO, and/or 3-3-J CS PMP 1 DISCH FLOW HI, as applicable. Observe alarm annunciators extinguish.

CUE: **None**

SAT UNSAT

Note: If CTMT Spray Pump 2 was started first. JPM is complete

---

5. PERFORMANCE STEP: Verify DH7A, BWST ISOLATION VALVE, is OPEN

STANDARD: At SFAS panel verifies that DH7A GREEN light OFF and RED light ON

CUE: **None**

SAT UNSAT

---

6. PERFORMANCE STEP: OPEN CS1531, CTMT SPRAY DISCH
........C........

STANDARD: Presses OPEN on HIS 1531. Observes RED light ON, GREEN light OFF

CUE: **None**

SAT UNSAT

Alternate Path Starts here. When the CTMT Spray Pump 2 is started a leak will develop in Train 2 CTMT Spray Header. Alarm 3-4-J will sound and Alarm Panel 3 Procedure DB-OP-02003 will direct stopping CTMT Spray Pump 2 and closing CS1531.

---

7. PERFORMANCE STEP: Start CTMT SPRAY PUMP 2
........C........

STANDARD: Rotates HIS 1532 to Start and releases. Observes amp increase, RED light ON and GREEN light OFF

CUE: **None**

SAT UNSAT

---

8. PERFORMANCE STEP: Verify flow indicated on FI 1535, CS PUMP 2 DISCH FLOW

STANDARD: Observe flow above 1900 GPM. Acknowledge Alarms 3-2-J, CS PMP 2 DISCH FLOW LO, and 3-4-J CS PMP 2 DISCH FLOW HI. Observe alarm 3-2-J extinguishes and 3-4-J CS PMP 2 DISCH FLOW HI remains in alarm (light ON).

CUE: **None**

SAT UNSAT

9. PERFORMANCE STEP: Respond to Alarm 3-4-J, CS PMP 2 DISCH FLOW HI

STANDARD: Locate Alarm Panel 3 Procedure DB-OP-02003 for alarm 3-4-J

CUE: **Provide examinee a copy of Alarm Panel 3 Procedure DB-OP-02003 for alarm 3-4-J**

SAT UNSAT

10. PERFORMANCE STEP: Check for flow rate high at FI 1535 located on Panel C5716

STANDARD: Observe flow above 1900 GPM alarm setpoint

CUE: **None**

SAT UNSAT

11. PERFORMANCE STEP: Check the Containment Spray Header 2 outside Containment for a piping break or leak

STANDARD: Contact Equipment Operator to look for leaks

CUE: **Equipment Operator reports, "Water is spraying from the CTMT Spray line just upstream of CS 1531, CTMT Spray Discharge Valve."**

(If asked) The SM directs, "continue with step 3.3."

SAT UNSAT

12. PERFORMANCE STEP: Stop CTMT Spray Pump 2
........C........

STANDARD: Turn HIS 1532 to Stop and release. Observe amps decrease with GREEN light ON and RED light OFF

COMMENT: May press block push button but SFAS is failed for this pump

CUE: **None**

SAT UNSAT

13. PERFORMANCE STEP: Close CS 1531, CTMT Spray Discharge Valve
........C........

STANDARD: Press Close on HIS 1531. Observe GREEN light ON and RED light OFF

COMMENT: May press block push button but SFAS is failed for this pump

CUE: **None**

SAT UNSAT

NOTE: If CTMT Spray Pump 2 was started first, return to step 1 for placing CTMT Spray Pump 1 in service.

Cue (If required, another SRO will verify leak has been isolated and refer to Tech Specs)

TERMINATING CUES: This JPM is complete (Terminated by the examiner)

END TIME

Simulator JPM
S6

Facility: Davis-Besse **Task No:** 062-005-01-0100

Task Title: Transfer Essential 4160 Kv Bus C1 to Alternate and respond to Annunciator 1-2-H, XFMR BD DNGR/TRBL

K/A Reference: (062) A4.01 3.3/3.1 **Job Performance Measure No**: S6 (NEW)

Examinee: ______________________________

NRC Examiner: ______________________________ **Date:** ______________

Method of testing:

Simulated Performance ___ Actual Performance _X_

Classroom ___ Simulator _X_ Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues.

