Simulator JPM
S1

Facility: Davis-Besse **Task No:** 001-021-01-0100

Task Title: Transfer Control Rod Group 7 from the Auxiliary Power Supply

K/A Reference: (001) A2.11 4.4/4.7 **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:
Transfer Group 7 Rods to the Normal Power Supply, return ICS to Auto and trip Reactor

Required Materials:
DB-OP-06402, R25, Limits & Precautions and Section 4.2, Transferring Control Rod(s) from the Auxiliary Power Supply

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:

Transfer Group 7 Control Rods from the Auxiliary Power Supply to the Normal Power Supply, identify undesired rod motion and trip the reactor

INITIAL CONDITION:

Plant stable at 50% power
Group 7 Control Rods on the Auxiliary Power Supply per DB-OP-06405 Section 4.1
Rod Control Panel in MANUAL
ICS REACTOR DEMAND Station in HAND

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Misalign SUPPLY PHASES between the NORMAL and AUX Power Supplies

Fail Rod Stop Button:
A06A1A25S501-1 to OFF

MALFUNCTIONS/FAILURE TO INSERT:

Continuous rod insertion when Reactor Demand is placed in Auto:
L502U

EXAMINER COPY

INITIAL CONDITIONS:

Plant is stable at 50% Power
Group 7 Rods are on the Auxiliary Power Supply for I&C troubleshooting
Rod Control Panel in MANUAL
ICS REACTOR DEMAND Station in HAND

INITIATING CUES:

I&C troubleshooting is complete

The Unit Supervisor directs you to transfer Group 7 Rods to the Normal Power Supply per DB-OP-06402, Section 4.2, Transferring Control Rod(s) from the Auxiliary Power Supply, and return the Rod Control Panel, ICS REACTOR DEMAND Station and the Unit Load Demand (ULD) station to Auto

(Provide examinee a copy of DB-OP-06402, Section 4.2)

CANDIDATE COPY

INITIAL CONDITIONS:

Plant is stable at 50% Power
Group 7 Rods are on the Auxiliary Power Supply for I&C troubleshooting
Rod Control Panel in MANUAL
ICS REACTOR DEMAND Station in HAND

INITIATING CUES:

I&C troubleshooting is complete

The Unit Supervisor directs you to transfer Group 7 Rods to the Normal Power Supply per DB-OP-06402, Section 4.2, Transferring Control Rod(s) from the Auxiliary Power Supply, and return the Rod Control Panel, ICS REACTOR DEMAND Station and the Unit Load Demand (ULD) station to Auto

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 Rod Control Panel in MANUAL

   STANDARD: Observe Rod Control Panel MANUAL light ON, AUTO light OFF

   CUE: **None**

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Verify ICS REACTOR DEMAND Station in HAND

   STANDARD: Observe ICS REACTOR DEMAND Station HAND light ON, AUTO light OFF

   CUE: **None**

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Verify Rod Control Panel in SEQ BYPASS

   STANDARD: Rod Control Panel SEQ BYPASS light ON

   CUE: **None**

   _____
   SAT UNSAT

4. PERFORMANCE STEP: Select Group 7 using GROUP SELECT switch
   .....C.....

   STANDARD: Turn GROUP SELECT switch to group 7

   Comment: Evaluator will provide Independent Verification

   CUE: **None**

   _____
   SAT UNSAT

5. PERFORMANCE STEP: Select ALL using the SINGLE SELECT switch
.....C.....

STANDARD: Turn SINGLE SELECT switch to ALL

Comment: Evaluator will provide Independent Verification

CUE: **None**

SAT UNSAT

6. PERFORMANCE STEP: Press and release AUX
.....C.....

STANDARD: Press and release AUX pushbutton. Observe AUX light ON

CUE: **None**

SAT UNSAT

7. PERFORMANCE STEP: Press and release JOG SPEED
.....C.....

STANDARD: Press and release JOG SPEED pushbutton. Observe JOG SPEED light ON

CUE: **None**

SAT UNSAT

8. PERFORMANCE STEP: Check SUPPLY PHASES lights are ON

STANDARD: Observe SUPPLY PHASES lights are ON

CUE: **None**

SAT UNSAT

9. PERFORMANCE STEP: Line up SUPPLY PHASES
.....C.....

STANDARD: Position Rod Control T-Handle to the Insert position until SUPPLY PHASE lights are lined up across from each other

CUE: **None**

SAT UNSAT

10. PERFORMANCE STEP: Verify SYNC CONFIRM

    STANDARD: Observe SYNC CONFIRM light is ON

    CUE: **None**

    _____
    SAT UNSAT

---

11. PERFORMANCE STEP: Press and release CLAMP
    .....C.....

    STANDARD: Press and release CLAMP pushbutton. Observe CLAMP light ON

    CUE: **None**

    _____
    SAT UNSAT

---

12. PERFORMANCE STEP: Transfer Group to Normal Power Supply
    .....C.....

    STANDARD: Press and release MANUAL XFR button. Observe MANUAL XFR light

    CUE: **None**

    _____
    SAT UNSAT

---

13. PERFORMANCE STEP: Verify Group transferred to Normal Power Supply

    STANDARD: Observe PI Panel CONTROL-ON lights for Group 7 rods OFF

    CUE: **None**

    _____
    SAT UNSAT

---

14. PERFORMANCE STEP: Release Clamp
    .....C.....

    STANDARD: Press and release CLAMP REL button. Observe CLAMP light OFF

    CUE: **None**

    _____
    SAT UNSAT

---

15. PERFORMANCE STEP: Select RUN SPEED
    .....C.....

    STANDARD: Press and release RUN SPEED. Observe RUN light ON, JOG light OFF

    CUE: **None**

    _____
    SAT UNSAT

---

16. PERFORMANCE STEP: Select GROUP
.....C.....

STANDARD: Press and release GROUP. Observe GROUP light ON

CUE: **None**

SAT UNSAT

17. PERFORMANCE STEP: Select XFR RESET
.....C.....

STANDARD: Press and release XFR RESET. Observe XFR RESET light ON.

