

Administrative JPM

NA – 1

REACTOR OPERATOR

SRO - I

SRO - U

Facility: Davis-Besse Task No: 004-006-01-0100Task Title: Calculate Boron Concentration for SDM of 1% Δ k/k with 2 stuck rodsK/A Reference: 2.1.37 Job Performance Measure No: NEW

Examinee: _____

NRC Examiner: _____ Date: _____

Method of testing:Simulated Performance ____ Actual Performance XClassroom X Simulator ____ 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:

This JPM is not dependant on any specific simulator initial conditions since the task is administrative in nature.

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

Task Standard:

Determine the boron concentration needed to ensure 1% shutdown margin

Required Materials:

DB-NE-06201, Reactor Operators Curve Book (ROCB), Rev 12
DB-NE-06202, Reactivity Balance Calculation, Rev 7
Calculator

General References:**Initiating Cue:**

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

Time Critical Task No

Validation Time: 30 minutes

SIMULATOR INSTRUCTIONS**INITIAL CONDITION:**

This JPM is not dependant on any specific simulator initial conditions since the task is administrative in nature.

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

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

If this JPM is not conducted in the simulator, the following references need to be available to the examinee:

MALFUNCTIONS/FAILURE TO INSERT:

None

ACTION/CUES:

JPM STEP NUMBER

CUE

See body of JPM

EXAMINER COPY**INITIAL CONDITIONS:**

The plant is in Mode 3 following a reactor trip.

Two control rods failed to insert on the trip.

The START program is not available.

The following conditions exist:

Burnup: 500 EFPD

Tave: 552°F

The Reactor Engineer reports the following values:

Reactivity worth due to transient poisons is - 2.6 % Δ K/K

Correction factor for Boron 10 depletion is 0.96

Reactivity Anomaly is zero.

INITIATING CUES:

The Unit Supervisor directs you to determine the boron concentration needed to ensure 1% shutdown margin is adequate in accordance with Section 14 of DB-NE-06202, Reactivity Balance Calculations, and DB-NE-06201, Reactor Operator Curve Book.

(Provide Candidate a copy of Section 14 and Attachment 10 of DB-NE-06202 and a copy of DB-NE-06201)

CANDIDATE COPY**INITIAL CONDITIONS:**

The plant is in Mode 3 following a reactor trip.

Two control rods failed to insert on the trip.

The START program is not available.

The following conditions exist:

Burnup: 500 EFPD

Tave: 552°F

The Reactor Engineer reports the following values:

Reactivity worth due to transient poisons is - 2.6 % Δ K/K

Correction factor for Boron 10 depletion is 0.96

Reactivity Anomaly is zero.

INITIATING CUES:

The Unit Supervisor directs you to determine the boron concentration needed to ensure 1% shutdown margin is adequate in accordance with Section 14 of DB-NE-06202, Reactivity Balance Calculations, and DB-NE-06201, Reactor Operator Curve Book.

PERFORMANCE INFORMATION

NOTE: Critical steps denoted with a "C". Failure to meet any one of these standards for this item constitutes failure. Sequence is assumed unless denoted in the "Comments".

START TIME: _____

1. PERFORMANCE STEP: Determine RCS Boron Concentration Shutdown Margin,.
.....C..... B (ROCB SDM)

STANDARD: Determine B(ROCB SDM) from Figure 6C. Determines the value to be 1460 to 1475 ppmB and enters this value on Attachment 10.

COMMENT: Actual value is 1470 ppmB %ΔK/K.

COMMENT: Sequence NOT required for this JPM except for last step

CUE: **None.**

SAT UNSAT

2. PERFORMANCE STEP: Determine CF(B10)

STANDARD: Enters 0.96 value for CF(B10) value from Initial Conditions

CUE: **None.**

SAT UNSAT

3. PERFORMANCE STEP: Determine Reactivity Worth of HFP Anomaly

STANDARD: Enters 0 for anomaly value from Initial Conditions

CUE: **None.**

SAT UNSAT

4. PERFORMANCE STEP: Determine the Differential Boron Worth (DBW).
.....C.....

STANDARD: Determine DBW value from Figure 5A. Determines value of – 0.00715 to – 0.00714 %ΔK/K.