Task Standard:
Transfer Bus C1 to Alternate, respond to Annunciator 1-2-H, XFMR BD DNGR/TRBL and unload BD Transformer

Required Materials:
DB-OP-06315 Sections 3.27 with prerequisites completed
DB-OP-02001 Annunciator 1-2-H
DB-OP-02104 Annunciator 104-2-C
DB-OP-06315 Sections 3.28
DB-OP-06315 Sections 3.29

General References:
None

Initiating Cue: The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
Yes

Validation Time:
12 Minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Transfer Bus C1 to Alternate and respond to Annunciator 1-2-H, XFMR BD DNGR/TRBL

INITIAL CONDITION:

Mode 1

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Open the schedule file prior to each JPM

MALFUNCTIONS/FAILURE TO INSERT:

Temp Alarm 30 seconds after AC110 is open

EXAMINER COPY

INITIAL CONDITIONS:

The Plant is in Mode 1

All systems are in a normal lineup

INITIATING CUES:

The Unit Supervisor directs you to perform a live transfer of Bus C1 ONLY from the normal to the alternate power supply, using Section 3.27 of DB-OP-06315, 4160 V Switching Procedure.

All prerequisites have been completed

(Provide examinee Section 3.27 of DB-OP-06315, 4160 V Switching Procedure with prerequisites completed)

CANDIDATE COPY

INITIAL CONDITIONS:

The Plant is in Mode 1

All systems are in a normal lineup

INITIATING CUES:

The Unit Supervisor directs you to perform a live transfer of Bus C1 ONLY from the normal to the alternate power supply, using Section 3.27 of DB-OP-06315, 4160 V Switching Procedure.

All prerequisites have been completed

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT critical unless denoted in the "Comments".

START TIME: ________

1. PERFORMANCE STEP: Notifies Shift Manager to refer to Tech Specs

   STANDARD: Notifies Shift Manager to refer to Tech Specs

   CUE: **The Shift Manager is referring to Tech Specs**

   SAT UNSAT

2. PERFORMANCE STEP: Close ABDC1, BUS TIE XFMR BD and hold
   ....C........

   STANDARD: Positions HIS 6220, ABDC1 to CLOSE and holds in the close position. Observes breaker ABDC1 RED light ON, GREEN light OFF

   CUE: **None**

   SAT UNSAT

3. PERFORMANCE STEP: Open AC110, BUS TIE FROM C2 BUS
   ....C........

   STANDARD: Positions HIS 6223, AC 110 to Trip and releases. Observes GREEN light ON, RED light OFF

   CUE: **None**

   SAT UNSAT

4. PERFORMANCE STEP: Release HIS 6220, ABDC1

   STANDARD: Release HIS 6220

   CUE: **None**

   SAT UNSAT

Alternate Path Starts here, 30 seconds after AC110 is open, Annunciator 1-2-H, XFMR BD DNGR/TRBL will alarm due to a High winding temperature at Transformer BD

5. PERFORMANCE STEP: Reference Alarm Response Procedure (ARP) for Annunciator 1-2-H, XFMR BD DNGR/TRBL

   STANDARD: Refers to ARP for Annunciator 1-2-H, XFMR BD DNGR/TRBL

   CUE: **When DB-OP-02001 is located, then hand candidate a copy of DB-OP-02001 Annunciator 1-2-H, XFMR BD DNGR/TRBL**

   SAT UNSAT

6. PERFORMANCE STEP: Send an Operator to Transformer BD to check the alarm and determine the cause.

   STANDARD: Dispatches an Operator to Transformer BD to determine the cause

   COMMENT: Alarm 104-2-C Caution 3.5 “Do not operate Transformer BD at any time with a winding temperature above 140°C”

   CUE: **TRANSFORMER BD ALARM 104-2-C, WINDING TEMP DANGER is in alarm**
   The winding temperature is at 140°C and slowly rising
   All the transformer fans are running

   SAT UNSAT

7. PERFORMANCE STEP: Perform the applicable section of DB-OP-02104, Transformer BD Alarm Panel 104 Annunciators, to correct the problem.

