INITIAL SUBMITTAL OF WALKTHROUH JPMS

FOR THE DAVIS-BESSE INITIAL EXAMINATION - MARCH 2002

Facility: Davis Besse Nuclear Power Station	Date of Examination: 03-04-02
Exam Level (circle one): RO / SRO(I) / SRO(U)	Operating Test No.: _____

B.1 Control Room Systems

System/ JPM Title	Type Code*	Safety Function
a. Perform PORV Cycle Test	N,A,S,L	5
b. Align ECCS Suction to Emergency Sump	M,S,L	3
c. Energize 4.16kv bus D2 from the SBODG	D,A,S	6
d. Borate the Makeup Tank using attach 13 of DB-OP-02000.	N,S	1
e. Trip an RPS Channel	D,A,S	7
f. Start CTMT Purge on the penetration rooms	N,S	8
g. Manually Trip SFAS	D,A,S	2

B.2 Facility Walkthrough

a. Primary Side Reactor Operator actions inside the RRA for Serious CTRM fire	D,R	2
b. Line up BUSW pmp to Service Water	D	4 Secondary
c. Loss of a TPCW pump	D	8

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

JPM NO.: B.1.A   Rev. 00   Page 1 of 8

TASK NO.: 010-013-04-0100

TASK DESCRIPTION: Perform Required Operator Actions for a Leaking PORV RC2A

K/A REFERENCE: 010 A2.03

APPLICABLE METHOD OF TESTING: Actual performance
                                  Simulator

TIME FOR COMPLETION: 10 minutes

APPLICABILITY: [X] RO   [X] SRO

TASK STANDARDS:

Recognize PORV failed open and close RC11.

REQUIRED MATERIALS:

DB-SP-03363, Pressurizer Pilot Operated Relief Valve Cycle Test

GENERAL REFERENCES:

DB-SP-03363, Pressurizer Pilot Operated Relief Valve Cycle Test, Rev. 01, C-4

INITIAL CONDITIONS:

RCS pressure is 700 psig. A plant shutdown for refueling is in progress.

INITIATING CUES:

You are directed to complete Section 4.2 of DB-SP-03363, Pressurizer Pilot
Operated Relief Valve Cycle Test.

INITIAL CONDITIONS:

RCS pressure is 700 psig. A plant shutdown for refueling is in progress.

INITIATING CUES:

You are directed to complete Section 4.2 of DB-SP-03363, Pressurizer Pilot Operated Relief Valve Cycle Test.

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Recognize PORV failed open and close RC 11 PORV block.

INITIAL CONDITION:

RCS pressure 700 psig on PRS RC2A1

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITIONS:

MALFUNCTIONS/FAILURE TO INSERT:

Fail PORV open when PORV is opened.

ACTION/CUES:

JPM STEP NUMBER   CUE

      1   CTMT Coordinator reports all personnel out of CTMT.

PERFORMANCE INFORMATION

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

START TIME: _____

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1.   PERFORMANCE STEP: Perform required prerequisites.

     STANDARD: Notify CTMT Coordinator.

     CUE: **None.**

                                                    ‾‾‾‾‾‾‾‾‾‾‾‾‾
                                                    SAT   UNSAT

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2.   PERFORMANCE STEP: Notify QC if required.

     STANDARD: N/A

     CUE: **Not required.**

                                                    ‾‾‾‾‾‾‾‾‾‾‾‾‾
                                                    SAT   UNSAT

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3.   PERFORMANCE STEP: Obtain Shift Manager's permission.

     STANDARD: Request Shift Manager's permission.

     CUE: **Shift Manager has given his permission.**

                                                    ‾‾‾‾‾‾‾‾‾‾‾‾‾
                                                    SAT   UNSAT

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4.   PERFORMANCE STEP: Establish communication.

     STANDARD: Determine communication is not required.

     CUE: **(If asked) Section 4.1 will not be performed.**

                                                    ‾‾‾‾‾‾‾‾‾‾‾‾‾
                                                    SAT   UNSAT

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5.   PERFORMANCE STEP: Verify alternate vent path operable.

     STANDARD: Check vent path available.

     CUE: **Vent path via RC 200 and 239 is available.**

                                                    ‾‾‾‾‾‾‾‾‾‾‾‾‾
                                                    SAT   UNSAT

6. PERFORMANCE STEP: Verify RCS pressure is between 675 and 700 psig.

    STANDARD: Verify PRS RC2A1 is between 675 and 700 psig.

    CUE: **None.**

                                                                SAT   UNSAT

7. PERFORMANCE STEP: Verify pressurizer temperature.

    STANDARD: Verify pressurizer temperature on T776 computer point.

    CUE: **None.**

                                                                SAT   UNSAT

8. PERFORMANCE STEP: Verify plant is in startup or shutdown phase.

    STANDARD:

    CUE: **(If asked) The information is in the initial condition.**

                                                                SAT   UNSAT

9. PERFORMANCE STEP: Verify pressurizer quench tank is in service.

    STANDARD:

    CUE: **Quench tank is in service.**

                                                                SAT   UNSAT

10. PERFORMANCE STEP: Verify alternate vent path is operable prior to
                       performing Section 4.1.

    STANDARD:

    CUE: **Section 4.1 is not being conducted.**

                                                                SAT   UNSAT

11. PERFORMANCE STEP: Close PORV block valve.

    STANDARD: Depress the close button on HIS RC11.

    CUE: **None.**

                                                                SAT   UNSAT

12. PERFORMANCE STEP: Open PORV block valve.

    STANDARD: Depress open on HIS RC11.

    CUE: **IV has been completed.**

    _____ SAT   UNSAT

13. PERFORMANCE STEP: Record RCS pressure.

    STANDARD: Record RCS pressure from PRS RC2A1.

    CUE: **None.**

    _____ SAT   UNSAT

14. PERFORMANCE STEP: Record PORV outlet temperature.

    STANDARD: Assign computer point T773 to point display and record.

    CUE: **None.**

    _____ SAT   UNSAT

15. PERFORMANCE STEP: Make plant announcement.

    STANDARD: Inform plant personnel to remain outside CTMT during PORV
               test.

    CUE: **None.**

    _____ SAT   UNSAT

16. PERFORMANCE STEP: Verify all personnel are evacuated from CTMT.

    STANDARD: Call CAS/SAS to verify all personnel out of CTMT.

    CUE: **None.**

    _____ SAT   UNSAT

17. PERFORMANCE STEP: Open RC2A.
    ....C........

    STANDARD: Open RC2A using HIS RC2-6, PRZR PORV VLV, and hold until
               indications are verified.

    CUE: None.

    _____ SAT   UNSAT

18. PERFORMANCE STEP: Verify PORV open.

    STANDARD: Verify PORV open indications ZL 4263B, ZL 4264B computer point
               Z768, increase in T773 computer point.

    CUE: **None.**

    _____
                                                       SAT   UNSAT

19. PERFORMANCE STEP: Close RC2A.

    STANDARD: Close RC2A by releasing HIS RC2-6.

    CUE: **None.**

    _____
                                                       SAT   UNSAT

20. PERFORMANCE STEP: Verify RC2A closes.
    ....C........

    STANDARD: Check indications for RC2A being closed. Determine it is
               still open.

    CUE: **None.**

    _____
                                                       SAT   UNSAT

21. PERFORMANCE STEP: Close RC11.
    ....C........

    STANDARD: Close RC11 using HIS RC11.

    CUE: **None.**

    _____
                                                       SAT   UNSAT

TERMINATING CUES: This JPM is complete.

                                                       _____
                                                       END TIME

VERIFICATION OF COMPLETION

Operator _____   Evaluator _____

SSN   _____   Date   _____

License: [ ] RO   [ ] SRO

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained: Yes   No   N/A

Result: [ ] SATISFACTORY   [ ] UNSATISFACTORY

         NOTE: An "Unsatisfactory" requires Comment and will require
                 subsequent remedial training.

Comments/Feedback: _____

_____

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                    _____/_____
                         Evaluator's Signature   Date

ATTACHMENT 7: TRANSFERRING LPI SUCTION TO THE EMERGENCY SUMP (Continued)

When the BWST level reaches 9 feet, attempt to transfer the suction of the LPI and CS Pumps to the emergency sump as described below. Continue the attempt until the transfer is complete. The annunciator "BWST LOLO LVL, XFER TO EMER SUMP" (5-3-A) may provide an indication to the operator that the BWST is at the level where the transfer can be completed, however do not rely on the annunciator as an indication of BWST Level.