COMMENT: Actual value is -0.007145 %ΔK/K.

CUE: **None.**

SAT UNSAT

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5. PERFORMANCE STEP: Determine Transient Poison worth, $\rho(tp)$, for Transient Reactivity Boron Equivalent (B(tr))

STANDARD: Enters – 2.6 % $\Delta K/K$ for $\rho(tp)$ value from the Initial Conditions

CUE: **None.**

SAT UNSAT

-
6. PERFORMANCE STEP: Determine Pu-239 worth, $\rho(PU-max)$, for Transient Reactivity
.....C..... Boron Equivalent (B(tr))

STANDARD: From Figure 20B, determines a value of 0.137 to 0.139 % $\Delta K/K$ for $\rho(PU-max)$

COMMENT: Actual value is 0.138 % $\Delta K/K$

CUE: **None.**

SAT UNSAT

-
7. PERFORMANCE STEP: Determine Transient Poison Conversion Factor for Transient
.....C..... Reactivity Boron Equivalent, B(tr)

STANDARD: Determines a value of 86 from Table 1 of the ROCB

CUE: **None.**

SAT UNSAT

-
8. PERFORMANCE STEP: Determine CF(B10) for Transient Reactivity Boron Equivalent, B(tr)

STANDARD: Enters 0.96 value for CF(B10) value from Initial Conditions

CUE: **None.**

SAT UNSAT

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9. PERFORMANCE STEP: Determine Transient Reactivity Boron Equivalent, B(tr)
.....C.....

STANDARD: Performs calculation for B(tr) on Attachment 10. Determine value of 220.46 to 220.64 ppmB

Comment: Actual value is 220.55

CUE: **None.**

SAT UNSAT

10. PERFORMANCE STEP: Determine Minimum RCS Boron Concentration for 1% SDM
.....C.....

STANDARD: Performs calculation on Attachment 10. Determine value of 1313
to 1330 ppmB

COMMENT: Actual value is 1324 ppmB

CUE: **None.**

SAT UNSAT

TERMINATING CUES: **This JPM is complete.** (The evaluator will terminate.)

END TIME

EVALUATOR NOTE: Multiple errors may provide a correct final answer.
Rounding off values may make the answer different from key.
Evaluator discretion required.

Verification of Completion**Job Performance Measure No.** A - 1 **Examinee's Name:** _____**Examiner's Name:** _____**Date Performed:** _____**Facility Evaluator:** _____**Number of Attempts:** _____**Time to Complete:** _____**Question Documentation:****Question:** _____

_____**Response:** _____

_____**Result:** Satisfactory/Unsatisfactory**Examiner's signature and date:** _____

ATTACHMENT 10: ANSWER KEY

Page 1 of 1

EFPD= 500 CF(B10)= 0.96 Tave = 552 °FNumber of known stuck rods? 2 Data: Date Today Time Now**CAUTION**

If Transient Poison is to be credited, take appropriate actions to ensure the 1%Δk/k Shutdown Margin is not lost as Transient Poison decrease

Minimum RCS Boron Concentration for 1%Δk/k Shutdown Margin

$$\left[\left(\frac{1470}{B(\text{ROCB SDM})} \right) / \frac{0.96}{CF(B10)} - \left(\frac{0}{\rho(\text{anom})} \right) / \frac{-0.007145}{DBW} - \frac{220.55}{B(\text{tr})} \right] \times (1 + .01) = \frac{1324}{\text{Minimum Measured B(RCS)}} \text{ ppmB}$$

Where:

B(ROCB SDM) is from Figure 6 based on Tave, EFPD, and stuck rod condition

$\rho(\text{anom})$ is Reactivity Worth of HFP Anomaly from the Reactor Operating Guidanc
(For conservatism, a value of 0 may be used in place of a negative HFP anomaly for calculations of Shutdown Margin. See Step 4.2.8.)

