

Facility: Davis-BesseTask No: 001-050-01-0100Task Title: Obtain 0% Lights for All Rods in a GroupK/A Reference: 014-A1.02 3.2/3.6Job Performance Measure No: A

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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: Mode 3, RCS temperature is 532 °F, RCS pressure is ~2155 psig. A plant shutdown and cooldown is in progress in accordance with DB-OP-06903, Plant Shutdown and Cooldown. All control rods are inserted except Group 1. Group 1 is on the Auxiliary Power Supply.

Task Standard: Insert Control Rod Group 1, recognize that not all 0% lights are on for the Control Rods in Group 1, and obtain the 0% lights for all Control Rods in Group 1.

Required Materials: None

General References: DB-OP-06402, CRD Operating Procedure

Initiating Cue: The Unit Supervisor directs you to insert Safety Rod groups 1 in accordance with DB-OP-06402, CRD Operating Procedure, section 3.14, beginning with step 3.14.3.

Time Critical Task: NO

Validation Time: 30 minutes

Initiating Cue

The plant is in Mode 3, RCS temperature is 532 °F, and RCS pressure is approximately 2155 psig.

A plant shutdown and cooldown is in progress in accordance with DB-OP-06903, Plant Shutdown and Cooldown.

All control rods are inserted except Group 1.

Group 1 is on the Auxiliary Power Supply.

The Unit Supervisor directs you to insert Safety Rod groups 1 in accordance with DB-OP-06402, CRD Operating Procedure, section 3.14, beginning with step 3.14.3.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Insert Group 1

√

Standard: At the Rod Control Panel insert Group1 control rods.

Comment: None

2. Performance step: Recognize Rod 1-1 does not have a 0% light

√

Standard: At the Rod Position Indication Panel, recognize the 0% light for Control Rod is not ON when Group 1 is fully inserted.

Comment: None

3. Performance step: Communicate to the Unit Supervisor

Standard: Inform the Unit Supervisor that the 0% light for Control Rod 1-1 is not ON.

Comment: None

Cue: If necessary, direct the candidate to refer to section 4.12 of DB-OP-06402, CRD Operating Procedure

4. Performance step: Verify Group 1 rods are on the Auxiliary Power Supply

Standard: Verify Group 1 rods are on the Auxiliary Power Supply

Comment: None

5. Performance step: Withdraw Group 1 until the In-Limit light goes off

√

Standard: At the Rod Control Panel, withdraw Group 1 until the In-Limit light goes off

Comment: None

6. Performance step: Identify rods that do not have 0% light lit

Standard: List Control Rod 1-1 in step 4.12.1.c of DB-OP-06402, CRD Operating Procedure

Comment: None

Cue: If necessary, direct the candidate to refer to section 4.2 of DB-OP-06402, CRD Operating Procedure

7. Performance step: Transfer Group 1 rods to the normal power supply

Standard: Route to section 4.2 of DB-OP-06402, CRD Operating Procedure, to transfer Group 1 Control Rods to the Normal Power Supply.

Comment: None

8. Performance step: Transfer Group 1 rods to the normal power supply

Standard: Verify Tave control will NOT transfer to Feedwater

Comment: None

9. Performance step: Transfer Group 1 rods to the normal power supply

Standard: At the Rod Control Panel verify the MANUAL light is lit

Comment: None

10. Performance step: Transfer Group 1 rods to the normal power supply

Standard: At the Reactor Demand Station, verify the HAND light is lit

Comment: None

11. Performance step: Transfer Group 1 rods to the normal power supply

Standard: Verify the SEQ BYPASS light is lit

Comment: None

12. Performance step: Transfer Group 1 rods to the normal power supply

Standard: Verify Group 1 is selected on the Group Select Switch

Comment:

Cue: If requested, role play as the independent verifier

13. Performance step: Transfer Group 1 rods to the normal power supply

Standard: Verify ALL is selected on the SINGLE SELECT switch

Comment: None

Cue: If requested, role play as the independent verifier

14. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release AUX pushbutton

Comment: None

15. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release JOG SPEED pushbutton

Comment: None

16. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Align SUPPLY PHASE lights by inserting Group 1 until SYNC CONFIRM light is ON

Comment: Critical if supply phase lights are NOT aligned

17. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release CLAMP pushbutton

Comment: None

18. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release MANUAL XFR pushbutton