Section 2. Suction Transfer

The SRO shall direct performance of this section of the Attachment.

1. Verify BOTH MU Pumps are stopped.

   _____ • MAKEUP PUMP 1

   _____ • MAKEUP PUMP 2

2. Press OFF and transfer BOTH MU Pump Suctions to the MU TANK.

   _____ • MU 6405

   _____ • MU 3971

_____ 3. Verify Section 1 of this attachment, Actions to close breakers for DH 7A, DH 7B, DH 9A, DH 9B and HP 31 has been completed.

4. Block SFAS incident level 2 for the following valves:

   _____ • DH7A

   _____ • DH9A

   _____ • DH7B

   _____ • DH9B

_____ 5. Press open for DH9A AND DH9B using HISDH9A and HISDH9B.

_____ 6. Check DH7A and DH7B start to close as DH9A and DH9B start to open. If an auto closure did not occur, do not manually close DH7B (DH7A) until DH9B (DH9A) is open.

_____ 7. Verify that the transfer is complete by checking the indicating lights on DH9A and DH9B and DH7A and DH7B and by checking that the low pressure injection flow was not significantly changed.

_____ 8. IF CS Pumps are operating,
   THEN verify CS Discharge Valves CS 1530 and CS 1531, go to the THROTTLE position.

9. Verify BOTH HPI Pump Minimum Recirc Valves are closed:

   _____ • HP 31

   _____ • HP 32

DAVIS-BESSE NUCLEAR POWER STATION
JOB PERFORMANCE MEASURE WORKSHEET

TASK NO.: 000-058-05-0100

TASK DESCRIPTION: Transfer LPI Suction to the Emergency Sump

K/A REFERENCE: 011-XXX-EA1.11

APPLICABLE METHOD OF TESTING: Actual performance
                                    Simulator

TIME FOR COMPLETION: 6 minutes

APPLICABILITY: [X] RO   [X]   SRO   [ ]   NLO

TASK STANDARDS:

1.   DHR/LPI pumps suction transferred to the CTMT sump.
2.   Low pressure injection flow maintained.

REQUIRED MATERIALS:

DB-OP-02000, RPS, SFAS, SFRCS Trip and SG Tube Rupture

GENERAL REFERENCES:

DB-OP-02000, RPS, SFAS, SFRCS Trip and SG Tube Rupture

INITIAL CONDITIONS:

A large break LOCA has occurred and the BWST level is approaching nine feet.
Both MU pumps and HPI pumps have been stopped IAW Specific Rule 3.4.1.
Section 1 of Attachment 7 of DB-OP-02000 has been completed

INITIATING CUES:

Annunciator "BWST LO-LO LVL, XFER TO EMER SUMP" (5-3-A) has been received.

You have been directed to transfer LPI suction to the emergency sump in
accordance with DB-OP-02000, Attachment 7, Section 2.

INITIAL CONDITIONS:

A large break LOCA has occurred and the BWST level is approaching nine feet.

Both MU pumps and HPI pumps have been stopped IAW Specific Rule 3.4.1.

Section 1 of Attachment 7 of DB-OP-02000 has been completed

INITIATING CUES:

Annunciator "BWST LO-LO LVL, XFER TO EMER SUMP" (5-3-A) has been received.

You have been directed to transfer LPI suction to the emergency sump in accordance with DB-OP-02000, Attachment 7, Section 2.

PERFORMANCE INFORMATION

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

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                                        START TIME:  _____
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1. PERFORMANCE STEP: Locate the correct procedure section.

    STANDARD: Identifies DB-OP-02000, RPS, SFAS, SFRCS Trip and SG Tube
               Rupture, Attachment 7, as correct procedure and section.

    COMMENT: Hand examinee a copy of Attachment 7.

    CUE: **None.**

                                                            SAT   UNSAT

2. PERFORMANCE STEP: Verify both MU pumps are stopped.

    STANDARD: Verify both MU pump Green lights LIT on control switches HIS
               MU24A and HIS MU24B.

    CUE: **None.**

                                                            SAT   UNSAT

3. PERFORMANCE STEP: Depress OFF and Transfer MU pump suctions to the MU
    ....C........ tank.

    STANDARD: Verify White lights LIT on HIS 3971 and HIS 6405.

    CUE: **None.**

                                                            SAT   UNSAT

4. PERFORMANCE STEP: Verify Section 1 of Attachment 7 of DB-OP-02000 has
                       been completed.

    STANDARD: Verify per cue sheet section 1 is complete.

    CUE: **(If asked) Please read cue sheet.**

                                                            SAT   UNSAT

5. PERFORMANCE STEP: Block SFAS incident Level 2 on DH 7A, DH 9A, DH 7B and
    ....C........   DH 9B.

    STANDARD: Push block pushbuttons on SFAS panel for DH 7A and DH 7B, or
                DH 9A and DH 9B.

    COMMENT: When DH 7A(B) are blocked, DH9A(B) get blocked also. The next
                two steps must performed in sequence.

    CUE: **None.**

                                                            _____
                                                            SAT   UNSAT
    _____

6. PERFORMANCE STEP: Open DH 9A and DH 9B using HIS DH9A and HIS DH9B.
    ....C........

    STANDARD: Depress the OPEN pushbuttons on HIS DH9A and HIS DH9B.

    CUE: **None.**

                                                            _____
                                                            SAT   UNSAT
    _____

7. PERFORMANCE STEP: Check that DH 7A and DH 7B start to close as DH 9A and
                        DH 9B start to open.

    STANDARD: Observe DH 7A and DH 7B valve indication lights are both OFF.

    CUE: **None.**

                                                            _____
                                                            SAT   UNSAT
    _____

8. PERFORMANCE STEP: Verify the transfer is complete.

    STANDARD: Check the RED indicating lights on HIS DH9A and HIS DH9B are
                LIT, and the GREEN indicating lights on HIS DH7A and HIS DH7B
                are LIT. Verify low pressure injection flow has not
                significantly changed.

    CUE: **None.**

                                                            _____
                                                            SAT   UNSAT

9. PERFORMANCE STEP: If CS pumps are operating verify discharge valves go
                       to the throttle position.

    STANDARD: Check CS pump status, and verify IL 1530 and IL 1531 are LIT.

    CUE: **None.**

                                                        _____
                                                        SAT   UNSAT

10. PERFORMANCE STEP: Verify both HPI pump Minimum Recirc Valves, HP 32 and
    ....C........ HP 31, are closed.

    STANDARD: Depress the CLOSE pushbutton on HIS HP32 and HIS HP31.

    CUE: **None.**

                                                        _____
                                                        SAT   UNSAT

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

                                                        _____
                                                        END TIME

VERIFICATION OF COMPLETION

Operator _____ Evaluator_____

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained   Yes _____   No _____   N/A _____

Result: [ ]   SATISFACTORY [ ]   UNSATISFACTORY

        NOTE: An " Unsatisfactory" requires Comment and will require
        subsequent remedial training.

Comments/Feedback:_____

_____

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_____/_____
       Evaluator's Signature   Date

JOB PERFORMANCE MEASURE COVER SHEET

Davis Besse Nuclear Power Station

TITLE: Re-energize D2 Bus from C1 Bus and Start MDFP

JPM: OPS-JPM-039

REVISION: 0   **EFFECTIVE DATE:**

SYSTEM:	004	**TIME CRITICAL:**	N
ALTERNATE PATH:	Y	**SAFETY FUNCTION:**	6
SIM IC:	205	**ESTIMATED SET-UP TIME:**	15
SETTING:	S	**VALIDATED:**	Y

TASK STANDARDS:

Recognize Station Blackout DG will not Start
D2 Bus re-energized from C1 bus. DG1 running within rated limits.
MDFP running on D2 and auxiliaries being supplied from F71.