CUE: **None**

SAT UNSAT

18. PERFORMANCE STEP: Verify Group 7 controlling

STANDARD: Observe PI panel CONTROL-ON lights for the group 7 ON

CUE: **None**

SAT UNSAT

19. PERFORMANCE STEP: Select OFF using SINGLE SELECT switch

STANDARD: Turn SINGLE SELECT switch to OFF

CUE: **None**

SAT UNSAT

20. PERFORMANCE STEP: Select OFF using GROUP SELECT switch

STANDARD: Turn GROUP SELECT switch to OFF

CUE: **None**

SAT UNSAT

21. PERFORMANCE STEP: Select SEQ control for Regulating Rods
.....C.....

STANDARD: Press and release SEQ. Observe SEQ light ON

CUE: **Sequence operation of the Rod Control Panel is directed by the Shift Manager**

SAT UNSAT

22. PERFORMANCE STEP: Transfer rod control to AUTO
.....C.....

STANDARD: Press and release AUTO on the Rod Control Panel. Observe AUTO light ON and MANUAL light OFF

CUE: **None**

_____
SAT UNSAT

NOTE:
Alternate Path Starts here. When the ICS REACTOR DEMAND Station is placed in AUTO, control rods will receive a continuous IN command. The Candidate will implement the immediate actions of DB-OP-02516, CRD Malfunctions for Undesired Control Rod Motion. The ROD STOP button will be depressed and the rods will continue inserting requiring the Reactor to be tripped.

---

23. PERFORMANCE STEP: Transfer ICS Reactor Demand Station to Auto
.....C.....

STANDARD: Press and release AUTO on the ICS REACTOR DEMAND Station. Observe AUTO red light ON and HAND white light OFF

CUE: **None**

_____
SAT UNSAT

---

24. PERFORMANCE STEP: Identify Undesired rod motion depress ROD STOP

STANDARD: Press and hold ROD STOP button and recognize rods continue inserting

COMMENT: May first attempt to stop rod motion by returning Reactor Demand Station to manual which will not stop rod motion

CUE: **None**

_____
SAT UNSAT

---

25. PERFORMANCE STEP: Identify Undesired rod motion and trip Reactor
.....C.....

STANDARD: Press Reactor trip button and observe rods insert

CUE: **None**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S2

Facility: Davis-Besse **Task No:** 004-044-04-0100

Task Title: Recover from Letdown Isolation on High Temperature

K/A Reference: (004) A4.06 3.6/3.1 **Job Performance Measure No**: S2 (JPM 017)

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:
Restore Letdown through Purification Demineralizer 1

Required Materials:
DB-OP-02523, Component Cooling Water System Malfunctions, Attachment 7

General References:
None

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

Time Critical Task:
No

Alternate Path:
No

Validation Time:
10 Minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Recover from Letdown Isolation on High Temperature

INITIAL CONDITION:

FPSS

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Purification Demineralizer 1 in service
- MU 10A open
- MU 10B closed
- MU 1903 closed

MALFUNCTIONS/FAILURE TO INSERT:

Close CC 97, CCW Isolation Valve to Letdown Cooler 2
IRF KAD3 0.0

After Letdown isolates on high temperature then reopen CC 97
IRF KAD3 0.8

ACTION/CUES:

2.	ACTION:	Open MU 104, Purification Demin Bypass **IRF BM00 1.0**
	CUE:	MU 104 is open
6.	ACTION:	Close MU 104, Purification Demin Bypass **IRF BM00 0.0**
	CUE:	MU 104 is closed

EXAMINER COPY

INITIAL CONDITIONS:

The Plant is in Mode 1

Purification Demineralizer 1 is in service

INITIATING CUES:

Letdown has isolated on high temperature due to a loss of CCW to Containment

The cause has been determined and corrected

The Unit Supervisor directs you to restore Letdown through Purification Demineralizer 1 using Attachment 7 of DB-OP-02523, CCW Malfunctions

(Provide the examinee a copy of Attachment 7 of DB-OP-02523)

CANDIDATE COPY

INITIAL CONDITIONS:

The Plant is in Mode 1

Purification Demineralizer 1 is in service

INITIATING CUES:

Letdown has isolated on high temperature due to a loss of CCW to Containment

The cause has been determined and corrected

The Unit Supervisor directs you to restore Letdown through Purification Demineralizer 1 using Attachment 7 of DB-OP-02523, CCW Malfunctions

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: _____

PERFORMANCE INFORMATION

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

START TIME: _____

1. PERFORMANCE STEP: Direct plant operator to open MU 104, PURIFICATION DEMINERALIZER BYPASS

   STANDARD: Communicate with an Equipment Operator

   COMMENT: Step 1 shall be completed prior to step 3

   CUE: **MU 104 is open (given by examiner – no action required)**

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Isolate Purification Demineralizer 1
   .....C.....

   STANDARD: Push close pushbutton on HIS MU10A, MIXED BED 1 LETDOWN INLET, using HISMU10A. Observe GREEN light ON. RED light off

   CUE: **None**

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Manually override the high temperature trip signals
.....C.....