Comment: None

19. Performance step: Transfer Group 1 to the normal power supply

Standard: Verify the CONTROL-ON lights for Group 1 are OFF

Comment: None

20. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release CLAMP REL pushbutton

Comment: None

21. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release RUN SPEED pushbutton

Comment: None

22. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release GROUP pushbutton

Comment: None

23. Performance step: Transfer Group 1 to the normal power supply

√

Standard: Press and release XFR RESET pushbutton

Comment: None

24. Performance step: Transfer Group 1 to the normal power supply

Standard: Verify the CONTROL-ON light is ON for Group 1

Comment: Candidate should return to section 4.12 which will direct the candidate to section 4.1 to transfer Rod 1-1 to the auxiliary power supply

Cue: If necessary, direct the candidate to refer to section 4.1 of DB-OP-06402, CRD Operating Procedure

25. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify the XFR CONFIRM light is OFF

Comment: None

26. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify the XFR RESET light is ON

Comment: None

27. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Dispatch an operator to the CRD cabinets

Comment: The Instructor Station operator can role play as the Equipment Operator

28. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify Tave will not transfer to Feedwater Control

Comment: None

29. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify Rod Control Panel is in MANUAL

Comment: None

30. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify the REACTOR DEMAND station is in HAND

Comment: None

31. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Turn GROUP SELECT switch to Group 1

Comment: If requested, role play as the independent verifier

32. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Turn SINGLE SELECT switch to rod 1-1

Comment: If requested, role play as the independent verifier

33. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify CONTROL-ON light is ON for rod 1-1

Comment: None

34. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release AUX pushbutton

Comment: None

35. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify CONTROL-ON light is OFF for rod 1-1

Comment: None

36. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release JOG SPEED pushbutton

Comment: None

37. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify the XFR RESET light is OFF

Comment: None

38. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify SUPPLY PHASE lights are ON

Comment: None

39. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Align SUPPLY PHASE lights by inserting rod 1-1 until SYNC CONFIRM light is ON

Comment: Critical if supply phase lights are NOT aligned

40. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify the SYNCH CONFIRM light is ON

Comment: None

41. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release CLAMP pushbutton

Comment: None

42. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release MANUAL XFR pushbutton

Comment: None

43. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Verify CONTROL-ON light is ON for rod 1-1

Comment: None

44. Performance step: Transfer Rod 1-1 to the auxiliary power supply

Standard: Contact the Equipment Operator to verify the transfer switch rotated from a square to a diamond configuration

Comment: None

Cue: Transfer switch shaft position for rod 1-1 has rotated to a diamond configuration

45. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release CLAMP RELEASE pushbutton

Comment: None

46. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release RUN SPEED pushbutton

Comment:

47. Performance step: Transfer Rod 1-1 to the auxiliary power supply

√

Standard: Press and release GROUP pushbutton

Comment:

48. Performance step: Obtain 0% light for rod 1-1

√

Standard: Insert rod 1-1 until the 0% light is ON

Comment: All Group 1 rods should have the 0% lights ON. Candidate should return to section 4.12

49. Performance step: Check Group 1 is NOT on the In-Limit.

√

Standard: Check Group 1 In-Limit light is OFF on the Rod Control Panel

Comment: If the candidate inserts Rod 1-1 too far, the In-Limit light may be ON

Cue: (If necessary) Withdraw Rod 1-1 to clear the Group 1 In-Limit

Termination Cue: This JPM is complete.

VERIFICATION OF COMPLETION

Job Performance Measure No. A

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM A
Simulator Instructions

Setup the simulator at Mode 3, NOP, NOT with Group 1 withdrawn

Place Group 1 on the auxiliary power supply

Insert malfunction

IMF LI29M (1) TRUE

Trgset 1 'liz29<2.1"

Delete malfunction when Group 1 in-limit is reached

Facility: Davis-BesseTask No: 013-005-05-0100Task Title: Manual Actuation of SFAS Level 1 and 2K/A Reference: 013-A4.03 4.5/4.7Job Performance Measure No: B

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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: Mode 3, RCS temperature is 490 °F, RCS pressure is 1600 psig, a plant shutdown and cooldown is in progress. SFAS low pressure trips have been blocked.

Task Standard: Manually trip the output modules in the SFAS cabinets

Required Materials: None

General References: DB-OP-06405, Safety Features Actuation System Procedure

Initiating Cue: An RCS leak has developed. The Unit Supervisor directs you to manually actuate SFAS levels 1 and 2 in accordance with DB-OP-06405, Safety Features Actuation System Procedure.