   STANDARD: Refers to DB-OP-02104, Transformer BD Alarm Panel 104 Annunciators

   CUE: **When DB-OP-02104 is located, then hand candidate a copy of DB-OP-02104 Annunciator 104-2-C, WINDING TEMP DANGER**

   SAT UNSAT

8. PERFORMANCE STEP: <u>REFER TO</u> DB-OP-06315,4160 Volt Switching Procedure to transfer loads to transformer AC

   STANDARD: Refers to DB-OP-06315, 4160 Volt Switching Procedure

   CUE: **When DB-OP-06315, 4160 Volt Switching Procedure is located, then hand candidate a copy of DB-OP-06315, 4160 Volt Switching Procedure sections 3.28 and 3.29**

   NOTE: Sections 3.28 and 3.29 can be done in any order

   SAT UNSAT

9. PERFORMANCE STEP: Transfer C1 to Normal (C2). Verify Bus C2 is energized

STANDARD: Checks breaker alignment and proper voltage

CUE: **If necessary, Role play as the SM, "Pre-evolution brief and Technical Specification evaluation can be signed as complete based on initial briefing.**

SAT UNSAT

10. PERFORMANCE STEP: Close AC110, Bus Tie from C2 Bus
........C........

STANDARD: Positions HIS 6223, AC110 to CLOSE. Observes breaker AC110 RED light ON, GREEN light OFF

CUE: **None**

SAT UNSAT

11. PERFORMANCE STEP: Trip ABDC1, Bus Tie XFMR BD
........C........

STANDARD: Positions HIS 6220, ABDC1 to Trip. Observes breaker Observes GREEN light ON, RED light OFF

CUE: **If asked, winding temperature is still slowly rising**

SAT UNSAT

12. PERFORMANCE STEP: Transfer D1 and D2 to Alternate (AC XFMR). Verify BD XFMR is energized

STANDARD: Checks breaker alignment and proper voltage

CUE: **None**

SAT UNSAT

13. PERFORMANCE STEP: Verify AD110, TIE BREAKER TO BUS D2, is closed

STANDARD: Observes breaker AD110 RED light ON, GREEN light OFF

CUE: **None**

SAT UNSAT

14. PERFORMANCE STEP: Close AACD1, BUS TIE XFMR AC, using HIS 6230, AACD1
........C........

STANDARD: Positions HIS 6230, AACD1 to CLOSE. Observes breaker AACD1 RED light ON, GREEN light OFF

CUE: **None**

SAT UNSAT

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15. PERFORMANCE STEP: Verify ABDD2, BUS TIE TRANSFORMER BD NORMAL, is tripped using HIS 6228, ABDD2
........C........

NOTE: **This step is critical only if ABDD2 is tripped opened using HIS 6228 (if auto trip does not occur)**

STANDARD: Observes breaker ABDD2 RED light OFF, GREEN light ON. If required, use HIS 6228, ABDD2 to trip ABDD2, BUS TIE TRANSFORMER BD NORMAL

CUE: **None**

SAT UNSAT

TERMINATING CUES: This JPM is complete (Terminated by the examiner)

END TIME

Simulator JPM
S7

Facility: Davis-Besse **Task No:** 087-005-01-0100

Task Title: Placing ARTS in MFP Bypass and resetting all four ARTS channels

K/A Reference (012) A4.03 3.6/3.6 **Job Performance Measure No**: S7 (JPM-234)

Examinee: ______________________________

NRC Examiner: ______________________________ **Date:** ______________

Method of testing:

Simulated Performance ___ Actual Performance X

Classroom ___ Simulator X Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Task Standard:
Place ARTS in MFP Bypass and reset all four ARTS channels

Required Materials:
DB-OP-06404, section 4.1

General References:
None

Initiating Cue:
The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
No

Validation Time:
15 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Place ARTS in MFP Bypass and reset all four ARTS channels

INITIAL CONDITION:

Establish stable post-trip conditions with all four ARTS channels tripped and the MDFP supplying main feed water

Verify all steps through Step 5.5 of DB-OP-06910, Trip Recovery have been completed

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Maintain RCS Pressure and control PZR Level during JPM

MALFUNCTIONS/FAILURE TO INSERT:

None.

ACTION/CUES:

None.