STANDARD: Simultaneously depress and hold in the OPEN position:

- MU2B, LETDOWN COOLERS INLET ISOLATION, using HISMU2B – Observe RED light ON, GREEN OFF

AND

- MU1A, RC LETDOWN COOLER 1 INLET ISOLATION, using HISMU1A – Observe RED light ON, GREEN OFF

AND

- MU1B, RC LETDOWN COOLER 2 INLET ISOLATION, using ISMU1B – Observe RED light ON, GREEN OFF

until Annunciator 2-3-A LETDOWN TEMP HI clears AND TIMU8 is less than 125ºF and then release

COMMENT: **The critical part of this step is that all three valves can remain open after releasing their respective control switches**

CUE: **None**

_____
SAT UNSAT

---

4. PERFORMANCE STEP: Restore MU System to normal valve lineup
.....C.....

STANDARD: Push OPEN pushbutton on HIS MU10A, MIXED BED 1 LETDOWN INLET, using HISMU10A. Observe RED light ON. GREEN light off

CUE: **None**

_____
SAT UNSAT

---

5. PERFORMANCE STEP: Restore MU System to normal valve lineup

STANDARD: Contact EO to close MU 104, Purification Demin Bypass Valve

CUE: **MU 104 is closed (given by examiner – no action required)**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S3

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**: S3 (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:
Place Decay Heat Pump 1 in service. Recognize DH14B, DH Cooler 1 Outlet valve failure and throttle downstream motor operated valve DH1B.

Required Materials:
DB-OP-02527, Rev. 18 Attachment 1
3-2-H LP INJ 1 FLOW HI from DB-OP-02003

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:
20 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Start Decay Heat Pump 1, following a loss of running Decay Heat Pump 2

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)

DH11 and DH12 open with control power removed

CC1467 closed

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

Decay Heat Pump 2 tripped

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

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, RCS Filled

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 should be marked N/A

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

NOTE:
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: **None**

_____
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: **If asked, EO reports DH14B can NOT be operated manually, indicates full open locally, no other issues noted**
If asked, hi flow set point is 3750 GPM (DB-OP-02003, 3-2-H, note 3.1)
When identified – hand candidate 3-2-H LP INJ 1 FLOW HI alarm pages

_____
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 stabilize RCS Temperature and monitor pump parameters

COMMENT: May initially throttle to 3000 GPM IAW Alarm procedure

CUE: **If asked for desired flow rate, ask for recommendation**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S4

Facility: Davis-Besse **Task No:** 039-011-04-0100

Task Title: Actions for a Steam Leak on the Gland Steam Header

K/A Reference: (055) 051 AA2.02 3.9/4.1 **Job Performance Measure No**: S4 (JPM 020)

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 steam leak in the Gland Steam Header and Trip the Reactor

Required Materials:
DB-OP-02525, Steam Leaks, Attachment 4 Step 9.0

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:
5 Minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Perform actions for a steam leak on the Gland Steam Header

INITIAL CONDITION:

Place the simulator in a Mode 3 configuration with RCS pressure at 2155 psig and RCS temperature at 532 °F with Control Rod Safety groups 1-4 withdrawn

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

None

MALFUNCTIONS/FAILURE TO INSERT:

1. On Simulator page HP & LP TURBINE DRAINS & SEAL SYSTEM – TD1 fail open GS 1932 and GS 1931 to simulate a steam leak on GS.
2. Place simulator in run for 5 seconds then **freeze the simulation** until Examinee and Examiner are ready to start JPM
3. Take simulator to run after Examiner has read the initiating cue.

EXAMINER COPY

INITIAL CONDITIONS:

Plant is in Mode 3 with a plant startup in progress

The Reactor Coolant System is at normal operating pressure and temperature.

All systems are in a normal lineup.

INITIATING CUES:

An Equipment Operator reports a steam leak on the Gland Steam Header.

The Unit Supervisor directs you to perform step 9.0 of Attachment 4 of DB-OP-02525, Steam Leaks.

(Provide the examinee a copy of Step 9.0 of DB-OP-02525, Attachment 4)

CANDIDATE COPY

INITIAL CONDITIONS:

Plant is in Mode 3 with a plant startup in progress

The Reactor Coolant System is at normal operating pressure and temperature.

All systems are in a normal lineup.

INITIATING CUES:

An Equipment Operator reports a steam leak on the Gland Steam Header.

The Unit Supervisor directs you to perform step 9.0 of Attachment 4 of DB-OP-02525, Steam Leaks.

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 GS 2384, Main Steam System Isolation is closed

   STANDARD: Check GREEN light ON, RED light OFF on HIS 2384

   CUE: **None.**

   SAT UNSAT

2. PERFORMANCE STEP: Close GS 2380, Aux Steam Isolation
   C

   STANDARD: Depress CLOSE on HIS 2380. GREEN light ON, RED light OFF.

   CUE: **None.**

   SAT UNSAT

3. PERFORMANCE STEP: Verify GS 2385, Steam Supply Bypass Valve is closed

   STANDARD: Check GREEN light ON, RED light OFF on HIS 2385

   CUE: **None.**

   SAT UNSAT

4. PERFORMANCE STEP: Check for steam leak isolation

   STANDARD: Contact Equipment Operator

   CUE: **Leak has been isolated**

   SAT UNSAT

5. PERFORMANCE STEP: Identify that Turbine Sealing Steam is lost

   STANDARD: Check 0 psig on PI 2340, Gland Steam Header Pressure and rising condenser pressure PR530 and PR541

   CUE: **None.**

   SAT UNSAT

6. PERFORMANCE STEP: Trip the reactor
C

STANDARD: Press either Reactor Trip pushbutton; Rods insert and power decreasing

CUE: **None.**

_____
SAT UNSAT

7. PERFORMANCE STEP: Initiate & Isolate SFRCS
C

STANDARD: Press both SFRCS Initiate & Isolate pushbuttons.

CUE: **None.**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S5

Facility: Davis-Besse **Task No:** 026-002-05-0100

Task Title: Initiate Containment Spray

K/A Reference: (026) A2.03 4.1/4.4 **Job Performance Measure No**: S5 (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:
Start both Containment Spray Pumps and open their respective discharge valves
Stop CTMT Spray pump and close its discharge valve when leak develops

Required Materials:
DB-OP-06013 Section 5.2 and 5.3
DB-OP-02003, 3-4-J to be given when located

General References:
Db-OP-02000

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 and open their respective discharge valves

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

EXAMINER COPY

INITIAL CONDITIONS:

A LOCA has occurred. Containment pressure has exceeded the SFAS Level 4 setpoint and 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)

(NOT PROVIDED AT THIS TIME - DB-OP-02003, 3-4-J. Provided during Alternate Path)

CANDIDATE COPY

INITIAL CONDITIONS:

A LOCA has occurred. Containment pressure has exceeded the SFAS Level 4 setpoint and 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: Spray pumps can be started in either sequence. If CTMT Spray Pump 2 is selected to be started first, go to step 5 and return following step 13.