DBW is Differential Boron Worth from Figure 5A based on B(ROCB SDM) and EFPD

B(tr) is Transient Reactivity Boron Equivalent*

$$\left[\left(\frac{-2.6}{\rho(\text{tp})} + \frac{0.138}{\rho(\text{Pu-max})} \right) \times \frac{86}{\text{TPCF}} \right] / \frac{0.96}{CF(B10)} \times [-1] = \frac{220.55}{B(\text{tr})}$$

Where:

$\rho(\text{tp})$ is Transient Poison Worth from START program at time of data

$\rho(\text{Pu-max})$ is Maximum Excess Pu-239 Worth from Figure 20B based on EFPD

TPCF is Transient Poison Conversion Factor from Table 1 of ROCB

* If no credit is to be taken for transient poison, enter zero for B(tr)

.01 is the Boron Concentration Measurement Uncertainty

(1+.01) is the Boron Concentration Measurement Correction Factor

Calculated by _____ Date _____ Time _____

Checked by _____ Date _____

Administrative JPM

NA – 2

REACTOR OPERATOR

SRO - I

SRO - U

Facility: Davis-Besse **Task No:** 115-004-02-0100**Task Title:** Control of Locked Valves During Post-Maintenance Testing**K/A Reference:** 2.1.18 **Job Performance Measure No:** JPM 261**Examinee:** _____**NRC Examiner:** _____ **Date:** _____**Method of testing:**Simulated Performance _____ Actual Performance XClassroom _____ Simulator X Plant _____***Read to the examinee:***

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

Initial Conditions:

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

Task Standard:

Perform Post Maintenance Testing and Control Valve

Required Materials:

DB-PF-03272, Post Maintenance Valve Test
ISTB3, Pump and Valve Basis Document, Volume III, Section C
Lock Valve Log Sheet
Stop Watch

General References:**Initiating Cue:**

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

Time Critical Task: No**Validation Time:** 40 minutes

SIMULATOR INSTRUCTIONS

TASK DESCRIPTION:

Control of Locked Valves During Post-Maintenance Testing

INITIAL CONDITION:

Any IC

ADDITIONAL SETUP/DEVIATION FROM INITIAL CONDITION:

None

MALFUNCTIONS/FAILURE TO INSERT:

DH2736 Malfunction to open faster than 45.71 seconds

ACTION/CUES:

EXAMINER COPY**INITIAL CONDITIONS:**

Maintenance has completed a packing adjustment on valve DH2736, DH Aux. Spray Throttle Valve, to stop a packing leak per Order 200001155.

INITIATING CUES:

The Unit Supervisor directs you to perform post maintenance valve testing of DH2736 in accordance with DB-PF-03272, Post Maintenance Valve Test beginning with Section 3.2.

DB-PF-03272, Section 3.1 is complete.

The Shift Manager has given his permission to stroke DH2736, DH Aux. Spray Throttle Valve.

An equipment operator is standing by in the Auxiliary Building.

The Locked Valve Log is in the Control Room.

The Unit Supervisor has completed the first eight columns in the Locked Valve Log.

(Provide the Candidate a copy of DB-PF-03272 and a copy of the Locked Valve Log)

CANDIDATE COPY**INITIAL CONDITIONS:**

Maintenance has completed a packing adjustment on valve DH2736, DH Aux. Spray Throttle Valve, to stop a packing leak per Order 200001155.

INITIATING CUES:

The Unit Supervisor directs you to perform post maintenance valve testing of DH2736 in accordance with DB-PF-03272, Post Maintenance Valve Test beginning with Section 3.2.