Time Critical Task: NO

Validation Time: 15 Minutes

Initiating Cue

The plant is in Mode 3, RCS temperature at 490 °F, RCS pressure at 1600 psig,
A plant shutdown and cooldown in progress.
SFAS low pressure trips have been blocked.

An RCS leak has developed.

The Unit Supervisor directs you to manually actuate SFAS levels 1 and 2 in accordance with DB-OP-06405, Safety Features Actuation System Procedure.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Locate the correct procedure section

Standard: Route to section 5.2 of DB-OP-06405, Safety Features Actuation System Procedure

Comment: None

Cue: If asked, the Shift Manager has given permission to manually actuate SFAS

2. Performance step: Check the status of the RC PRESSURE LO BLOCK Bistables

Standard: Check SFAS low pressure trips are blocked

Comment: SFAS block status can be checked from the SFAS cabinets, from annunciator alarm 5-2-C or from the SFAS block lights in the Control Room

Comment: Sequence of the next four steps is NOT critical

3. Performance step: Actuate SFAS levels 1 and 2

√

Standard: In SFAS cabinet 1, depress the TRIP pushbutton for all SFAS level 1 Output Modules and SFAS level 2 Output Modules

Comment: Sequence of the Output Module tripping is NOT critical

4. Performance step: Actuate SFAS levels 1 and 2

√

Standard: In SFAS cabinet 2, depress the TRIP pushbutton for all SFAS level 1 Output Modules and SFAS level 2 Output Modules

Comment: Sequence of the Output Module tripping is NOT critical

5. Performance step: Actuate SFAS levels 1 and 2

√

Standard: In SFAS cabinet 3, depress the TRIP pushbutton for all SFAS level 1 Output Modules and SFAS level 2 Output Modules

Comment: Sequence of the Output Module tripping is NOT critical

6. Performance step: Actuate SFAS levels 1 and 2

√

Standard: In SFAS cabinet 4, depress the TRIP pushbutton for all SFAS level 1 Output Modules and SFAS level 2 Output Modules

Comment: Sequence of the Output Module tripping is NOT critical

7. Performance step: Verify proper SFAS actuation

Standard: Verify all SFAS level 1 and 2 equipment actuated properly using table 2 of DB-OP-02000

Comment: None

Cue: Another Reactor Operator is verifying proper SFAS levels 1 and 2 actuation

Terminating cue: This JPM is complete

VERIFICATION OF COMPLETION

Job Performance Measure No. B

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM B
Simulator Instructions

Setup the simulator at Mode 3, ≈ 1600 psig, ≈ 490 °F

Block the SFAS low RCS trips

Facility: Davis-Besse

Task No: 010-018-01-0100

Task Title: Spray the Pressurizer for Boron Equalization

K/A Reference: 010-A1.01 2.8/2.9

Job Performance Measure No: C

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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 is at 100% power.

Task Standard: Control Pressurizer heaters and spray to equalize boron concentration between the RCS and the Pressurizer

Required Materials: None

General References: DB-OP-06003, Pressurizer Operating Procedure

Initiating Cue: The plant is at 100% power. RCS boron concentration is 1540 ppmB. The Pressurizer boron concentration is 1660 ppmB. The Unit Supervisor directs you to equalize boron between the RCS and the Pressurizer in accordance with section 4.3 of DB-OP-06003, Pressurizer Operating Procedure.

Time Critical Task: NO

Validation Time: 17 Minutes

Initiating Cue

The plant is at 100% power.

RCS boron concentration is 1540 ppmB.

The Pressurizer boron concentration is 1660 ppmB.

The Unit Supervisor directs you to equalize boron between the RCS and the Pressurizer in accordance with section 4.3 of DB-OP-06003, Pressurizer Operating Procedure.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Turn On Pressurizer Heaters

√

Standard: Place Pressurizer heaters to ON using the applicable HIS

Comment: None

Cue: If asked, the Unit Supervisor directs you to energize non-essential heater banks 2, 3 and 4.

2. Performance step: Monitor RCS pressure

Standard: Raise RCS pressure to greater than 2170 psig

Comment: None

3. Performance step: Throttle open the Pressurizer Spray Valve

√

Standard: When RCS pressure is between 2170 and 2200 place HISRC2-1 in OPEN and then return to AUTO

Comment: The trainee may perform this step more than one time to establish adequate spray flow.