JOB PERFORMANCE MEASURE COVER SHEET

Davis Besse Nuclear Power Station

TITLE: Re-energize D2 Bus from C1 Bus and Start MDFP

JPM: OPS-JPM-039

REVISION: 0   **EFFECTIVE DATE:**

ESTIMATED TIME: 20 minutes   **TIME CRITICAL:** N

TASKS:

Task	Task Description
000-046-05-0100	PERFORM REQUIRED SUPPLEMENTARY ACTIONS FOR AN RPS,SFAS OR SFRCS TRIP OR A SGTR
000-050-05-0100	PERFORM NECESSARY ACTIONS FOR LACK OF FEEDWATER DURING LACK OF HEAT TRANSFER

K/A DATA:

054AA1.02 Rev: 2	055EA2.03 Rev: 2
056AA2.37 Rev: 2	062A2.04 Rev: 2
062A2.11 Rev: 2	

MATERIALS/EQUIPMENT:

VALID REFERENCES:

OTHER REFERENCES:

DB-OP-02000.06, RPS, SFAS, SFRCS Trip or SG Tube Rupture, Attachments 1 and 2

COMMENTS:

PREPARED BY:	**Date:**
TECHNICAL REVIEW BY:	**Date:**
INSTRUCTIONAL REVIEW BY:	**Date:**
APPROVED BY:	**Date:**

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Recognize Station Blackout DG will not Start

Re-energize D2 Bus from C1 bus and Start MDFP

INITIAL CONDITION:

Any at-power I.C.

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

1. Loss of OFF-SITE power - IMF P8RFC.
2. Trip EDG 2 and lockout (differential or overspeed), using - IMF G532G or IMF G528B.
3. Trip AFPT 2 using - IRF SFEQA Trip.

MALFUNCTIONS/FAILURE TO INSERT:

Fail SBODG to START use of AIR START RELAY - IMF GB07A.

ACTION/CUES:

2. Cue: **(Desired breaker) is open.**

INITIAL CONDITIONS:

The reactor has tripped from 100% power.

A loss of offsite power has occurred.

DG1 is supplying C1 Bus.

EDG 2 has failed to start and efforts to start it have failed.

AFPT 2 has tripped and efforts to reset it have failed.

INITIATING CUES:

You are directed to re-energize D2 from SBODG and start the MDFP, using
Attachment 1 of DB-OP-02000.

PERFORMANCE INFORMATION

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

START TIME: _____

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1. PERFORMANCE STEP: Locate the correct procedure.

    STANDARD: Identifies DB-OP-02000, RPS, SFAS, SFRCS Trip or SG Tube
               Rupture, Attachment 1, Section A, as correct procedure.

    COMMENTS: Hand copy of DB-OP-02000, Attachments 1 and 2, to the
               examinee.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

2. PERFORMANCE STEP: Routes to the correct attachment.

    STANDARD: Routes to DB-OP-02000, RPS, SFAS, SFRCS Trip or SG Tube
               Rupture, Attachment 2, Section 2.0, as correct procedure.

    CUE: **(If asked) The Shift Manager directs you to uses the SBODG to
               re-energize D2.**

                                                              _____
                                                              SAT   UNSAT

3. PERFORMANCE STEP: Verify OPEN the breakers on D2 bus.

    STANDARD: Verify the following breakers are open: AD301, ABDD2, AD205,
               AD206, AD201, AD202, AD204, AD207 and AD210. May elect to
               have EO locally check breakers, some or all.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

4. PERFORMANCE STEP: Verify open AD110.

    STANDARD: Verify AD110 is OPEN.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

5. PERFORMANCE STEP: Start SBODG.

    STANDARD: Press START on SBODG Control Panel.

    COMMENT: SBODG will not start.

    CUE: **(If asked) Shift Manager directs the operator to re-energize
               D2 Bus from C1 Bus and start MDFP.**

                                                          _____
                                                          SAT   UNSAT
_____

6. PERFORMANCE STEP: Routes to the correct attachment.

    STANDARD: Routes to DB-OP-02000, RPS, SFAS, SFRCS Trip or SG Tube
               Rupture, Attachment 2, Section 4.0, as correct procedure.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT
_____

7. PERFORMANCE STEP: Verify OPEN the breakers on D2 bus.

    STANDARD: Verify the following breakers are open: AD301, ABDD2, AD205,
               AD206, AD201, AD202, AD204, AD207 and AD210. May elect to
               have EO locally check breakers, some or all.

    COMMENT: Examinee may not repeat this step, verified previously.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT
_____

8. PERFORMANCE STEP: Verify open AD110.

    STANDARD: Verify AD110 is OPEN.

    COMMENT: Examinee may not repeat this step, verified previously.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT
_____

9. PERFORMANCE STEP: Verify open HBBD.
    ....C........

    STANDARD: OPEN breaker HBBD using HIS 6214.

    COMMENT: This step must be performed prior to steps 7 and 8.

    CUE: **None.**

    _____
                                                SAT   UNSAT

10. PERFORMANCE STEP: Verify open AC110.

    STANDARD: Verify AC110 is OPEN.

    CUE: **None.**

    _____
                                                SAT   UNSAT

11. PERFORMANCE STEP: Place C1 Sync Select switch in the Bkr to XBD
    ....C........ position.

    STANDARD: Rotate the C1 Sync Select switch, HS 6221, to the Bkr to XBD
                position.

    COMMENT: This steps 11, 12 and 13 must be performed in sequence.

    CUE: **None.**

    _____
                                                SAT   UNSAT

12. PERFORMANCE STEP: Close ABDC1.
    ....C........

    STANDARD: HIS 6220 (ABDC1) rotated to CLOSE.

    CUE: **None.**

    _____
                                                SAT   UNSAT

13. PERFORMANCE STEP: Place C1 Sync Select switch in OFF.

    STANDARD: Rotate the C1 Sync Select switch, HS 6221, to off.

    CUE: **None.**

    _____
                                                SAT   UNSAT

14. PERFORMANCE STEP: Close ABDD2.
    ....C........

    STANDARD: ABDD2 (HIS 6228) rotated to CLOSE.

    COMMENT: This step must be performed prior to the rest of the steps.

    CUE: **None.**

    _____
                                        SAT   UNSAT

15. PERFORMANCE STEP: Verify D2 is energized.

    STANDARD: Approximately 4160 V is indicated on D2.

    CUE: **None.**

    _____
                                        SAT   UNSAT

16. PERFORMANCE STEP: Energize F7.
    ....C........

    STANDARD: HIS 6463 (AD2DF7) and HIS 6464 (BDF7) rotated to CLOSE.

    COMMENT: Only critical if previously opened.

    CUE: **None.**

    _____
                                        SAT   UNSAT

17. PERFORMANCE STEP: Verify EDG 1 is loaded to less than 2250 KW and locate
                        the correct procedure.

    STANDARD: Determine EDG 1 loading is less than 2250 KW. Identify
                DB-OP-02000, RPS, SFAS, SFRCS Trip or SG Tube Rupture,
                Attachment 1, Section A as the correct procedure.

    CUE: **None.**

    _____
                                        SAT   UNSAT

18. PERFORMANCE STEP: Ensure the MDFP is aligned to the AFW System.

    STANDARD: Visual check of manual valve position indicating lights.

    CUE: **None.**

    _____
                                        SAT   UNSAT

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19. PERFORMANCE STEP: Enable and close both MDFP discharge valves.
    ....C........

    STANDARD: Control power "ON" switches for HIS 6459 and HIS 6460 pushed.
                Reduce the demand on LIC 6459 and LIC 6460 to zero.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

20. PERFORMANCE STEP: Start the MDFP.
    ....C.......

    STANDARD: Rotate handswitch HIS 579 to START.

    COMMENT: There is a short time delay before the pump starts. After
                switch HIS 579 is rotated to START, wait 10-15 seconds before
                providing MDFP status CUES to the trainee.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

21. PERFORMANCE STEP: Establish feedwater flow to the Steam Generators at
    ....C........   less than 1000 gpm total flow.

    STANDARD: Total feedwater flow to both S/Gs < 1000 gpm.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

22. PERFORMANCE STEP: Verify proper
            SG levels per Specific Rule 4.

    STANDARD: Maintain maximum flow.

    CUE: **Another RO will maintain SG levels.**

                                                              _____
                                                              SAT   UNSAT

23. PERFORMANCE STEP: Contact an EO
            to realign AFW minimum recirc back to the CST.

    STANDARD: Contact an EO.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

TERMINATING CUES: Trainee should report the task is complete.

                                                              _____
                                                              END TIME

VERIFICATION OF COMPLETION

Operator _____ Evaluator_____

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained   Yes _____   No _____   N/A _____

Result: [ ] SATISFACTORY   [ ] UNSATISFACTORY

        NOTE: An " Unsatisfactory" requires Comment and will require
             subsequent remedial training.