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 3-3-J CS PMP 1 DISCH FLOW HI. 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

---

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 FI1535, 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

NOTE:
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.

---

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: **None**

   _____
   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."**

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 1530, CTMT Spray Discharge Valve
    .....C.....

    STANDARD: Press Close on HIS 1530. 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.

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

END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S6

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

Task Title: Transfer Essential 4160 Kv Bus C1 only to Alternate

K/A Reference: (062) A4.01 3.3/3.1 **Job Performance Measure No**: S6 (JPM 084)

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 C1 bus only to Alternate and back to Normal

Required Materials:
DB-OP-06315 Sections 3.27 and 3.28 with prerequisites completed

General References:
None

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

Time Critical Task:
No

Alternate Path:
No

Validation Time:
9 Minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Transfer C1 only to Alternate (BD Transformer) and back to Normal (Bus C2)

INITIAL CONDITION:

Mode 1
Normal system lineup

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

None

MALFUNCTIONS/FAILURE TO INSERT:

None

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.

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

(Section 3.28 is NOT to be provided at this time but will be directed to be provided later)

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.

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 OFF 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: **The Unit Supervisor directs you to return bus C1 to the normal power supply using Section 3.28 of DB-OP-06315, 4160V Switching Procedure (Provide Section 3.28 of DB-OP-06315, prerequisites complete).**

   _____
   SAT UNSAT

5. PERFORMANCE STEP: Close AC110, BUS TIE FROM C2 BUS
.....C.....

STANDARD: Turn HIS 6223, AC110 to CLOSE. Observe RED light ON, GREEN light OFF

CUE: **None**

_____
SAT UNSAT

---

6. PERFORMANCE STEP: Open ABDC1, BUS TIE XFMR BD
.....C.....

STANDARD: Turn HIS 6220, ABDC1 to OFF. Observe GREEN light ON, RED light OFF

CUE: **None**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S7

Facility: Davis-Besse **Task No:** 016-001-01-0100

Task Title: Exchange RC flow Inputs to RPS Channel 2

K/A Reference: (016) A4.01 2.9/2.8 **Job Performance Measure No**: S7 (JPM 048)

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 RC Flow Inputs for the Computer and NNI from RPS Channel 1 to RPS Channel 2

Required Materials:
DB-OP-06403, Reactor Protection System (RPS) and Nuclear Instrumentation System (NI) Operating Procedure, Section 4.3
DB-OP-06407, Non-Nuclear Instrumentation System Operating Procedure, Section 4.2

General References:
None

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

Time Critical Task:
No

Alternate Path:
No

Validation Time:
20 Minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Exchange RC Flow Inputs to the Computer and NNI from RPS channel 1 to RPS Channel 2

INITIAL CONDITION:

4 RCPs in operation

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

NNI Flow Inputs selected to RPS Channel 1

MALFUNCTIONS/FAILURE TO INSERT:

None

EXAMINER COPY

INITIAL CONDITIONS:

Maintenance is planned for RPS Channel 1 RCS flow instrumentation

The RC Flow inputs are selected from RPS Channel 1

INITIATING CUES:

The Unit Supervisor directs you to exchange RC flow inputs (Computer and NNI) to RPS Channel 2 in accordance with section 4.3 of DB-OP-06403, RPS and NI Operating Procedure

(Provide the examinee a copy of section 4.3 of DB-OP-06403)

CANDIDATE COPY

INITIAL CONDITIONS:

Maintenance is planned for RPS Channel 1 RCS flow instrumentation

The RC Flow inputs are selected from RPS Channel 1

INITIATING CUES:

The Unit Supervisor directs you to exchange RC flow inputs (Computer and NNI) to RPS Channel 2 in accordance with section 4.3 of DB-OP-06403, RPS and NI Operating 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 critical unless denoted in the "Comments".

START TIME: _____

1. PERFORMANCE STEP: Locate correct procedure step

   STANDARD: Mark step 4.3.1 N/A. Begin with step 4.3.2 in DB-OP-06403

   CUE: **None**

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Remove cap on Selection Panel for the alternate RC flow ∆p COMPUTER receptacle
   .....C.....

   STANDARD: Locate the selection panel in RPS Channel 2 and rotate the cap counterclockwise to remove the cap

   CUE: **None**

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Disconnect the amphenol connector from RC flow ∆p computer Sub-assembly and reconnect to alternate RC flow ∆p receptacle
   .....C.....

   STANDARD: Unscrew the amphenol connector from RPS Channel 1 input and screw in to RPS Channel 2 RC flow ∆p input

   CUE: **None**

   _____
   SAT UNSAT

4. PERFORMANCE STEP: Cap the open receptacle

   STANDARD: Replace cap on the open receptacle

   CUE: **None**

   _____
   SAT UNSAT

5. PERFORMANCE STEP: Administratively document the amphenol exchange in Unit Log

   STANDARD: Document RPS Channel 2 supplying NNI in the procedure and inform Control Room to enter in Unit Log

   CUE: **Another Operator will make the entry in the Unit Log**

SAT UNSAT

6. PERFORMANCE STEP: Remove the Tave SASS Instrument string from automatic

   STANDARD: Refer to section 4.2 of DB-OP-06407, Non-Nuclear Instrumentation System Operating Procedure

   CUE: **Provide the examinee a copy of section 4.2 of DB-OP-06407**

SAT UNSAT

7. PERFORMANCE STEP: Select the instrument string to be tested
   .....C.....

   STANDARD: Take the test selector switch for Loop 2 Tave and Loop 1 Tave to the "A" or "B" position AND hold