4. Performance step: Stabilize RCS pressure between 2155 psig and 2205 psig

Standard: Use the spray valve and/or heaters to control RCS pressure

Comment: Maximum number of starts on the Spray Valve motor is 20 per hour

Cue: (When RCS pressure is stabilized) The Unit Supervisor has determined sufficient time has elapsed to equalize boron concentration.

5. Performance step: Close the Pressurizer Spray Valve

√

Standard: Place HISRC2-1 to CLOSE

Comment: None

6. Performance step: Close the Pressurizer Spray Valve

√

Standard: After five seconds place HISRC2-1 in AUTO

Comment: None

7. Performance step: Place all Pressurizer heaters in automatic

√

Standard: Place all heater controls in AUTO

Comment: None

8. Performance step: Contact Chemistry to sample

Standard: Communicate with Chemistry to sample the Pressurizer

Comment: May request the Unit Supervisor contact Chemistry

Cue: Chemistry will sample Pressurizer boron

Terminating Cue: This JPM is complete.

VERIFICATION OF COMPLETION

Job Performance Measure No. C

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM C
Simulator Instructions

Setup the simulator to any at-power initial condition

Facility: Davis-BesseTask No: 005-009-01-0100Task Title: 1 Hour Shutdown of Decay Heat Pump to Support Core AlterationsK/A Reference: 005-A4.01 3.6/3.4Job Performance Measure No: D

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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: Mode 6, Core Alterations in progress

Task Standard: Stop the running Decay Heat Pump, Restart the Decay Heat Pump within 1 hour

Required Materials: None

General References: DB-OP-06012, Decay Heat and Low Pressure Injection Operating Procedure

Initiating Cue: The plant is in Mode 6. Core alterations are in progress. The Fuel Handling Director has requested the running Decay Heat Pump be shutdown. The Unit Supervisor directs you to stop Decay Heat Pump 1 in accordance with section 3.22 of DB-OP-06012, Decay Heat and Low Pressure Injection Operating Procedure. All prerequisites are complete. The Shift Manager has given permission to operate locked valves.

Time Critical Task: NO

Validation Time: 16 Minutes

Initiating Cue

The plant is in Mode 6. Core alterations are in progress. The Fuel Handling Director has requested the running Decay Heat Pump be shutdown.

The Unit Supervisor directs you to stop Decay Heat Pump 1 in accordance with section 3.22 of DB-OP-06012, Decay Heat and Low Pressure Injection Operating Procedure.

All prerequisites are complete.

The Shift Manager has given permission to operate locked valves.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Record Decay Heat System Data

Standard: Record DH Loop 1 flow, DH Cooler outlet temperature and the temporary Incore temperature

Comment: None

Cue: The highest reading temporary incore is the in-service incore

2. Performance step: Stop Decay Heat Pump 1

√

Standard: Stop Decay Heat Pump 1 using HIS DH6B

Comment: None

3. Performance step: Record when the Decay Heat Pump was stopped

Standard: Record the date and time Decay Pump 1 was stopped

Comment: None

4. Performance step: Close Decay Heat Cooler outlet valve

√

Standard: Close DH 14B using HIC DH 14B

Comment: None

5. Performance step: Close Decay Heat Cooler bypass valve

√

Standard: Close DH 13B using HIC DH 13B

Comment: Only critical if DH 13B is open.

6. Performance step: Determine when the Decay Heat Pump must be restarted

Standard: Add 1 hour to the time recorded in step 3.22.10 and record the time

Comment: None

Cue: The Fuel Handling Director reports fuel movement in the vicinity of the hot legs is complete. The Unit Supervisor directs you to restart Decay Heat Pump 1.

7. Performance step: Restart Decay Heat Pump 1

Standard: Station an Equipment Operator at Decay Heat Pump 1

Comment: None

8. Performance step: Restart Decay Heat Pump 1

√

Standard: Start Decay Heat Pump using HIS DH6B

Comment: None

9. Performance step: Record when the Decay Heat Pump was started

Standard: Record the date and time Decay Pump 1 was started

Comment: None

10. Performance step: Establish Decay Heat Flow

√

Standard: Throttle open DH 14B and DH 13B to establish flow

Comment: None

Cue: (If asked) The Unit Supervisor directs you to establish the same flow rate as recorded in step 3.22.8

11. Performance step: Record Decay Heat System Data

Standard: Record DH Loop 1 flow, DH Cooler outlet temperature and the temporary Incore temperature

Comment: None

12. Performance step: Notify the Fuel Handling Director

Standard: Inform the Fuel Handling Director that the Decay Heat Pump has been restarted

Comment: None

13. Performance step: Notify Radiation Protection

Standard: Inform Radiation Protection that the Decay Heat Pump has been restarted

Comment: None

14. Performance step: Verify SPDS display is in service

Standard: Update SPDS display for Decay Heat Pump 1 in service

Comment: May not update SPDS display if the display was not changed when the pump was stopped.