Comments/Feedback:_____

_____

_____

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_____

_____

_____

_____

_____

_____/_____
       Evaluator's Signature   Date

TASK NO.: 000-045-05-0100

TASK DESCRIPTION: Borate the Makeup Tank per Attachment 13 of DB-OP-02000

K/A REFERENCE:

APPLICABLE METHOD OF TESTING: Actual performance
Simulator

TIME FOR COMPLETION: 10 minutes

APPLICABILITY: [X] RO   [X] SRO

TASK STANDARDS:

REQUIRED MATERIALS:

DB-OP-02000, **RPS, SFAS, SFRCS Trip or SG Tube Rupture,** Attachment 13

GENERAL REFERENCES:

DB-OP-02000, **RPS, SFAS, SFRCS Trip or SG Tube Rupture,** Attachment 13

INITIAL CONDITIONS:

Reactor trip in Mode 3.

INITIATING CUES:

A reactor trip occurred 30 minutes ago. The makeup pump suctions have been
transferred back to the makeup tank. You have been directed to add
50 gallons of acid to the makeup tank using BA Pump 1, per Attachment 13 of
DB-OP-02000.

INITIAL CONDITIONS:

Reactor trip in Mode 3.

INITIATING CUES:

A reactor trip occurred 30 minutes ago. The makeup pump suctions have been
transferred back to the makeup tank. You have been directed to add
50 gallons of acid to the makeup tank using BA Pump 1, per Attachment 13 of
DB-OP-02000.

PERFORMANCE INFORMATION

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

```
                                          START TIME:  _____
```

---

1. PERFORMANCE STEP: Verify MU 39, Batch Flow Contorl Valve, is closed.
    ....C........

    STANDARD: On the batch controller, press VALVE SET, then ACK (" 0"),
               then ENTER.

    CUE: **None.**

                                                              SAT   UNSAT

2. PERFORMANCE STEP: Verify MU 23, Flow Control, is closed.
    ....C........

    STANDARD: Verify MU 23, Flow Control, is closed.

    CUE: **None.**

                                                              SAT   UNSAT

3. PERFORMANCE STEP: Verify WC 3526, Booster System Bypass, is closed using
    ....C........ HIS 3526.

    STANDARD: Verify WC 3526, Booster System Bypass, is closed using
               HIS 3526.

    CUE: **None.**

                                                              SAT   UNSAT

4. PERFORMANCE STEP: Set batch controller to desired batch size.
    ....C........

    STANDARD: On the batch controller, press BATCH SET, then press number
               keys equating to desired batch size in gallons, then press
               ENTER. Exit BATCH SET mode by pressing DISPLAY (" Lower").
               Display batch size in lower display by pressing BATCH (" 4").

    CUE: **None.**

                                                              SAT   UNSAT

5. PERFORMANCE STEP: Reset the indicated total on the batch controller.
   ....C........

   STANDARD: On the batch controller, press DISPLAY (" Lower"), then press
             TOTAL (" 7"), then press TOTAL RESET (" 6").

   CUE: **None.**

   _____
   SAT   UNSAT

6. PERFORMANCE STEP: Display flow rate in the upper display.
   ....C........

   STANDARD: On the batch controller, press DISPLAY (" upper"), then press
             RATE (" 8").

   CUE: **None.**

   _____
   SAT   UNSAT

7. PERFORMANCE STEP: Notify the Control Room SRO that the batch controller
                      is aligned for boric acid addition.

   STANDARD: Control Room SRO notified.

   CUE: **None.**

   _____
   SAT   UNSAT

8. PERFORMANCE STEP: Enable the batch controller.
   ....C........

   STANDARD: Enable batch controller by pressing RUN.

   CUE: **None.**

   _____
   SAT   UNSAT

9. PERFORMANCE STEP: Open MU 40, BATCH ISO, using HIS MU 40.
   ....C........

   STANDARD: Open MU 40, BATCH ISO, using HIS MU 40.

   CUE: **None.**

   _____
   SAT   UNSAT

10. PERFORMANCE STEP: Start the desired boric acid pump.
    ....C........

    STANDARD: Start Boric Acid Pump 1 using HIS MU50A.

    CUE: **None.**

    _____
    SAT   UNSAT

11. PERFORMANCE STEP: Throttle boric acid flow.
    ....C........

    STANDARD: Throttle boric acid flow with MU 23, FLOW CONTROL, HC MU23,
               while observing flow indication on the upper display of the
               batch controller.

    CUE: **None.**

    _____
    SAT   UNSAT

12. PERFORMANCE STEP: Stop the running boric acid pump.
    ....C........

    STANDARD: Stop Boric Acid Pump 1 using HIS MU50A, after desired batch
               has been added.

    CUE: **None.**

    _____
    SAT   UNSAT

13. PERFORMANCE STEP: Close MU 23, FLOW CONTROL, using HC MU 23.

    STANDARD: Close MU 23, FLOW CONTROL, using HC MU 23.

    CUE: **None.**

    _____
    SAT   UNSAT

14. PERFORMANCE STEP: Verify MU 40, BATCH ISO, is closed using HIS MU 40.

    STANDARD: Verify MU 40, BATCH ISO, is closed using HIS MU 40.

    CUE: **None.**

    _____
    SAT   UNSAT

TERMINATING CUES: This JPM is complete.

    _____
    END TIME

VERIFICATION OF COMPLETION

Operator _____   Evaluator _____

SSN   _____   Date   _____

License: [ ] RO   [ ] SRO

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained: Yes   No   N/A

Result: [ ] SATISFACTORY   [ ] UNSATISFACTORY

          NOTE: An "Unsatisfactory" requires Comment and will require
                 subsequent remedial training.

Comments/Feedback: _____

_____

_____

_____

_____

_____

_____

_____

                        _____/_____
                        Evaluator's Signature   Date

JPM NO.: B.1.E   Rev. 00   Page 1 of 5

TASK NO.: 012-003-01-0100

TASK DESCRIPTION: Manually Trip an RPS Channel

K/A REFERENCE: 012-XXX-A4.0, 012-XXX-A4.04

APPLICABLE METHOD OF TESTING: Actual Performance
Simulator

TIME FOR COMPLETION: 8 minutes

APPLICABILITY: [X] RO   [X] SRO   [ ] NLO

TASK STANDARDS:

Identify CTMT high pressure module will not trip, trip RPS Channel 2 by using the RCS Flow Test Module.

REQUIRED MATERIALS:

DB-OP-06403, RPS and NI Operating Procedure

GENERAL REFERENCES:

DB-OP-06403, RPS and NI Operating Procedure

INITIAL CONDITIONS:

Inform operator of Mode.

INITIATING CUES:

Channel 2 of the RPS is inoperable due to an out-of-specification power-to-pumps B/S setting. The Shift Manager directs you to trip Channel 2 of the RPS on CTMT pressure per DB-OP-06403, RPS and NI Operating Procedure.

(Hand examinee a copy of DB-OP-06403)

INITIAL CONDITIONS:

The plant is in Mode 1.

INITIATING CUES:

Channel 2 of the RPS is inoperable due to an out-of-specification
power-to-pumps B/S setting. The Shift Manager directs you to trip Channel 2
of the RPS on CTMT pressure per 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
        required unless denoted in the "Comments".

START TIME: _____

---

1. PERFORMANCE STEP: Locate the correct procedure section.

    STANDARD: Identifies Section 4.1, as correct procedure section.

    COMMENT: Hand procedure to examinee. When correct procedure section
                has been located, provide CUE to trainee.

    CUE: **All prerequisites are complete.**

                                                              SAT   UNSAT

2   PERFORMANCE STEP: Obtain the door key to RPS Channel 2.
    ....C........

    STANDARD: Obtain correct key from Control Room Simulator key cabinet.

    CUE: **None.**

                                                              SAT   UNSAT

3. PERFORMANCE STEP: Depress the TEST toggle switch for HIGH BUILDING PRESS
    ....C........   CONTACT BUFFER module and determine that RPS Channel 2
                        did NOT trip.

    STANDARD: Depress and hold the TEST toggle switch for the HIGH BUILDING
                PRESS CONTACT BUFFER module. Individual recognizes that TEST
                switch did NOT trip channel.

    CUE: **None.**

    NOTE: If failure is NOT detected, channel will not be tripped and
                individual will continue with HIGH BUILDING PRESS CONTACT
                BUFFER module section. Provide cues as required.

                                                              SAT   UNSAT

4. PERFORMANCE STEP: Informs Shift Manager (SM).

    STANDARD: Informs SM that RPS Channel 2 High Building Pressure will not
                trip.