EXAMINER COPY

INITIAL CONDITIONS:

The plant was at 100% power

An automatic reactor trip occurred

INITIATING CUES:

The operating crew is at Step 5.5, DB-OP-06910, Trip Recovery

You are a spare operator. The Unit Supervisor directs you to place ARTS in MFP Bypass and reset all four ARTS channels in accordance with DB-OP-06404, section 4.1

All prerequisite steps are complete

(Provide the examinee a copy of section 4.1 of DB-OP-06404 with prerequisites complete)

CANDIDATE COPY

INITIAL CONDITIONS:

The plant was at 100% power

An automatic reactor trip occurred

INITIATING CUES:

The operating crew is at Step 5.5, DB-OP-06910, Trip Recovery

You are a spare operator. The Unit Supervisor directs you to place ARTS in MFP Bypass and reset all four ARTS channels in accordance with DB-OP-06404, section 4.1

All prerequisite steps are complete

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT required unless denoted in the "Comments".

START TIME: ________

1. PERFORMANCE STEP: Inform Control Room Operator which ARTS Channel(s) are to be reset, AND the ARTS cabinet doors will be opened

STANDARD: Communicates with the Reactor Operator

CUE: **Acknowledge communication**

SAT UNSAT

2. PERFORMANCE STEP: Open the ARTS cabinet door
........C........

STANDARD: Opens all four doors or one door at a time depending on how he/she chooses to complete the task

CUE: **None**

SAT UNSAT

3. PERFORMANCE STEP: Verify the MAIN FEED PUMP OPERATE/TRIP Switches are in the TRIP position
........C........

STANDARD: Places each MAIN FEED PUMP OPERATE/TRIP Switch in the TRIP position

- CH No. 1 _____
- CH No. 2 _____
- CH No. 3 _____
- CH No. 4 _____

CUE: **None**

SAT UNSAT

4. PERFORMANCE STEP: Verify the MFP NORMAL/BYPASS Switch in the BYPASS position
........C........

STANDARD: Places each MFP NORMAL/BYPASS Switch in the BYPASS position

- CH No. 1 _____
- CH No. 2 _____
- CH No. 3 _____
- CH No. 4 _____

CUE: **None**

____
SAT UNSAT

5. PERFORMANCE STEP: Verify the 1/5 lights

STANDARD: Verifies all 1/5 lights OFF EXCEPT for the MFP on each channel

CUE: **None**

____
SAT UNSAT

6. PERFORMANCE STEP: Reset all ARTS channels
........C........

STANDARD: Depresses RESET pushbutton on each channel AND verify the Trip light goes off

- CH No. 1 _____
- CH No. 2 _____
- CH No. 3 _____
- CH No. 4 _____

CUE: **None**

____
SAT UNSAT

7. PERFORMANCE STEP: Close and lock the ARTS Cabinet doors

STANDARD: Closes and locks each cabinet

CUE: **None**

____
SAT UNSAT

TERMINATING CUES: This JPM is complete. (Terminated by the Evaluator)

END TIME __________

Simulator JPM
S8

Facility: Davis-Besse **Task No:** 008-004-01-0100

Task Title: Transfer Non-Essential CCW Isolation Valves from Line 1 to Line 2

K/A Reference (008) A4.01 3.3/3.1 **Job Performance Measure No**: S8 (JPM184)

Examinee: ______________________

NRC Examiner: ______________________ **Date:** ______________

Method of testing:

Simulated Performance ___ Actual Performance X

Classroom ___ Simulator X Plant ___

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
The plant conditions are specified in the Initial Conditions and Initiating Cues

Task Standard:
Transfer Non-Essential CCW Isolation Valves from Line 1 to Line 2

Required Materials:
DB-OP-06262 Section 3.16 and L&P 2.2.11

General References:
None

Initiating Cue:
The Initiating Cues are specified in the Examiner/Student Copy Performance Measure pages.

Time Critical Task:
No

Alternate Path:
No

Validation Time:
15 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Transfer Non-Essential CCW Isolation Valves from Line 1 to Line 2

INITIAL CONDITION:

100% Power
CCW Surge Tank 51 to 53 inches

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

CCW pump 1 running.
CCW pump 2 running.
CCW Loop 1 supplying non-essential loads
Open CC 1469, CCW from DH Cooler 2

MALFUNCTIONS/FAILURE TO INSERT:

None

ACTION/CUES:

As written in body of JPM

EXAMINER COPY

INITIAL CONDITIONS:

CCW Pump 1 is being shutdown for preventative maintenance.