   CUE: **There is no suspected problem with the instrument string**

SAT UNSAT

8. PERFORMANCE STEP: Release the test selector switch
   .....C.....

   STANDARD: Test selector switch released after the Yellow MISMCH light is LIT

   CUE: **None**

SAT UNSAT

9. PERFORMANCE STEP: Verify green AUTO light is OFF for instrument pair in test

   STANDARD: Check that the Green AUTO light is OFF

   CUE: **None**

SAT UNSAT

10. PERFORMANCE STEP: Remove the cap on the Selection Panel for the alternate RC flow Δp NNI receptacle
    .....C.....

    STANDARD: Rotate the cap counterclockwise to remove the cap

    CUE: **None**

SAT UNSAT

11. PERFORMANCE STEP: Disconnect amphenol receptacle for RC flow and reconnect **.....C.....** to alternate RC flow NNI ∆p receptacle

    STANDARD: Unscrew amphenol connector from RPS Channel 1 input and screw in to RPS Channel 2 RC flow ∆p NNI

    CUE: **None**

_____
SAT UNSAT

12. PERFORMANCE STEP: Cap the open receptacle

    STANDARD: Replace cap on the open receptacle

    CUE: **None**

_____
SAT UNSAT

13. PERFORMANCE STEP: Administratively document the amphenol exchange in Unit Log

    STANDARD: Document RPS Channel 2 supplying NNI in the procedure and inform Control Room to enter in Unit Log

    CUE: **Another Operator will make the entry in the Unit Log**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

Simulator JPM
S8

Facility: Davis-Besse **Task No:** 029-003-01-0100

Task Title: Purge Containment in Mode 5

K/A Reference: (016) A2.03 2.7/3.1 **Job Performance Measure No**: S8 (JPM 162)

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 Containment Purge in service on Containment

Required Materials:
DB-OP-06503, Containment Purge System (entire procedure), with Section 3.1 prerequisites completed

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:
12 Minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Place Containment Purge in service on Containment

INITIAL CONDITION:

Mode 5

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

Turn off CTMT Purge Supply and Exhaust Fans
Close dampers CV 5004, 5016, 5009 and 5021
Install fuses in SFAS cabinets
Verify dampers CV 5005, 5006, 5007, and 5008 are closed

MALFUNCTIONS/FAILURE TO INSERT:

Prevent start of CTMT Purge Supply Fan by closing air valve to supply damper.

IMF CAV7B

ACTION/CUES:

1. Step 11, CUE: Freeze stats TSL-5612A & B for the supply fan are tripped

2. Step 12, ACTION: Remove the air valve malfunction. DMF CAV7B
   CUE: Freeze stats TSL-5612A & B have been reset

EXAMINER COPY

INITIAL CONDITIONS:

The plant is in Mode 5.

INITIATING CUES:

The Unit Supervisor directs you to start a purge of the Containment Vessel in accordance with section 3.1 of DB-OP-06503, Containment Purge System Procedure.

The Incore Instrument Tank will NOT be purged.

(Provide the examinee a copy of DB-OP-06503, prerequisites completed)

CANDIDATE COPY

INITIAL CONDITIONS:

The plant is in Mode 5.

INITIATING CUES:

The Unit Supervisor directs you to start a purge of the Containment Vessel in accordance with section 3.1 of DB-OP-06503, Containment Purge System Procedure.

The Incore Instrument Tank will NOT be purged.

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: Implement the correct procedure section.

   STANDARD: Locates Section 3.1 of DB-OP-06503, Containment Purge System Procedure

   CUE: **None**

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Make a plant announcement.

   STANDARD: Use the GAITRONICS to announce "Attention all station personnel, starting the containment vessel purge".

   CUE: **None**

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Open the purge CTMT isolation valve CV5008.
   .....C.....

   STANDARD: Press the OPEN pushbutton on HIS 5008. RED light ON, GREEN light OFF

   COMMENT: Sequence NOT required.

   CUE: **None**

   _____
   SAT UNSAT

4. PERFORMANCE STEP: Open the purge CTMT isolation valve, CV5006.
   .....C.....

   STANDARD: Press the OPEN pushbutton on HIS 5006. RED light ON, GREEN light OFF

   COMMENT: Sequence NOT required.

   CUE: **None**

   _____
   SAT UNSAT

5. PERFORMANCE STEP: Open the purge CTMT isolation valve, CV5005.
.....C.....

STANDARD: Press the OPEN pushbutton on HIS 5005. RED light ON, GREEN light OFF

COMMENT: Sequence NOT required.

CUE: **None**

_____
SAT UNSAT

6. PERFORMANCE STEP: Open the purge CTMT isolation valve, CV5007.
.....C.....

STANDARD: Press the OPEN pushbutton on HIS 5007. RED light ON, GREEN light OFF

COMMENT: Sequence NOT required.

CUE: **None**

_____
SAT UNSAT

7. PERFORMANCE STEP: Start CTMT purge exhaust fan.
.....C.....

STANDARD: Turn handswitch HIS 5013, to START.

CUE: **None**

_____
SAT UNSAT

8. PERFORMANCE STEP: Verify CTMT Purge Exhaust fan starts.

STANDARD: Verifies HIS 5013 RED light ON, GREEN light OFF.

COMMENT: The fan will start in approximately 120 seconds.

CUE: **None.**

_____
SAT UNSAT

9. PERFORMANCE STEP: Start the CTMT purge supply fan.

STANDARD: Within 20 seconds after the exhaust fan starts, turn handswitch HIS 5003 to START.

COMMENT: Fan is failed.