    CUE: **If asked, Shift Manager directs you to "TRIP" RPS Channel 2
                using RCS FLOW Test Module.**

                                                              SAT   UNSAT

5. PERFORMANCE STEP: Place the RPS Flow module TEST Selector Switch (TSS)
    ....C........ in TEST OPERATE.

    STANDARD: Rotate TSS for RCS Flow test module to TEST OPERATE.

    CUE: **None.**

    ———————————
    SAT   UNSAT

6. PERFORMANCE STEP: Verify RPS channel tripped.

    STANDARD: Verify the ON TEST light is BRIGHT and the PROTECTIVE
               SUB-SYSTEM light is BRIGHT.

    CUE: **None.**

    ———————————
    SAT   UNSAT

7. PERFORMANCE STEP: Lock the doors and return key.

    STANDARD: Doors locked and key returned.

    CUE: **None.**

    ———————————
    SAT   UNSAT

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

    ———————————
    END TIME

VERIFICATION OF COMPLETION

Operator _____ Evaluator_____

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained   Yes _____   No _____   N/A _____

Result: [ ] SATISFACTORY [ ] UNSATISFACTORY

        NOTE: An " Unsatisfactory" requires Comment and will require
        subsequent remedial training.

Comments/Feedback:_____

_____

_____

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_____

_____/_____
      Evaluator's Signature   Date

JPM NO.: B.1.F   Rev. 00   Page 1 of 6

TASK NO.: 029-007-01-0100

TASK DESCRIPTION: Purge the Penetration Rooms

K/A REFERENCE:

APPLICABLE METHOD OF TESTING: Actual performance
                                   Simulator

TIME FOR COMPLETION: 10 minutes

APPLICABILITY: [X] RO   [X] SRO

TASK STANDARDS:

Start CTMT purge on the penetration rooms

REQUIRED MATERIALS:

DB-OP-06503, **CTMT Purge System Procedure**

GENERAL REFERENCES:

DB-OP-06503, **CTMT Purge System Procedure**

INITIAL CONDITIONS:

The plant is at 100% power. Maintenance on CTMT purge has just been
completed.

INITIATING CUES:

You have been directed to start CTMT purge on the penetration rooms.

TASK NO.: 029-007-01-0100

TASK DESCRIPTION: Purge the Penetration Rooms

K/A REFERENCE:

APPLICABLE METHOD OF TESTING: Actual performance
                                   Simulator

TIME FOR COMPLETION: 10 minutes

APPLICABILITY: [X] RO   [X] SRO

TASK STANDARDS:

Start CTMT purge on the penetration rooms

REQUIRED MATERIALS:

DB-OP-06503, **CTMT Purge System Procedure**

GENERAL REFERENCES:

DB-OP-06503, **CTMT Purge System Procedure**

INITIAL CONDITIONS:

The plant is at 100% power. Maintenance on CTMT purge has just been
completed.

INITIATING CUES:

You have been directed to start CTMT purge on the penetration rooms.

INITIAL CONDITIONS:

The plant is at 100% power. Maintenance on CTMT purge has just been
completed.

INITIATING CUES:

You have been directed to start CTMT purge on the penetration rooms.

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Start CTMT purge on penetration rooms.

INITIAL CONDITION:

100% power

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITIONS:

CTMT purge off all supply and exhaust valves closed.

MALFUNCTIONS/FAILURE TO INSERT:

None

ACTION/CUES:

None

JPM STEP NUMBER   CUE

PERFORMANCE INFORMATION

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

+--+
| |
| START TIME: _____ |
| |
+--+

1. PERFORMANCE STEP: Identifies correct proceudre and section.

    STANDARD: Identifies DB-OP-06503, Section 3.3 as the correct procedure
               and section.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT

2. PERFORMANCE STEP: Complete prerequisites.

    STANDARD: Verify Steps 3.3.1 to 3.3.3 are complete.

    CUE: **Prerequisites are complete.**

                                                          _____
                                                          SAT   UNSAT

3. PERFORMANCE STEP: Make plant announcement.

    STANDARD: Announce over Gai-Tronics starting Mechanical Penetration Room
               Purge System.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT

4. PERFORMANCE STEP: Verify proper valve alignment.
    ....C........

    STANDARD: Verify open CV 5009, 5016, 5004, and 5021.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT

5. PERFORMANCE STEP: Determine if roll media filter is required.

    STANDARD: Refer to Limit and Precaution 2.2.4 to determine if roll media
               filter is required.

    CUE: **Roll media filter is NOT required.**

                                                          _____
                                                          SAT   UNSAT

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

    STANDARD: Place HIS 5013 CTMT Purge Exhaust System to START.

    CUE: **None.**

                                                    SAT   UNSAT

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

    STANDARD: Place HIS 5003 CTMT Purge Supply System to START after CTMT
               purge exhaust fan starts.

    CUE:

                                                    SAT   UNSAT

8. PERFORMANCE STEP: Verify system starts.

    STANDARD: Check that both the supply and exhaust fans have started.

    CUE: **None.**

                                                    SAT   UNSAT

9. PERFORMANCE STEP: Verify RE 5052 is in service.

    STANDARD: Verify RE 5052 is in service.

    CUE: **RE 5052 is in service.**

                                                    SAT   UNSAT

TERMINATING CUES: This JPM is complete.

                                                    END TIME

VERIFICATION OF COMPLETION

Operator _____   Evaluator _____

SSN   _____   Date   _____

License: [ ] RO   [ ] SRO

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained: Yes   No   N/A

Result: [ ] SATISFACTORY   [ ] UNSATISFACTORY

> NOTE: An "Unsatisfactory" requires Comment and will require
>   subsequent remedial training.

Comments/Feedback: _____

_____

_____

_____

_____

_____

_____

_____

_____/_____
                Evaluator's Signature   Date

JPM NO.: B.1.G   Rev. 05   Page 1 of 6

TASK NO.: 013-005-05-0100

TASK DESCRIPTION: Manually Initiate SFAS

K/A REFERENCE: 013-XXX-A4.02 4.3/4.4, 013-XXX-A4.03 4.5/4.7

APPLICABLE METHOD OF TESTING: Actual Performance
                                  Simulator

TIME FOR COMPLETION: 7 minutes

APPLICABILITY: [X] RO   [X]   SRO   [ ]   NLO

TASK STANDARDS:

Actuation of SA Levels 1-4 components for both channels.
Reclose the following valves:
1. Post accident sampling valves
2. Pressurizer and Quench Tank sample valves
3. Letdown isolation
CTMT spray manually actuated.

REQUIRED MATERIALS:

DB-OP-06405, Safety Features Actuation System Procedure, Revision 02, C-9
DB-OP-02000, RPS, SFAS, SFRCS Trip or SG Tube Rupture, Revision 06

GENERAL REFERENCES:

DB-OP-06405, Safety Features Actuation System Procedure, Revision 02, C-9

INITIAL CONDITIONS:

A loss of coolant accident has occurred.
CTMT sample valves CV 5010A through E and CV 5011A through E have been
blocked and reopened.
PZR and quench tank sample valves, RC 240A, RC 240B, RC 232 have been blocked
and reopened.
MU2A and MU3 have been blocked and reopened.

INITIATING CUES:

Due to a change in leak size, RCS pressure is dropping rapidly and CTMT
pressure is increasing rapidly.
The Shift Manager directs you to manually actuate all SFAS components
including CTMT spray.

INITIAL CONDITIONS:

A loss of coolant accident has occurred.

CTMT sample valves CV 5010A through E and CV 5011A through E have been blocked and reopened.

PZR and quench tank sample valves, RC 240A, RC 240B, RC 232 have been blocked and reopened.

MU2A and MU3 have been blocked and reopened.

INITIATING CUES:

Due to a change in leak size, RCS pressure is dropping rapidly and CTMT pressure is increasing rapidly.

The Shift Manager directs you to manually actuate all SFAS components including CTMT spray.

PERFORMANCE INFORMATION

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

+---+
| |
| START TIME: _____ |
| |
+---+

1. PERFORMANCE STEP: Locate the correct procedure section.

    STANDARD: Identifies DB-OP-06405, SFAS System Procedure, Section 5.2, or
               DB-OP-02000, Attachment 9, as the correct procedure section.