CCW Pump 1 and CCW Pump 2 are running.

INITIATING CUES:

The Unit Supervisor directs you to transfer Non-Essential CCW Isolation Valves from Line 1 to Line 2 in accordance with section 3.16 of DB-OP-06262.

The Shift Manager has determined that thermal cycling of RCP seals is **NOT** a concern.

(Provide candidate with a copy of DB-OP-06262 Section 3.16)

CANDIDATE COPY

INITIAL CONDITIONS:

CCW Pump 1 is being shutdown for preventative maintenance.

CCW Pump 1 and CCW Pump 2 are running.

INITIATING CUES:

The Unit Supervisor directs you to transfer Non-Essential CCW Isolation Valves from Line 1 to Line 2 in accordance with section 3.16 of DB-OP-06262.

The Shift Manager has determined that thermal cycling of RCP seals is **NOT** a concern.

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is NOT required unless denoted in the "Comments".

START TIME: ________

1. PERFORMANCE STEP: N/A step to warmup oncoming loop due to concern for RCP seals thermal cycling

STANDARD: Mark step N/A. Oncoming loop is in operation and already warmed up

CUE: **If necessary, "The SM has determined thermal cycling of RCP seals is NOT a concern." (Initiating Cue)**

SAT UNSAT

2. PERFORMANCE STEP: Open CC2649, CCW from Aux Building to Line 2 Isolation.
........C........

STANDARD: Depress OPEN on HIS2649, observe GREEN light goes OFF and RED light comes ON

NOTE: Steps 2 and 3 can be performed in any order. (Bulleted procedure steps)

CUE: **None**

SAT UNSAT

3. PERFORMANCE STEP: Open CC5098, CCW Line 2 Return Isolation.
........C........

STANDARD: Depress OPEN on HIS5098, observe GREEN light goes OFF and RED light comes ON

CUE: **None**

SAT UNSAT

4. PERFORMANCE STEP: When CC2649 and CC5098 are open then Open CC 5096, CCW Line 2 Discharge Isolation.
........C........

STANDARD: Observe CC2649 and CC5098 RED lights ON then Depress OPEN on HIS5096 observe GREEN light goes OFF and RED light comes ON

CUE: **None**

SAT UNSAT

5. PERFORMANCE STEP: Close CC1469, CCW from DH Cooler 2 Outlet valve
........C........

STANDARD: Depress CLOSE on HIS1469, observe RED light goes OFF and GREEN light comes ON

CUE: **None**

SAT UNSAT

6. PERFORMANCE STEP: When CC5096 is Open then Close CC5095, CCW Line 1 Discharge Isolation
........C........

STANDARD: Observe CC5096 RED light ON then Depress close pushbutton on CC5095, observe RED light goes OFF and GREEN light comes ON

NOTE: Annunciator 11-4-B, CCW PMP 1 FLOW LO is an expected alarm

CUE: **If necessary, "Annunciator 11-4-B, CCW PMP 1 FLOW LO is an expected alarm, another operator will verify Annunciator 11-4-B is expected."**

SAT UNSAT

7. PERFORMANCE STEP: When CC5095 is closed, Close CC 2645 CCW from Aux Building to Line 1 Isolation.
........C........

STANDARD: Observe CC5095 GREEN light ON then Depress CLOSE pushbutton on HIS2645, observe RED light goes OFF and GREEN light comes ON

NOTE: Steps 7 and 8 can be performed in any order. (Bulleted procedure steps)

CUE: **None**

SAT UNSAT

8. PERFORMANCE STEP: When CC5095 is closed, Close CC5097 CCW Line 2 Return Isolation.
........C........

STANDARD: Observe CC5095 GREEN light ON then Depress CLOSE pushbutton on CC5097, observe RED light goes OFF and GREEN light comes ON

CUE: **None**

SAT UNSAT

TERMINATING CUES: **This JPM is complete. (Terminated by the Evaluator)**

END TIME__________