CUE: **None**

_____
SAT UNSAT

10. PERFORMANCE STEP: GO TO Section 4.3, inability to complete proper system startup

    STANDARD: Routes to Section 4.3

    CUE: **None**

    _____
    SAT UNSAT

11. PERFORMANCE STEP: Verify the CTMT Purge Exhaust Fan and CTMT Purge Supply fan are OFF.

    STANDARD: Verifies HIS5003 CTMT Purge Supply Sys Fan GREEN light ON, RED light OFF
    Verifies HIS5013 CTMT Purge Exhaust Sys Fan GREEN light ON, RED light OFF

    COMMENT: The CTMT Purge Exhaust Fan will trip 20 seconds after starting without the Supply Fan running

    CUE: **None**

    _____
    SAT UNSAT

12. PERFORMANCE STEP: Refer to Attachment 5, Containment Purge System Troubleshooting Guide. Send an EO to investigate

    STANDARD: Verbal communication with an Equipment Operator to investigate the problem using Attachment 5.

    CUE: **If asked, the Unit Supervisor directs you to use an EO to check the problem Report as EO the Freeze stats are found tripped for the Purge Supply Fan**

    _____
    SAT UNSAT

13. PERFORMANCE STEP: Direct the EO to reset Freeze stats TSL-5612A & B

    STANDARD: Verbal communication with Equipment Operator to reset Freeze stats TSL-5612A & B

    COMMENT: The Booth Operator will remove the fault as soon as the fan trips

    CUE: **If asked, the Unit Supervisor directs you to have the Equipment Operator reset Freeze stats TSL-5612A & B.**

    _____
    SAT UNSAT

14. PERFORMANCE STEP: Return to step 3.11. Start CTMT purge exhaust fan.
.....C.....

STANDARD: Turn HIS 5013 to START.

COMMENT: The fan will start in approximately 120 seconds.

CUE: **None**

_____
SAT UNSAT

14. PERFORMANCE STEP: Verify CTMT Purge Exhaust fan starts.

STANDARD: HIS 5013 RED light ON, GREEN light OFF.

CUE: **None**

_____
SAT UNSAT

15. PERFORMANCE STEP: Start the CTMT purge supply fan.
.....C.....

STANDARD: Within 20 seconds after the exhaust fan is running, turn hand switch HIS 5003 to START.

CUE: **None**

_____
SAT UNSAT

17. PERFORMANCE STEP: Verify CTMT Purge Supply fan starts.

STANDARD: HIS 5003 RED light ON, GREEN light OFF.

CUE: **None**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

In Plant JPM
P1

Facility: Davis-Besse **Task No:** 001-011-05-0100

Task Title: Perform Attachment 5 of Control Room Evacuation per DB-OP-02508

K/A Reference: (004) AA1.06 4.1/4.2 **Job Performance Measure No**: P1 (JPM 006)

Examinee: _____

NRC Examiner: _____ **Date:** _____

Method of testing:

Simulated Performance _X_ Actual Performance ___

Classroom ___ Simulator ___ Plant _X_

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 Letdown, start the Standby Makeup Pump and transfer both Makeup Pump suctions to the BWST from outside the Control Room

Required Materials:
DB-OP-02508, Control Room Evacuation, Attachment 5

General References:
None

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

Time Critical Task:
No

Alternate Path:
No

Validation Time:
15 Minutes

EXAMINER COPY

INITIAL CONDITIONS:

A hazardous condition has forced the evacuation of the Control Room

There is NO fire in the Control Room area

ONLY the Immediate Actions of Trip the Reactor and Initiate and Isolate SFRCS were performed prior to evacuation

Makeup Pump 1 is running

INITIATING CUES:

The Unit Supervisor directs you to perform Attachment 5 of DB-OP-02508, Control Room Evacuation

You have an emergency key ring

The Zone 3 Operator has been provided Attachment 6 and Attachment 7 for controlling the Atmospheric Vent Valves

(Provide the examinee a copy of Attachment 5 of DB-OP-02508)

CANDIDATE COPY

INITIAL CONDITIONS:

A hazardous condition has forced the evacuation of the Control Room

There is NO fire in the Control Room area

ONLY the Immediate Actions of Trip the Reactor and Initiate and Isolate SFRCS were performed prior to evacuation

Makeup Pump 1 is running

INITIATING CUES:

The Unit Supervisor directs you to perform Attachment 5 of DB-OP-02508, Control Room Evacuation

You have an emergency key ring

The Zone 3 Operator has been provided Attachment 6 and Attachment 7 for controlling the Atmospheric Vent Valves

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: Dispatch the Zone 3 operator to establish local manual control of the AVVs

   STANDARD: Sign off step per initial conditions

   CUE: **None**

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Isolate Letdown
   .....C.....

   STANDARD: Close MU 2B, REACTOR COOLANT LETDOWN COOLER INLET ISOLATION, using the local switch on Breaker BE 1172 on MCC E11B. Observe Green light ON Red light OFF

   CUE: **Local switch (on BE 1172) has been placed in CLOSE. Green light goes ON Red light goes OFF**

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Start the standby Makeup Pump
   .....C.....

   STANDARD: Press local START Button on NP0372B for Makeup Pump 2 Main Oil Pump (AC). Observe Green light OFF Red light ON

   CUE: **Local START button (on NP0372B) for Makeup Pump 2 Main Oil Pump has been pressed. Green light goes OFF, Red light goes ON**

   _____
   SAT UNSAT

4. PERFORMANCE STEP: Start the standby Makeup Pump

   STANDARD: Check Main Oil Pump discharge pressure >15 psig on PI MU106A

   CUE: **PI MU106A reads 23 psig**

   _____
   SAT UNSAT

5. PERFORMANCE STEP: Start the standby Makeup Pump

   STANDARD: Check MU Pump 2 Aux. Gear LO pump started at NP0372D. Observe Red light is LIT on NP0372D

   CUE: **Red light is LIT on NP0372D**

   _____
   SAT UNSAT

6. PERFORMANCE STEP: Start the standby Makeup Pump
   .....C.....

   STANDARD: CLOSE/START pressed on NP0372A to START Makeup Pump 2. Observe Green light goes OFF, Red light goes ON

   CUE: **CLOSE/START has been pressed on NP0372A.**
   Green light goes OFF, Red light goes ON