    COMMENT: Operator may elect to perform from memory or from CTRM
               operator aid. If DB-OP-06405 is used then hand trainee a copy
               of the procedure.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT____

2. PERFORMANCE STEP: Depress the SFAS reset pushbuttons.
    ....C........

    STANDARD: Push RESET on HIS 2022B and HIS 2023B.

    COMMENT: SFAS Channel 2 will NOT reset, and is <u>NOT</u> critical.
               Channel 1 <u>NOT</u> critical if examinee actuates at the component
               level for Channel 1. Step 5 would become critical with
               standard to push CLOSE on the listed switches.

    CUE: **None.**

                                                          _____
                                                          SAT   UNSAT____

3. PERFORMANCE STEP: Determine SFAS Actuation Channel 2 did not reset.

    STANDARD: Visual observation that SFAS Actuation Channel 2 equipment did
               not reposition.

    CUE: **If asked, Shift Manager directs the operator to manually place all
           SFAS components in their SFAS position.**

                                                          _____
                                                          SAT   UNSAT____

---

4. PERFORMANCE STEP: Trip SFAS Actuation Channel 1 and 2 for all components
                        except CTMT spray.
    ....C........

    STANDARD: Push TRIP on HIS 2022A and HIS 2023A.

    COMMENT: Operator may not perform all of this step since RESET was
               unsuccessful for Channel 2.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

---

5. PERFORMANCE STEP: CLOSE CV 5011A through E, RC 240A, and MU 2A.

    STANDARD: Visually verify CLOSED HIS 5011A, HIS 5011B, HIS 5011C,
                HIS 5011D, HIS 5011E, HIS 240A, and HIS MU2A.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

---

6. PERFORMANCE STEP: CLOSE CV 5010A through E.
    ....C........

    STANDARD: Push CLOSE on HIS 5010A, HIS 5010B, HIS 5010C, HIS 5010D,
                HIS 5010E.

    COMMENT: Also acceptable is to RESET SFAS Output Modules L122 and L124.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

---

7. PERFORMANCE STEP: CLOSE RC 240B, RC 232 and MU 3.
    ....C........

    STANDARD: Push CLOSE on HIS 240B, HIS 232 and HIS MU3.

    COMMENT: Also acceptable to RESET SFAS Output Modules L272 and L274 for
               RC 240B, L282 and L284 for RC 232, and L272 and L274 for MU3.

    CUE: **None.**

                                                              _____
                                                              SAT   UNSAT

---

8. PERFORMANCE STEP: Manually actuate CTMT spray.
    ....C........

    STANDARD: Push TRIP on HIS 2020A and HIS 2021A.

    COMMENT: Also acceptable to manually start spray pumps and verify open
              discharge valves.

    CUE: **None.**

                                                  _____
                                                  SAT   UNSAT

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

                                                  _____
                                                  END TIME

VERIFICATION OF COMPLETION

Operator _____ Evaluator_____

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained   Yes _____   No _____   N/A _____

Result: [ ]   SATISFACTORY [ ]   UNSATISFACTORY

          NOTE: An " Unsatisfactory" requires Comment and will require
                subsequent remedial training.

Comments/Feedback:_____

_____

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_____

_____

_____

                    _____/_____
                    Evaluator's Signature   Date

JOB PERFORMANCE MEASURE COVER SHEET

Davis Besse Nuclear Power Station

TITLE: Serious Control Room Fire, Primary Side Reactor Operator Actions Inside RRA

JPM: OPS-JPM-003

REVISION: 0

EFFECTIVE DATE:

SYSTEM:	067	**TIME CRITICAL:**	N
ALTERNATE PATH:	N	**SAFETY FUNCTION:**	2
SIM IC:	N/A	**ESTIMATED SET-UP TIME:**	N/A
SETTING:	I	**VALIDATED:**	Y

TASK STANDARDS:

JOB PERFORMANCE MEASURE COVER SHEET

Davis Besse Nuclear Power Station

TITLE: Serious Control Room Fire, Primary Side Reactor Operator Actions Inside RRA

JPM: OPS-JPM-003

REVISION: 0   **EFFECTIVE DATE:**

ESTIMATED TIME: 30 Minutes   **TIME CRITICAL:** N

TASKS:

Task	Task Description
000-078-05-0100	PERFORM REQUIRED OPERATOR ACTIONS OUTSIDE THE CON-TROL ROOM FOR A SERIOUS CONTROL ROOM FIRE.
086-016-04-0100	PERFORM REQUIRED OPERATOR ACTIONS FOR FIRE IN THE PLANT

K/A DATA:

068AA1.06 Rev: 2   068AA1.21 Rev: 2

068AA1.28 Rev: 2

MATERIALS/EQUIPMENT:

VALID REFERENCES:

OTHER REFERENCES:

DB-OP-02519.04,C-5, Serious Control Room Fire

COMMENTS:

PREPARED BY:	Date:
TECHNICAL REVIEW BY:	Date:
INSTRUCTIONAL REVIEW BY:	Date:
APPROVED BY:	Date:

DAVIS-BESSE NUCLEAR POWER STATION
JOB PERFORMANCE MEASURE WORKSHEET

INITIAL CONDITIONS:

The Control Room has been evacuated due to a serious Control Room fire.

INITIATING CUES:

You are directed to perform the actions outside the Control Room of the
Primary Side Reactor Operator for a Serious Control Room Fire. Steps 1.a.
through 1 c. of Attachment 3 have been completed. You have a Captain's
lantern, a radio and fresh battery and an emergency key ring.

PERFORMANCE INFORMATION

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

START TIME: _____

NOTE: This JPM should be initiated from the Control Room. Entry to the RRA
via the emergency entrance is NOT required.

1. PERFORMANCE STEP: Locate the correct procedure attachment.

    STANDARD: Identifies Attachment 3 as correct attachment.

    CUE: None.

                                                                   SAT   UNSAT

2. PERFORMANCE STEP: Close AF 599, Steam GEN 2 Aux Feedwater Line Stop
    ....C........   Valve.

    STANDARD: CLOSE AF 599 using handwheel.

    CUE: AF 599 handwheel has been rotated clockwise. Position
               indicates closed.

                                                                   SAT   UNSAT

3. PERFORMANCE STEP: Place disconnect switches to LOCAL on CDYE2.
    ....C........

    STANDARD: Place all CDYE2 disconnect switches in the LOCAL position.

    NOTE: Trainee should verbalize each disconnect switch that is being
               repositioned.

    CUE: Disconnect switch _____ has been placed in the LOCAL position
               on CDYE2.

                                                                   SAT   UNSAT

4. PERFORMANCE STEP: Place disconnect switches to LOCAL on CDE11A.
    ....C........

    STANDARD: Place all CDE11A disconnect switches in LOCAL position.

    NOTE: Trainee should verbalize each disconnect switch that is being
               repositioned.

    CUE: Disconnect switch _____ has been placed in the LOCAL position
               on CDE11A.

                                                                   SAT   UNSAT

5. PERFORMANCE STEP: Place disconnect switches to LOCAL on CDE11C.
    ....C........

    STANDARD: Place all CDE11C disconnect switches in LOCAL position.

    NOTE: Trainee should verbalize each disconnect switch that is being
               repositioned.

    CUE: **Disconnect switch _____ has been placed in the LOCAL position
               on CDE11C.**

                                                              SAT   UNSAT

6. PERFORMANCE STEP: Place disconnect switches to LOCAL on CDE11B-1.
    ....C........

    STANDARD: Place all CDE11B-1 disconnect switches in LOCAL position.

    NOTE: Trainee should verbalize each disconnect switch that is being
               repositioned.

    CUE: **Disconnect switch _____ has been placed in the LOCAL position
               on CDE11B-1.**

                                                              SAT   UNSAT

7. PERFORMANCE STEP: Place disconnect switches to LOCAL on CDE11B-2.
    ....C........

    STANDARD: Place the following disconnect switches in LOCAL at CDE11B-2,
               MU 59C, MU 59D, RC 240A, CC1407A, and DH 12.

    CUE: **MU 59C disconnect switch is placed in LOCAL.**
               MU 59D disconnect switch is placed in LOCAL.
               RC 240A disconnect switch is placed in LOCAL.
               CC 1407A disconnect switch is placed in LOCAL.
               DH 12 disconnect switch is placed in LOCAL.

                                                              SAT   UNSAT

8. PERFORMANCE STEP: Open BE 1180 on E11B.
    ....C........

    STANDARD: OPEN breaker BE 1180 for YE2 240 VAC MCC on E11B.