Terminating Cue: This JPM is complete.

VERIFICATION OF COMPLETION

Job Performance Measure No. _____ D _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

JPM D
Simulator Instructions

Setup the simulator in Mode 6 with the Refueling Canal filled

Verify DHR Pump 1 is running

Setup the DHR page of SPDS to reflect plant conditions

Facility: Davis-BesseTask No: 028-003-04-0100Task Title: Operate the Hydrogen Purge/Dilution SystemsK/A Reference: 028-A4.01 4.0/4.0Job Performance Measure No: E

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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: A large break LOCA has occurred. Containment H2 concentration has risen above 3%. The Hydrogen Recombiner is not yet on site. Station management approval has been obtained for a release through the Containment H2 purge filter.

Task Standard: Place the containment Hydrogen Purge System and the Containment Hydrogen Dilution System in service

Required Materials: None

General References: DB-OP-06502, Containment H2 Dilution and H2 Purge System

Initiating Cue: The Unit Supervisor directs you to control Containment H2 concentration using the Containment H2 purge system in accordance with section 5.3 of DB-OP-06502, Containment H2 Purge and H2 Dilution System. The Zone 3 Operator is standing by in a low radiation area of the AUX Building to assist with system startup. All prerequisites are complete. The Shift Manager has given permission to block SFAS components.

Time Critical Task: NO

Validation Time: 9 Minutes

Initiating Cue

A large break LOCA has occurred.
Containment H2 concentration has risen above 3%.
The Hydrogen Recombiner is not yet on site.
Station management approval has been obtained for a release through the Containment H2 purge filter.

The Unit Supervisor directs you to control Containment H2 concentration using the Containment H2 purge system in accordance with section 5.3 of DB-OP-06502, Containment H2 Purge and H2 Dilution System.

The Zone 3 Operator is standing by in a low radiation area of the Auxiliary Building to assist with system startup.

All prerequisites are complete.

The Shift Manager has given permission to block SFAS components.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Open CV 5037 CTMT H₂ PURGE EXH

√

Standard: OPEN pressed on HIS 5037

Comment: Sequence of Steps 2 and 3 are NOT critical

2. Performance step: Open CV 5038 CTMT H₂ PURGE EXH

√

Standard: OPEN pressed on HIS 5038

Comment: None

3. Performance step: Direct the Equipment Operator to energize the pipe heater

√

Standard: Communicate with the Equipment Operator via the GAI-TRONICS or radio

Comment: None

Cue: The Equipment Operator reports flow is indicated on DP gauge PDI 5095B and the pipe heater has been energized.

(If asked), the Unit Supervisor directs you to start Hydrogen Dilution Blower 1

4. Performance step: Direct the Equipment Operator to verify proper oil level on Hydrogen Dilution Blower 1

Standard: Communicate with the Equipment Operator via the GAI-TRONICS or radio

Comment: None

Cue: The Equipment Operator reports oil level is proper for Hydrogen Dilution Blower 1

5. Performance step: Direct the Equipment Operator to unisolate LG 5614 WATER SEPERATOR GAGE GLASS

Standard: Communicate with the Equipment Operator via the GAI-TRONICS or radio

Comment: None

Cue: The Equipment Operator reports CV 109 and CV 114 are open.

6. Performance step: Open CV 5090 H₂ DILUTION SYSTEM 1-1 CTMT ISOLATION.

√

Standard: OPEN pushbutton depressed on HIS 5090

Comment: None

7. Performance step: Start H₂ DILUTION SYS BLOWER 1

√

Standard: HIS 5067 placed in START

Comment: None

8. Performance step: Direct the Equipment Operator to maintain separator level 1/2 to 3/4 full

Standard: Communicate with the Equipment Operator via the GAI-TRONICS or radio

Comment: None

Cue: The Equipment Operator reports SW 334 is throttled. The separator level is 5/8 full. PI 3842 indicates 22 psi.