DB-PF-03272, Section 3.1 is complete.

The Shift Manager has given his permission to stroke DH2736, DH Aux. Spray Throttle Valve.

An equipment operator is standing by in the Auxiliary Building.

The Locked Valve Log is in the Control Room.

The Shift Manager has completed the first eight columns in the Locked Valve Log.

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: Complete Section 3.2 of DB-PF-03272.

STANDARD: Check/verify Section 3.1 is complete.

CUE: **None.**

SAT UNSAT

2. PERFORMANCE STEP: Complete Section 3.2 of DB-PF-03272.

STANDARD: Verify an RWP is available.

CUE: **(If asked) A special RWP is not required for this test.**

SAT UNSAT

3. PERFORMANCE STEP: Obtain stroke times from the Pump and Valve Basis
.....**C**..... Document and record.

STANDARD: Enter the maximum close time of 59.70 seconds; the maximum open time of 59.62 seconds; the expected close time range of 33.83 seconds to 45.77 seconds; and the expected open time range of 33.79 seconds to 45.71 seconds in Step 3.2.3 of DB-PF-03272.

CUE: **None.**

SAT UNSAT

4. PERFORMANCE STEP: Complete Section 3.2 of DB-PF-03272.

STANDARD: Obtain Shift Manager's permission to perform the test.

CUE: **(If asked) The Shift Manager has given permission to stroke test DH 2736 and no actions need to be taken.**

SAT UNSAT

-
5. PERFORMANCE STEP: Record test equipment data.

STANDARD: Record the M&TE number for the stopwatch and the calibration due date.

CUE: **(If asked) A special NOP-OP-1014 lineup is NOT required.**

SAT UNSAT

6. PERFORMANCE STEP: Verify the Equipment Operator is at DH 2736.

STANDARD: Communicate via Gai-Tronics or radio.

CUE: **An Equipment Operator is standing by to verify local valve position.**

SAT UNSAT

7. PERFORMANCE STEP: Stroke DH 2736 open and record time.

.....**C**.....

STANDARD: Depress and hold the OPEN pushbutton and stroke time using the stopwatch. Record the stroke time.

COMMENT: DH 2736 is a throttle valve, which requires the OPEN pushbutton to be depressed while the valve is stroking.

DH 2736 will stroke faster than the expected time.

CUE: **None**

SAT UNSAT

8. PERFORMANCE STEP: Contact the Equipment Operator to check local indication.

STANDARD: Communicate via Gai-Tronics or radio.

CUE: **(I/F) The Equipment Operator reports local valve position indicates DH 2736 is open.**

SAT UNSAT

-
9. PERFORMANCE STEP: Complete the "Position To" column in the Locked Valve Log.
.....**C**.....

STANDARD: Enter "Open".

COMMENT: The Locked Valve Log may be updated after the stroke test is complete.

CUE: **None.**

SAT UNSAT

10. PERFORMANCE STEP: Complete the "Position By" column in the Locked Valve Log.
.....**C**.....

STANDARD: Enter initials.

COMMENT: The Locked Valve Log may be updated after the stroke test is complete.

CUE: **None.**

SAT UNSAT

11. PERFORMANCE STEP: Stroke DH 2736 closed and record time.
.....**C**.....

STANDARD: Depress and hold the CLOSED pushbutton and stroke time using the stopwatch. Record the stroke time.

CUE: **None.**

SAT UNSAT

12. PERFORMANCE STEP: Contact the equipment operator to check local indication.

STANDARD: Communicate via Gai-Tronics or radio.

CUE: **(I/F) The Equipment Operator reports local valve position indicates DH 2736 is closed.**

SAT UNSAT

13. PERFORMANCE STEP: Complete the "Restored By" column in the Locked Valve Log.
.....**C**.....

STANDARD: Enter initials.

COMMENT: The Locked Valve Log may be updated after the stroke test is complete.