    CUE: **BE 1180 breaker handle is placed in OFF (OPEN).**

                                                              SAT   UNSAT

9. PERFORMANCE STEP: Proceed to the Makeup Pump Room and establish
    communications with the Unit Supervisor.

    STANDARD: Communications established with the Unit Supervisor from the
    Makeup Pump Room.

    CUE: **Communications have been established. The Unit Supervisor
                reports Makeup Pump 1 is ready for operation.**

                                                        _____
                                                        SAT   UNSAT

10. PERFORMANCE STEP: Start Makeup Pump (MU Pump 1).
    ....C........

    STANDARD: Press local START Button on NP0371B for MU Pump 1 main oil
    pump (AC).

    CUE: **Local START button (on NP0371B) for MU Pump 1 main oil pump
                has been pressed. Green light goes OFF; Red light LIGHTS.**

                                                        _____
                                                        SAT   UNSAT

11. PERFORMANCE STEP: Start the Makeup Pump (cont.).

    STANDARD: Check MU Pump 1 aux. gear LO pump started at NPO371D.

    CUE: **Red light is LIT (on NPO371D).**

                                                        _____
                                                        SAT   UNSAT

12. PERFORMANCE STEP: Start the Makeup Pump (cont.).

    STANDARD: Check 12 gpm CCW flow to MU Pump 1 Oil Cooler at FI 2190.

    CUE: **FI 2190 reads 14 gpm.**

                                                        _____
                                                        SAT   UNSAT

13. PERFORMANCE STEP: Start the Makeup Pump (Cont.).

    STANDARD: Check Main Oil Pump discharge pressure >15 psig on PI MU106B.

    CUE: **PI MU106B reads 23 psig.
                (Communications have been established with the Shift Manager.)**

                                                        _____
                                                        SAT   UNSAT

14. PERFORMANCE STEP: Verify Makeup System is lined up and establish communications with the Shift Manager.

    STANDARD: Wait to be contacted or contact the Safety EO. Contact the Shift Manager.

    CUE: **Safety EO reports the Makeup system is lined up.**

               Communications have been established with the Shift Manager.

                                                              SAT   UNSAT

15. PERFORMANCE STEP: Start the Makeup Pump (cont.).
    ....C........

    STANDARD: CLOSE/START has been pressed on NPO371A to START Makeup Pump 1. Makeup Pump 1 is visually inspected during operation (not critical).

    CUE: **CLOSE/START has been pressed (on NPO371A). Green light goes OFF; Red light LIGHTS.**

               MU Pump 1 is operating normally. All parameters are acceptable.

               Shift Manager directs you to open MU 6420 two turns.

                                                              SAT   UNSAT

16. PERFORMANCE STEP: Throttle MU 6420, NORMAL MAKEUP Flow Controller.
    ....C........

    STANDARD: MU 6420 is throttled to the desired position.

    CUE: **MU 6420 clutch has been engaged. Handwheel has been rotated two turns in the counter clockwise direction.**

               The Equipment Operator notifies you to shift MU Pump recirc to the BWST.

                                                              SAT   UNSAT

17. PERFORMANCE STEP: Open MU 208, High Pressure Line Flow Test Isolation.
    ....C........

    STANDARD: MU 208 is open.

    CUE: **MU 208 valve handwheel rotated counterclockwise to OPEN, valve stem is UP.**

                                                              SAT   UNSAT

18. PERFORMANCE STEP: Close MU 206, MU Pump 1 Recirc Stop to Seal Return.
    ....C........

    STANDARD: Unlocked and closed MU 206.

    CUE: **MU 206 is unlocked, valve handwheel is rotated clock wise,
                valve stem is DOWN.**

                                                            _____
                                                            SAT   UNSAT

19. PERFORMANCE STEP: Notify Equipment Operator to setup MU Pump recirc.
                       flow.

    STANDARD: Equipment Operator notified to setup MU Pump recirc flow.

    CUE: **Equipment Operator acknowledges to setup MU Pump recirc flow.**

                                                            _____
                                                            SAT   UNSAT

20. PERFORMANCE STEP: Notify RP Supervisor posted radiological boundaries
                       have been violated.

    STANDARD: RP Supervisor notified that posted radiological boundaries have
                been violated.

    CUE: **RP Supervisor acknowledges that posted radiological boundaries
                have been violated.**

                                                            _____
                                                            SAT   UNSAT

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

                                                            _____
                                                            END TIME

JPM NO.: B.2.B   Rev. 00   Page 1 of 7

TASK NO.: 076-004-04-0100

TASK DESCRIPTION: Lineup and Start the Backup Service Water Pump During a Loss of all Service Water

K/A REFERENCE: 076-XXX-A2.01

APPLICABLE METHOD OF TESTING: Simulate performance
                                  In-plant

TIME FOR COMPLETION: 15 minutes

APPLICABILITY: [X] RO   [X] SRO   [X] NLO

TASK STANDARDS:

Provide service water flow to the Service Water System, Loop 1, by utilizing the Backup Service Water Pump.

REQUIRED MATERIALS:

DB-OP-02511, Loss of Service Water Pumps/Systems, Revision 01, C-4

GENERAL REFERENCES:

DB-OP-02511, Loss of Service Water Pumps/Systems, Revision 01, C-4

INITIAL CONDITIONS:

The Backup Service Water Pump is in service as a dilution source.
Service Water Pump 1 is aligned to supply Primary loads.

INITIATING CUES:

The plant has experienced a loss of all service water pumps. DB-OP-02511, Loss of Service Water Pumps/Systems, is in progress at Step 4.3.8.

You have been directed to continue with the procedure.

INITIAL CONDITIONS:

The Backup Service Water Pump is in service as a dilution source.
Service Water Pump 1 is aligned to supply Primary loads.

INITIATING CUES:

The plant has experienced a loss of all service water pumps. DB-OP-02511,
Loss of Service Water Pumps/Systems, is in progress at Step 4.3.8.

You have been directed to continue with the 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 required
        unless denoted in the "Comments".

START TIME: _____

---

1.   PERFORMANCE STEP: Locate the correct procedure.

     STANDARD: Locate and obtain DB-OP-02511, Loss of Service Water Pumps/
                 Systems.

     COMMENTS: This JPM is written assuming SW Pump 3 is aligned to Loop 1.
                 Actual plant conditions may NOT be as assumed.

     CUE: **None.**

                                                          SAT   UNSAT

---

2.   PERFORMANCE STEP: Stop the Backup Service Water Pump.
     ....C.......

     STANDARD: Rotate HIS 3609 to STOP.

     CUE: **The B/U Service Water Pump Green Light LIGHTS, Red Light goes OFF
           and AMPS are Zero**

                                                          SAT   UNSAT

---

3.   PERFORMANCE STEP: Route to Attachment 5.

     STANDARD: Route to section for given conditions.

     CUE: **None.**

                                                          SAT   UNSAT

---

4.   PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1.
     ....C.......

     STANDARD: CLOSE SW 403, BSW Pump Outlet to the Collection Box.

     CUE: **SW 403 handwheel is rotated clockwise, Indicator moves to CLOSE.**

                                                          SAT   UNSAT

5. PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1.
    ....C.......

    STANDARD: CLOSE SW 400, SW Pump 3 DISCH ISO.

    COMMENT: Sequence is NOT required within this block.

    CUE: **SW 400 handwheel is rotated clockwise, Indicator moves to CLOSE.**

    _____
    SAT   UNSAT

6. PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1

    STANDARD: CLOSE SW 24, SW Pump 3 X-TIE to SW Loop 2.

    COMMENTS: Steps 6 & 7 must be performed prior to steps 8 & 9.

    CUE: **SW 24 indicator is at close, handwheel is rotated clockwise.**

    _____
    SAT   UNSAT

7. PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1

    STANDARD: CLOSE SW 25, SW Pump 3 X-TIE to SW Loop 2.

    COMMENTS: Steps 6 & 7 must be performed prior to steps 8 & 9.

    CUE: **SW 25 indicator is at close, handwheel is rotated clockwise.**

    _____
    SAT   UNSAT

8. PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1.

    STANDARD: OPEN SW 22, SW Pump 3 X-TIE to SW Loop 1.

    COMMENTS: Steps 6 & 7 must be performed prior to steps 8 & 9.

    CUE: **SW 22 Indicator is at OPEN, handwheel is rotated slightly
          clockwise then back counterclockwise to OPEN.**

    _____
    SAT   UNSAT

9.   PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1.

     STANDARD: OPEN SW 23, SW Pump 3 X-TIE to SW Loop 1.