Terminating Cue: This JPM is complete.

VERIFICATION OF COMPLETION

Job Performance Measure No. _____ E _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM E
Simulator Instructions

Setup the simulator with a large break LOCA

Increase Containment H₂ concentration to 3%.

Facility: Davis-Besse

Task No: 062-062-04-0100

Task Title: Energize D1 Bus from Emergency Diesel Generator 1

K/A Reference: B&W A05-AA1.1 4.3/4.2

Job Performance Measure No: E

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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: A loss of offsite power has occurred. EDG 2 failed to start.

Task Standard: Align EDG 1 to D! Bus.

Required Materials: None

General References: DB-OP-02521, Loss of AC Bus Power Sources

Initiating Cue: The Unit Supervisor directs you to energize D1 Bus from EDG 1 in accordance with Attachment 7 of DB-OP-02521, Loss of AC Bus Power Sources.

Time Critical Task: NO

Validation Time: 13 Minutes

Initiating Cue

A loss of offsite power has occurred.
EDG 2 failed to start.

The Unit Supervisor directs you to energize D1 Bus from EDG 1 in accordance with Attachment 7 of DB-OP-02521, Loss of AC Bus Power Sources.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Verify EDG 1 is supplying C1 Bus.

Standard: Verify EDG 1 at 900 RPM and EDG 1 output breaker (AC101) is closed

Comment: None

Cue: If asked, the Unit Supervisor directs you to use Method 1 to energize D1 bus.

2. Performance step: Strip C2 Bus

Standard: Verify/open the following breakers using Attachment 3: AC212, AACC2, AC205, AC206, AC208, AC202, AC201, AC204, AC210 and AC207

Comment: May request AC212 checked locally. All other breakers should be open.

Cue: If asked, the Startup Feedwater Pump was not previously in service.

3. Performance step: Strip D1 Bus

√

Standard: Verify/open the following breakers using Attachment 2: AD107, AD113, AD112, AD111, AD109, AD108, AD105, AD101, AACD1 and AD110

Comment: Critical to open breakers that did not load shed.

4. Performance step: Verify ABDC1 is open

Standard: Verify ABDC1 OPEN light is lit

Comment: None

5. Performance step: Place SYNC SELECT in the correct position

√

Standard: HIS 6221 rotated to the BKR TO C2 position

Comment: None

6. Performance step: Close AC110

√

Standard: Rotate HIS 6223 to the CLOSE position

Comment: None

7. Performance step: Place SYNC SELECT in the correct position

√

Standard: HIS 6221 rotated to the TIE BKR TO XBD position

Comment: None

8. Performance step: Verify HAAC is open

√

Standard: HIS 6207 rotated to the OPEN position

Comment: None

10. Performance step: Place SYNC SELECT in the correct position

√

Standard: HIS 6221 rotated to the OFF position

Comment: None

11. Performance step: Close AACC2

√

Standard: HIS 6218 rotated to the CLOSE position

Comment: None

12. Performance step: Close AACD1

√

Standard: HIS 6230 rotated to the CLOSE position

Comment: None

13. Performance step: Monitor EDG 1 load

Standard: Monitor JI 6221 to maintain EDG 1 load below limits

**Comment: Another operator is monitoring EDG 1 load.
The Unit Supervisor has assigned an Equipment Operator to remove the CLOSE power fuses for breaker HAAC.**

Terminating Cue: This JPM is complete

VERIFICATION OF COMPLETION

Job Performance Measure No. E

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM F
Simulator Instructions

Setup the simulator with a loss of offsite power

Lock out EDG 2

Facility: Davis-BesseTask No: 012-019-01-0100Task Title: Reset a Tripped Reactor Protection System ChannelK/A Reference: 012-A4.04 3.3/3.3Job Performance Measure No: G

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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 is in MODE 1. To comply with Tech Spec 3.3.1.1, RPS Channel 4 was manually tripped using the CONTACT MONITOR TEST module. RPS Channel 4 has subsequently been repaired and declared OPERABLE.

Task Standard: Reset an RPS channel that was manually tripped

Required Materials: None

General References: DB-OP-06403, Reactor Protection System (RPS) and Nuclear Instrumentation (NI) Operating Procedure

Initiating Cue: The Unit Supervisor directs you to reset RPS Channel 4 in accordance with section 4.2 of DB-OP-06403, Reactor Protection System (RPS) and Nuclear Instrumentation (NI) Operating Procedure.