CUE: **None.**

SAT UNSAT

14. PERFORMANCE STEP: Recognize the stroke times are not within the expected times.

STANDARD: Compare valve stroke times to the expected range of stroke times.

CUE: **None.**

SAT UNSAT

15. PERFORMANCE STEP: Restroke DH 2736 and record times.

.....**C**.....

STANDARD: Recognize the test requires the valve to be stroke timed a second time.

CUE: **DH 2736 has been stroked open and closed a second time. The stroke times are the same as recorded in Step 4.2.2**

SAT UNSAT

16. PERFORMANCE STEP: Inform the Unit Supervisor or Shift Manager the stroke times are
.....**C**..... not within the expected range.

STANDARD: Communicate to a shift SRO the need to write a Condition Report and perform an Operability Justification.

CUE: **The Shift Manager will write the Condition Report and document the Operability Justification.**

SAT UNSAT

17. PERFORMANCE STEP: Complete acceptance criteria.

.....**C**.....

STANDARD: Sign off Steps 5.2 and 5.3.

CUE: **None.**

SAT UNSAT

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

END TIME

Verification of Completion**Job Performance Measure No.** _____**Examinee's Name:** _____**Examiner's Name:** _____**Date Performed:** _____**Facility Evaluator:** _____**Number of Attempts:** _____**Time to Complete:** _____**Question Documentation:****Question:** _____

_____**Response:** _____

_____**Result:** Satisfactory/Unsatisfactory**Examiner's signature and date:** _____

ATTACHMENT 1: SAMPLE LOCKED VALVE LOG SHEET

Page 1 of 1

[illegible]

*If AS 138, CC 609, or WG 19, Refer to Attachment 4

Completed Sheet Reviewed By Operations Superintendent _____

Date_____

Administrative JPM

NA – 3

REACTOR OPERATOR

Facility: Davis-Besse Task No: 119-023-03-0100Task Title: Determine a safety tagout for Containment Spray Pump 1 with eSOMS unavailableK/A Reference: 2.2.13 Job Performance Measure No: NEW

Examinee: _____

NRC Examiner: _____ Date: _____

Method of testing:Simulated Performance ____ Actual Performance XClassroom X Simulator ____ 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:

This JPM is not dependant on any specific simulator initial conditions since the task is administrative in nature.

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

Task Standard:

Prepare a safety tagout manually

Required Materials:

NOBP-OP-1001, Clearance Program, Rev. 03
NOP-OP-1001-07, Manual Clearance Coversheet, filled out
NOP-OP-1001-10, Clearance Preparation and Review Checklist, Rev 10
Valve Location Book
Operations Schematic, OS-005 (Containment Spray System)

General References:**Initiating Cue:**

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

Time Critical Task: No

Validation Time: 40 minutes

EXAMINER COPY**INITIAL CONDITIONS:**

The plant is currently operating at 100%.

eSOMS is currently out of service and will not be restored for another four hours.

Containment Spray Pump #1 has a leak on the pump's seal that requires replacement.

Clearance No. is DB-060-05-XXX

The Manual Clearance Coversheet has been filled out.

INITIATION CUE:

The Shift Manager directs you to determine the tagging points, tag type, placement configuration, and hang order for Containment Spray Pump #1 for seal replacement. A cover sheet has been completed. Another operator will complete restoration review.

(Hand Candidate a copy of NOBP-OP-1001, and NOP-OP-1001-07, Cover Sheet, form filled out)

CANDIDATE COPY**INITIAL CONDITIONS:**

The plant is currently operating at 100%.

eSOMS is currently out of service and will not be restored for another four hours.

Containment Spray Pump #1 has a leak on the pump's seal that requires replacement.

Clearance No. is DB-060-05-XXX

The Manual Clearance Coversheet has been filled out.