     COMMENTS: Steps 6 & 7 must be performed prior to steps 8 & 9.

     CUE: **SW 23 Indicator is at OPEN, handwheel is rotated slightly
            clockwise then back counterclockwise to OPEN.**

                                                        SAT   UNSAT

10. PERFORMANCE STEP: Align the Backup Service Water Pump to Loop 1
     ....C.......

     STANDARD: OPEN SW 401, BSW Pump Out to SW Pump 3

     CUE: **SW 401 handwheel is rotated counterclockwise, Indicator moves
            to OPEN.**

                                                        SAT   UNSAT

11. PERFORMANCE STEP: Verify the BUSW pump is NOT running.

     STANDARD: Local verification by lights or observing pump

     CUE: **Green "STOP" light on HIS 3609A is LIT.
            BUSW pump is NOT rotating.**

                                                        SAT   UNSAT

12. PERFORMANCE STEP: Place the Backup Service Water Pump in "FAST" Speed.
     ....C.......

     STANDARD: Place the Backup Service Water Pump Speed Select Switch
                 HIS 3609A to "FAST" speed.

     CUE: **B/U SW Pump Speed Select Switch (HIS 3609A) is rotated to FAST.**

                                                        SAT   UNSAT

VERIFICATION OF COMPLETION

Operator _____ Evaluator_____

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained   Yes _____   No _____   N/A _____

Result: [ ] SATISFACTORY   [ ] UNSATISFACTORY

        NOTE: An " Unsatisfactory" requires Comment and will require
              subsequent remedial training.

Comments/Feedback:_____

_____

_____

_____

_____

_____

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_____

_____

_____

                    _____/_____
                         Evaluator's Signature   Date

JPM NO.: B.2.C   Rev. 00   Page 1 of 6

TASK NO.: 074-008-04-0100

TASK DESCRIPTION: Perform Actions for Loss of TPCW Pump

K/A REFERENCE: XXX-GEN-2.4.11

APPLICABLE METHOD OF TESTING: Simulate Performance
                                    In-Plant

TIME FOR COMPLETION: 14 minutes

APPLICABILITY: [X] RO   [X]   SRO   [X]   NLO

TASK STANDARDS:

1. Maintain proper discharge pressure on the running TPCW pump.
2. Maintain proper Main Generator Hydrogen Cooler outlet temperature.
3. Start the EIAC and stop the running SAC.
4. Lockout the Mechancial Hogger and isolate cooling water.

REQUIRED MATERIALS:

DB-OP-02514.03, Loss of Turbine Plant Cooling Water Pumps

GENERAL REFERENCES:

DB-OP-02514.03

INITIAL CONDITIONS:

You are the spare RO.
The plant is operating at 100% power, TPCW Pumps 1 and 2 are running.
TPCW Pump 3 is disassembled for maintenance.
SAC 2 is running.

INITIATING CUES:

TPCW Pump 2 has tripped and cannot be restarted.
The Shift Manager, directs you to perform all required local operator actions
of DB-OP-02514, Step 4.1.2, including TPCW load reduction.
The HLCWT is at 19 feet and decreasing slowly.

(Hand the examinee a copy of DB-OP-02514)

INITIAL CONDITIONS:

You are the spare RO.

The plant is operating at 100% power, TPCW Pumps 1 and 2 are running.

TPCW Pump 3 is disassembled for maintenance.

SAC 2 is running.

INITIATING CUES:

#2 TPCW Pump has tripped and cannot be restarted.

The Shift Manager, directs you to perform all required local operator actions of DB-OP-02514, Step 4.1.3, including TPCW load reduction.

The HLCWT is at 19 feet and decreasing slowly.

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: Throttle COOLING WATER PUMP 1-1 DISCHARGE ISOLATION
    ....C........   VALVE CW 6 to maintain pump discharge pressure above
                        50 psig.

    STANDARD: CW6 handwheel rotated clockwise toward closed. Valve left in
                throttled position.

    CUE: (If asked prior to throttling, discharge pressure [PI 1582] is
           40 psig). (CW 6) handwheel has been rotated in clockwise
           direction. Pointer moves toward CLOSED. Discharge pressure
           (PI 1582) is 55 psig.

                                                            _____
                                                            SAT   UNSAT

2. PERFORMANCE STEP: Place GEN HYDROGEN COOLERS OUTLET DEG F TIC 2396B
    ....C........   in MANUAL and throttle to maintain generator cold gas
                        temperature between 110 and 113°F.

    STANDARD: Slide moved left to M. CLOSE pushbutton pressed then
                released. Valve left in throttled position.

    CUE: Slide has been moved left to M. CLOSE button pressed then
           released. Red (temperature) indicator rises to 112°F and stops
           there. (If asked, EIAC is available).

                                                            _____
                                                            SAT   UNSAT

3. PERFORMANCE STEP: Start EIAC.
    ....C........

    STANDARD: Direct CTRM operator to start EIAC
                            OR
                Press START on HIS 5491.

    CUE: CTRM operator has started EIAC.
                        OR
           START has been pressed (on HIS 5491). Green TRIP light goes OFF.
           Red RUN light comes ON.

                                                            _____
                                                            SAT   UNSAT

4. PERFORMANCE STEP: Open one of the Diesel Air Compressor Inlet Valves to
                        Station Air Compressor Receiver SA 54 or SA 55.

    STANDARD: Check of valve stem OUT.

    COMMENT: SA 54 is normally open.

    CUE: **SA 54 (55) valve stem is OUT.**

                                                                  _____
                                                                  SAT   UNSAT
_____

5. PERFORMANCE STEP: Open SV 6445 IA/SA CROSSTIE SOLERNOID VALVE.

    STANDARD: SV 6445 OPEN pushbutton pressed.

    CUE: **(SV 6445) OPEN pushbutton has been pressed. Red OPEN light comes
           ON, green CLOSED light goes OFF.**

                                                                  _____
                                                                  SAT   UNSAT
_____

6. PERFORMANCE STEP: Stop the operating Station Air Compressor.
    ....C........

    STANDARD: Direct CTRM operator to stop SAC 1 or SAC 2.
                        OR
                Place local SAC 1 or SAC 2 UNLOAD/AUTO switch in UNLOAD.
                Press local SAC 1 or SAC 2 STOP pushbutton.

    CUE: **CTRM operator has stopped SAC 1 or SAC 2.**
                        OR
           (SAC 1 or SAC 2) UNLOAD/AUTO switch has been placed in UNLOAD.
           **(SAC 1 or SAC 2) STOP pushbutton has been pressed. Compressor
           shaft stops turning.**

                                                                  _____
                                                                  SAT   UNSAT
_____

7. PERFORMANCE STEP: Lock out Mechanical Hogger and SAC 1 and 2.
    ....C........

    STANDARD: Direct CTRM operator to lock out Mechanical Hogger, SAC 1 and
                SAC 2.

    CUE: **CTRM operator has locked out Mechanical Hogger, SAC 1 and SAC 2.**

                                                                  _____
                                                                  SAT   UNSAT

8. PERFORMANCE STEP: CW 470 SAC 2 Cooling Water Supply.
    ....C........

    STANDARD: CW 470 handwheel rotated in clockwise direction.

    CUE: (CW 470) handwheel has been rotated in clockwise direction. Valve
          stem is IN.

                                                        _____
                                                        SAT   UNSAT

9. PERFORMANCE STEP: Close CW 1020 Mechanical Hogger Cooler Inlet.
    ....C........

    STANDARD: CLOSE pressed on Mechanical Hogger Cooler Inlet Valve NV 1020.

    CUE: (NV 1020) CLOSE pushbutton has been pressed. Green light comes ON,
          red light goes OFF.

                                                        _____
                                                        SAT   UNSAT

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

                                                        _____
                                                        END TIME

VERIFICATION OF COMPLETION

Operator _____ Evaluator_____

Validated Completion Time: _____ minutes

Actual Completion Time: _____ minutes

Acceptable Progress Maintained   Yes _____   No _____   N/A _____

Result: [ ]   SATISFACTORY   [ ]   UNSATISFACTORY

        NOTE: An " Unsatisfactory" requires Comment and will require
             subsequent remedial training.

Comments/Feedback:_____

_____

_____

_____

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_____

_____

_____

_____

_____

_____/_____
        Evaluator's Signature   Date