Time Critical Task: NO

Validation Time: 9 Minutes

Initiating Cue

The plant is in MODE 1.

To comply with Tech Spec 3.3.1.1, RPS Channel 4 was manually tripped using the CONTACT MONITOR TEST module.

RPS Channel 4 has subsequently been repaired and declared OPERABLE.

The Unit Supervisor directs you to reset RPS Channel 4 in accordance with section 4.2 of DB-OP-06403, Reactor Protection System (RPS) and Nuclear Instrumentation (NI) Operating Procedure.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Obtain the door key for RPS Channel 4

√

Standard: Obtain RPS Channel 4 door key from the Control Room key cabinet

Comment: None

Cue: Entry has been made in the key log to sign out the key

2. Performance step: Place Channel 4 CONTACT MONITOR TEST switch in OPERATE.

√

Standard: CONTACT MONITOR TEST module switch rotated to OPERATE

Comment: None

3. Performance step: Reset any tripped bistables

Standard: OUTPUT STATE and OUTPUT MEMORY toggles of any tripped bistable (except Shutdown Bypass High Pressure Trip) depressed. Status lights DIM

Comment: No bistables should be tripped

4. Performance step: Energize Channel Trip Relay

√

Standard: RESET switch on Reactor Trip Module depressed

Comment: None

5. Performance step: Check channel reset

Standard: Visual check of PROTECTIVE SUBSYSTEM light DIM

Comment: None

6. Performance step: Return the door key for RPS Channel 4

Standard: Return RPS Channel 4 door key to the Control Room key cabinet

Comment: None

Cue: Entry has been made in the key log to return the key

Terminating Cue: This JPM is complete.

VERIFICATION OF COMPLETION

Job Performance Measure No. _____ G _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM G
Simulator Instructions

Setup the simulator at 100% RTP

Trip RPS Channel 4 using the Contact Monitor Test Module

Verify the CONTACT MONITOR TEST switch in TEST OPERATE

Facility: Davis-Besse

Task No: 075-003-01-0100

Task Title: Shift from Four to Two Circulating Water Pump Operation

K/A Reference: 075-A2.02 2.5/2.7

Job Performance Measure No: H

Examinee: _____

NRC Examiner: _____

Facility Evaluator: _____

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 is at 28% power. Outside air temperature is 20°F. An Equipment Operator reports that ice is forming on the cooling tower.

Task Standard: Shutdown 2 of the 4 Circulating Water Pumps

Required Materials: None

General References: DB-OP-06232, Circulating Water System and Cooling Tower Operation

Initiating Cue: The Unit Supervisor directs you to shift from four Circulating Water Pump operation to two Circulating Water Pump operation beginning with step 3.7.8 of DB-OP-06232, Circulating Water System and Cooling Tower Operation. The Unit Supervisor directs you to stop Circulating Water Pump 2 and Circulating Water Pump 3. An Equipment Operator is standing by locally to monitor the Circulating Water System.

Time Critical Task: NO

Validation Time: 16 Minutes

Initiating Cue

The plant is at 28% power. Outside air temperature is 20°F. An Equipment Operator reports that ice is forming on the cooling tower.

The Unit Supervisor directs you to shift from four Circulating Water Pump operation to two Circulating Water Pump operation beginning with step 3.7.8 of DB-OP-06232, Circulating Water System and Cooling Tower Operation.

The Unit Supervisor directs you to stop Circulating Water Pump 2 and Circulating Water Pump 3. An Equipment Operator is standing by locally to monitor the Circulating Water System.

PERFORMANCE INFORMATION

(Denote critical steps with a check mark)