   _____
   SAT UNSAT

7. PERFORMANCE STEP: Align makeup pumps suction to the BWST
   .....C.....

   STANDARD: NV 3971 switch placed in BWST position. Observe Bottom Red light goes OFF, Top Red light goes ON

   CUE: **Switch NV 3971 has been placed in BWST position**
   Bottom Red light goes OFF, Top Red light goes ON

   _____
   SAT UNSAT

8. PERFORMANCE STEP: Align makeup pumps suction to the BWST
   .....C.....

   STANDARD: NV 6405 switch placed in the BWST position. Observe Bottom Red light goes OFF, Top Red light goes ON

   CUE: **Switch NV 6405 has been placed in the BWST position**
   Bottom Red light goes OFF, Top Red light goes ON

   _____
   SAT UNSAT

9. PERFORMANCE STEP: Proceed to the Radwaste Panel and establish communications with the Unit Supervisor

   STANDARD: Communications established with the Unit Supervisor from the Radwaste Panel

   CUE: **Communications have been established**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

In Plant JPM
P2

Facility: Davis-Besse **Task No:** 062-094-01-0401

Task Title: Restore EDG to supply 4160 Essential Bus per DB-OP-02538

K/A Reference: (064) AA1.03 3.1/3.3 **Job Performance Measure No**: P2 (JPM 079)

Examinee: _____

NRC Examiner: _____ **Date:** _____

Method of testing:

Simulated Performance _X_ Actual Performance ___

Classroom ___ Simulator ___ Plant _X_

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:
Restore power to D1 from EDG 2

Required Materials:
DB-OP-02538, Loss of D2P and DBP, Attachment 6

General References:
None

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

Time Critical Task:
No

Alternate Path:
No

Validation Time:
22 Minutes

EXAMINER COPY

INITIAL CONDITIONS:

The plant has experienced a loss of essential DC Panel D2P

Bus D1 is de-energized

Emergency Diesel Generator 2 is not running

INITIATING CUES:

The Unit Supervisor directs you to restore Emergency Diesel Generator 2 to supply Bus D1 in accordance with Attachment 6: RESTORE POWER TO D1 BUS FROM EDG 2 of DB-OP-02538, Loss of D2P and DBP

(Provide a copy of DB-OP-02538 Attachment 6)

CANDIDATE COPY

INITIAL CONDITIONS:

The plant has experienced a loss of essential DC Panel D2P

Bus D1 is de-energized

Emergency Diesel Generator 2 is not running

INITIATING CUES:

The Unit Supervisor directs you to restore Emergency Diesel Generator 2 to supply Bus D1 in accordance with Attachment 6: RESTORE POWER TO D1 BUS FROM EDG 2 of DB-OP-02538, Loss of D2P and DBP

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: Open D2P07
   .....C.....

   STANDARD: Place breaker D2P07 in the OFF position. Turn the key to extend the plunger and remove the key

   CUE: **D2P07 is in OFF.**
   Key has been turned and removed, the plunger is extended

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Open D2P05
   .....C.....

   STANDARD: Place breaker D2P05 in the OFF position. Turn the key to extend the plunger and remove the key

   CUE: **D2P05 is in OFF.**
   Key has been turned and removed, the plunger is extended

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Open D2P09
   .....C.....

   STANDARD: Place breaker D2P09 in the OFF position. Turn the key to extend the plunger and remove the key

   CUE: **D2P09 is in OFF.**
   Key has been turned and removed, the plunger is extended

   _____
   SAT UNSAT

4. PERFORMANCE STEP: Close D2N07
.....C.....

STANDARD: Insert the key and turn to retract the plunger.
Place breaker D2N07 in the ON position.

CUE: **Key is inserted and turned, plunger is retracted**
D2N07 has been placed in ON

SAT UNSAT

5. PERFORMANCE STEP: Close D2N05
.....C.....

STANDARD: Insert the key and turn to retract the plunger.
Place breaker D2N07 in the ON position.

CUE: **Key is inserted and turned, plunger is retracted**
D2N07 has been placed in ON

SAT UNSAT

6. PERFORMANCE STEP: Close D2N09
.....C.....

STANDARD: Insert the key and turn to retract the plunger.
Place breaker D2N09 in the ON position.

CUE: **Key is inserted and turned, plunger is retracted**
D2N09 has been placed in ON

SAT UNSAT

7. PERFORMANCE STEP: Verify the DC control power source disconnect switches on busses DBP and DBN are closed

STANDARD: Verify the DC breakers are in the ON position

CUE: **DBN02 is in the ON position**
DBN04 is in the ON position
DBP02 is in the ON position
DBP04 is in the ON position
DBP07 is in the ON position
DBP11 is in the ON position

SAT UNSAT

8. PERFORMANCE STEP: Transfer D1 control power to alternate
.....C.....

STANDARD: Place knife switch in Cubicle 13 of D1 bus to ALTERNATE position

CUE: **Knife switch is placed in ALTERNATE**

SAT UNSAT

9. PERFORMANCE STEP: Verify D1 load breakers are tripped

STANDARD: Check the following breakers OPEN using indicating lights, mechanical indicators or communicate with the control room (GREEN light is LIT/position indicator at OPEN):

AD 110, Bus D1 Normal Feed (HIS 6233)
AACD1, XFRMR XBD to BUS D1 (HIS 6230)
AD 107, SW Pump 2 (HIS 1371) **OR** AD 109, SW Pump 3 as 2 (HIS 1372B)
AD 111, HPI Pump 2 (HIS 1523)
AD 112, LPI/DH Pump 2 (HIS DH 6A)
AD 105, Makeup Pump 2 (HIS MU24B)

CUE: **AD110, GREEN light is LIT/position indicator at OPEN**
OR HIS 6233 GREEN light is LIT
AACD1, GREEN light is LIT/position indicator at OPEN
OR HIS 6230 GREEN light is LIT.
AD107 (AD109) GREEN light is LIT/position indicator at OPEN
OR HIS 1371(1372B) GREEN light is LIT.
AD109, NO lights lit/breaker racked OUT
OR HIS NO lights lit
AD111, GREEN light is LIT/position indicator at OPEN
OR HIS 1523 GREEN light is LIT.
AD112, GREEN light is LIT/position indicator at OPEN
OR HIS DH6A GREEN light is LIT.
AD105, GREEN light is LIT/position indicator at OPEN
OR HIS MU24B GREEN light is LIT.