INITIATION CUE:

The Shift Manager directs you to determine the tagging points, tag type, placement configuration, and hang order for Containment Spray Pump #1 for seal replacement. A cover sheet has been completed. Another operator will complete restoration review.

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: :Reviews NOBP-OP-1001, Manual Clearance
Generation and Cover Sheet

STANDARD: Determines Section 4.0 is the correct section

CUE: NONE

SAT	UNSAT
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2. PERFORMANCE STEP: Determine Tagging Boundaries
C

STANDARD Use system drawing OS-005 to determine tagging points

COMMENTS Refer to Manual Clearance Tag List (NOP-OP-1001-09) key

CUE: NONE

SAT	UNSAT
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3. PERFORMANCE STEP: Determine Tag Type, Placement Configuration, Hand Order
C

STANDARD: Tag electrical, high pressure, low pressure, and vents and drains

COMMENTS: Refer to Manual Clearance Tag List (NOP-OP-1001-09) key

CUE: NONE

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

END TIME

Verification of Completion**Job Performance Measure No.** A-3**Examinee's Name:** _____**Examiner's Name:** _____**Date Performed:** _____**Facility Evaluator:** _____**Number of Attempts:** _____**Time to Complete:** _____**Question Documentation:****Question:** _____

Response: _____

Result: Satisfactory/Unsatisfactory**Examiner's signature and date:** _____

Facility: Davis-Besse **Task No:** 331-007-03-300**Task Title:** Determine Compensatory Measures For Removing Fire Suppression For Startup Transformer 01**K/A Reference:** KA 2.2.37 **Job Performance Measure No:** NEW**Examinee:** _____**NRC Examiner:** _____ **Date:** _____**Method of testing:**

Simulated Performance _____

Actual Performance XClassroom X

Simulator _____

Plant _____

Read to the examinee:

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

Initial Conditions:

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

Initiating Cue:

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

Task Standard:

Determine Fire Suppression Compensatory Measures

Required Materials:

DB-FP-0009, Fire Protection Impairment and Fire Watch

Form DB-100

FHAR 8.2.2 and Table 8.4

Drawings - OS-47A Sheet 4, and OS-47B Sheet 4

General References:

Time Critical Task: No

Validation Time: 35 minutes

EXAMINER COPY**INITIAL CONDITIONS:**

The plant is currently operating at 100%

Maintenance needs to replace a sprinkler head on Startup Transformer 01

Work Order number is 200XXXXXX

The work will take approximately 4 hours

FP 126 will be closed to support the maintenance

No Fire Detection instrumentation is out of service

INITIATION CUE:

The Shift Manager directs you to determine the Fire Protection compensatory measure required.

(Hand Candidate a copy of DB-FP-00009)

CANDIDATE COPY**INITIAL CONDITIONS:**

The plant is currently operating at 100%

Maintenance needs to replace a sprinkler head on Startup Transformer 01

Work Order number is 200XXXXXX

The work will take approximately 4 hours

FP 126 will be closed to support the maintenance

No Fire Detection instrumentation is out of service

INITIATION CUE:

The Shift Manager directs you to determine the Fire Protection compensatory measure required.

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: Identifies Section 6.0 is the correct procedure section

CUE: NONE

SAT	UNSAT
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2. PERFORMANCE STEP: Completes Sections 1 of Form DB-100

C

STANDARD Fills in Name, Date and Extension

COMMENTS See Form DB 100 key
Any phone extension is acceptable

NOTE: Attachment 4. Fire Suppression System Impairment Decision
Tree may be used

CUE: **(If asked) Use extension 7269**

SAT	UNSAT
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3. PERFORMANCE STEP: Completes Section 2A of Form DB-100

C

STANDARD: Checks Fire Suppression System "Sprinklers", fills in fire system id number, Work Order Number, and reason for impairment

COMMENTS: See Form DB 100 key

CUE: NONE

SAT	UNSAT
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-
4. PERFORMANCE STEP: Determine impairment features and completes Section 2B of Form
C DB-100 (page 2)