1. Performance step: Throttle CT856, CIRC WATER PUMP 1 DISCHARGE

√

Standard: Depress CLOSE on HIS856

Comment: Sequence for steps 1 through 4 is NOT critical

2. Performance step: Throttle CT861, CIRC WATER PUMP 2 DISCHARGE

√

Standard: Depress CLOSE on HIS861

Comment: None

3. Performance step: Throttle CT868, CIRC WATER PUMP 3 DISCHARGE

√

Standard: Depress CLOSE on HIS868

Comment: None

4. Performance step: Throttle CT873, CIRC WATER PUMP 4 DISCHARGE

√

Standard: Depress CLOSE on HIS873

Comment: None

5. Performance step: Verify CT856, CIRC WATER PUMP 1 DISCHARGE, goes to the THROTTLE position

Standard: HIS856 Amber THROT light ON

Comment: None

6. Performance step: Verify CT861, CIRC WATER PUMP 2 DISCHARGE, goes to the THROTTLE position

Standard: HIS861 Amber THROT light ON

Comment: None

7. Performance step: Verify CT868, CIRC WATER PUMP 3 DISCHARGE, goes to the THROTTLE position

Standard: HIS868 Amber THROT light ON

Comment: None

8. Performance step: Verify CT873, CIRC WATER PUMP 4 DISCHARGE, goes to the THROTTLE position

Standard: HIS873 Amber THROT light ON

Comment: None

Cue: The Circulating Water Pump discharge valves have been throttled for 10 minutes

9. Performance step: Close CT861 (868), CIRC WATER PUMP 2 (3) DISCHARGE

√

Standard: Depress CLOSE on HIS861 (868)

Comment: Sequence of stopping pumps is not critical. The second pump will not stop from the Control Room.

10. Performance step: Verify CT861 (868), CIRC WATER PUMP 2 (3) DISCHARGE, goes to the CLOSE position

Standard: HIS CT861 (868) CLOSE light on

Comment: None

11. Performance step: Verify Circulating Water Pump 2 (3) stops

Standard: GREEN light for Circulating Water Pump 2 (3)

Comment: None

Cue: Circulating Water Pump 2 (3) has been stopped for 5 minutes

12. Performance step: Close CT868 (861), CIRC WATER PUMP 3 (2) DISCHARGE

√

Standard: Depress CLOSE on HIS868 (861)

Comment: None

13. Performance step: Verify CT868 (861), CIRC WATER PUMP 3 (2) DISCHARGE, goes to the CLOSE position

Standard: HIS868 (861) CLOSE light on

Comment: None

14. Performance step: Recognize Circulating Water Pump 3 (2) did not stop

√

Standard: CT868 (861), CIRC WATER PUMP 3 (2) DISCHARGE, closed for greater than 45 seconds and Circulating Water Pump 3 (2) continues to run.

Comment: None

15. Performance step: Direct the Equipment Operator to stop Circulating Water Pump 3 (2)

√

Standard: Communicate via the GAI-TRONICS or radio

Comment: None

Cue: (After Circulating Water Pump 3 (2) is stopped) The Shift Manager will write a condition report and make the appropriate notifications.

The Unit Supervisor directs you to continue with the procedure.

(If asked) The Unit Supervisor directs you to open CT914 and CT915.

16. Performance step: Open CT914, Cooling Tower Line 1 Bypass

√

Standard: Depress OPEN on HIS914

Comment: Sequence of steps 16 and 17 are NOT critical

17. Performance step: Open CT915, Cooling Tower Line 2 Bypass

√

Standard: Depress OPEN on HIS915

Comment:

18. Performance step: Direct an Equipment Operator to close CT77, CIRCULATING WATER PUMP 2 SUPPLY TO THRUST BEARING STOP

Standard: Communicate via the GAI-TRONICS or radio

Comment: Sequence of steps 18 and 19 are NOT critical

Cue: CT77 is closed

19. Performance step: Direct an Equipment Operator to close CT99, CIRCULATING WATER PUMP 3 SUPPLY TO THRUST BEARING STOP

Standard: Communicate via the GAI-TRONICS or radio

Comment: None

Cue: CT99 is closed

Terminating Cue: This JPM is complete

VERIFICATION OF COMPLETION

Job Performance Measure No. _____ H _____

Examinee's Name:

Examiner's Name:

Date performed:

Facility Evaluator:

Number of attempts:

Time to complete:

Question Documentation:

Question: _____

Response: _____

Result: SAT or UNSAT

Examiner's signature and date: _____

JPM H
Simulator Instructions

Setup the simulator at 28% RTP

Verify 4 Circ Water Pumps are running

Verify the CW Makeup Tag is on CW Pump 1

Verify the CW Blowdown Tag is on CW Pump 4

Fail the breaker closed on the second Circ Water Pump to be stopped

CW Pump 3 – imf kkp3p true

CW Pump 2 – imf kkp2p true

Delete the breaker failure when the EO is directed to trip the CW Pump locally

CW Pump 3 – mmf kkp3p false

CW Pump 2 – mmf kkp2p false