SAT UNSAT

10. PERFORMANCE STEP: Open CB1
.....C.....

STANDARD: Breaker CB1 is placed in OFF in Panel C3616

CUE: **Breaker CB1 is in OFF**

_____
SAT UNSAT

---

11. PERFORMANCE STEP: Close CB2
.....C.....

STANDARD: Breaker CB2 is placed in ON in Panel C3616. Expects EDG 2 start.

CUE: **CB2 is in ON. Emergency Diesel Generator 2 has started**

_____
SAT UNSAT

---

12. PERFORMANCE STEP: Verify Emergency Diesel Generator 2 starts and loads D1 Bus

STANDARD: Check indications of Emergency Diesel Generator 2 start.
Breaker AD101 Red light ON
Speed at SI 6232A is 900 RPM
Voltage at DG 2 VOLTS (P1-1076) is 4160 VAC
KW load indicated on KW meter

CUE: **EDG 2 has started and loading is in progress**

_____
SAT UNSAT

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

_____
END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____

In Plant JPM
P3

Facility: Davis-Besse **Task No:** 078-010-04-0400

Task Title: Bypass and Isolate the In Service Air Dryers per DB−OP-02528, IA Malfunctions

K/A Reference: (078) AA2.03 2.6/2.9 **Job Performance Measure No**: P3 (078)

Examinee: _____

NRC Examiner: _____ **Date:** _____

Method of testing:

Simulated Performance X Actual Performance ___

Classroom ___ Simulator ___ Plant X

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:
Bypass and Isolate the In Service Instrument Air Dryers

Required Materials:
DB-OP-02528, Instrument Air System Malfunctions, Step 4.2.2 and Attachment 20

General References:
None

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

Time Critical Task:
No

Alternate Path:
No

Validation Time:
10 Minutes

EXAMINER COPY

INITIAL CONDITIONS:

The plant is operating at 100% power

Both sets of Instrument Air Dryers are in service due to high air usage

INITIATING CUES:

The Control Room announces Instrument Air pressure is lowering

The Unit Supervisor directs you to perform Attachment 20 of DB-OP-02528 to bypass and isolate the in service air dryers

(Provide examinee a copy of Attachment 20 from DB-OP-02528, Instrument Air System Malfunctions)

CANDIDATE COPY

INITIAL CONDITIONS:

The plant is operating at 100% power

Both sets of Instrument Air Dryers are in service due to high air usage

INITIATING CUES:

The Control Room announces Instrument Air pressure is lowering

The Unit Supervisor directs you to perform Attachment 20 per step 4.2.2 of DB-OP-02528 to bypass and isolate the in service air dryers

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: Bypass Instrument Air Dryers 3 & 4
   .....C.....

   STANDARD: Open IA 411, IA Dryers 3 & 4 Bypass to Receiver, by rotating handle parallel to pipe

   CUE: **Handle for IA 411 has been placed parallel to pipe**

   _____
   SAT UNSAT

2. PERFORMANCE STEP: Isolate Instrument Air Dryers 3 & 4
   .....C.....

   STANDARD: Close IA 419, IA Dryers 3 & 4 Inlet Isolation by rotating handle perpendicular to pipe

   CUE: **Handle for IA 419 has been placed perpendicular to pipe**

   _____
   SAT UNSAT

3. PERFORMANCE STEP: Isolate Instrument Air Dryers 3 & 4
   .....C.....

   STANDARD: Close IA 413, IA Dryers 3 & 4 Outlet Isolation by rotating handle perpendicular to pipe

   CUE: **Handle for IA 413 has been placed perpendicular to pipe**

   _____
   SAT UNSAT

4. PERFORMANCE STEP: De-energize Instrument Air Dryers 3 & 4

   STANDARD: Place HIS 5941, Dryers 3 & 4 On/Off Switch in OFF. Observe GREEN light ON and RED light OFF

   CUE: **HIS 5941 is in OFF. GREEN light is ON and RED light is OFF**

   _____
   SAT UNSAT

5. PERFORMANCE STEP: Bypass Instrument Air Dryers 1 & 2
.....C.....

STANDARD: Open IA 289, IA Dryers 1 & 2 Bypass to Receiver, by rotating handle parallel to pipe

CUE: **Handle for IA 289 has been placed parallel to pipe**

SAT UNSAT

6. PERFORMANCE STEP: Isolate Instrument Air Dryers 1 & 2
.....C.....

STANDARD: Close IA 24, IA Dryers 1 & 2 Inlet Isolation, by rotating handle perpendicular to pipe

CUE: **Handle for IA 24 has been placed perpendicular to pipe**

SAT UNSAT

7. PERFORMANCE STEP: Isolate Instrument Air Dryers 1 & 2
.....C.....

STANDARD: Close IA 31, IA Dryers 1 & 2 Outlet Isolation, by rotating handle perpendicular to pipe

CUE: **Handle for IA 31 has been placed perpendicular to pipe**

SAT UNSAT

8. PERFORMANCE STEP: De-energize Instrument Air Dryers 1 & 2

STANDARD: Place HIS 5940, Dryers 1 & 2 On/Off Switch in OFF. Observe GREEN light ON and RED light OFF

CUE: **HIS 5940 is in OFF. GREEN light is ON and RED light is OFF**

SAT UNSAT

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

END TIME

Verification of Completion

Job Performance Measure No. _____

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:_____
_____
_____

Response:_____
_____
_____
_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____