STANDARD: Using Attachment 14, determines Zone FSA-Startup 01 Trans is affected
Zone is a Appendix A fire suppression system, and with FP 126 closed, the fire
suppression system is inoperable

COMMENTS: See Form DB 100 key

CUE: NONE

SAT UNSAT

-
5. PERFORMANCE STEP: Determines Compensatory measures and completes Section 2C of
C Form DB-100

STANDARD: Reviews Attachment 4 and determines FHAR 8.2.2 and Table 8-4 applies

COMMENTS: See Form DB 100 key

CUE: NONE

SAT UNSAT

-
6. PERFORMANCE STEP: Determine Compensatory measure from FHAR 8.2.2 and completes
C Section 2C of Form DB-100

STANDARD: Determines there is an Operable fire detection instrument in the affected
area(s) and no further actions are required

COMMENTS: See Form DB 100 key

CUE: NONE

SAT UNSAT

7. PERFORMANCE STEP: Completes Section 3
C*

STANDARD: *Checks 8.2.2 under Suppression column
Recognizes NEIL notification is not required (not Critical)

COMMENTS: See Form DB 100 key

CUE: NONE

SAT UNSAT

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

END TIME

Verification of Completion**Job Performance Measure No.** A - 3**Examinee's Name:** _____**Examiner's Name:** _____**Date Performed:** _____**Facility Evaluator:** _____**Number of Attempts:** _____**Time to Complete:** _____**Question Documentation:****Question:** _____

_____**Response:** _____

_____**Result:** Satisfactory/Unsatisfactory**Examiner's signature and date:** _____

[illegible]

[illegible]

MANUAL CLEARANCE COVERSHEET					
NOP-OP-1001-07 Rev. 02					
Manual Clearance DB -060-05 -XXX		Date / /		Time	
Equipment ID / Asset Number : P56-1 /					
Description / Reason Replace CTMT Spray Pump 1 seal					
Placement Notes Align pump drains to the nearest floor drain					
Cautions None					
Completion Notes Vent the pump and associated piping prior to placing the pump in service					
Order Number 200XXXXXX		FLOC P56-1		Description CTMT SPRAY PUMP 1	
Clearance Acceptance _____ / _____ Print/Sign Date			Work Group Acceptance _____ / _____ Print/Sign Date		
Clearance Release _____ / _____ Print/Sign Date			Work Group Release _____ / _____ Print/Sign Date		
Status	Name (Print / Sign)		Date / Time		
Prepared By	/		/		
Reviewed By	/		/		
Approved by	/		/		
Issued for Work by	/		/		
Removal Authorized by	/		/		
Clearance Closed by	/		/		

Administrative JPM

NA – 4

REACTOR OPERATOR

SRO - I

SRO – U

Facility: Davis-Besse **Task No:** 072-011-01-0100**Task Title:** Check out a Radiation Detector in the RRA**K/A Reference:** 2.3.5 **Job Performance Measure No:** JPM 149**Examinee:** _____**NRC Examiner:** _____ **Date:** _____**Method of testing:**Simulated Performance ____ Actual Performance XClassroom ____ Simulator ____ Plant X***Read to the examinee:***

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

Initial Conditions:

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

Task Standard:

Check out a FLUKE 451B

Required Materials:

Operator Aid for Use of FLUKE 451B
FLUKE 451B Radiation Meter
Radiation Sources

General References:**Initiating Cue:**

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

Time Critical Task No**Validation Time:** 10 minutes

EXAMINER COPY**INITIAL CONDITIONS:**

A large break Loss of Coolant Accident has occurred.

RE 8421 is reading 50 mRem/hr for #4 Mechanical Penetration Room general area dose rates.

The water curtain between Mechanical Penetration Room 4 and the Heater Bay has actuated inadvertently and flooding of Emergency Core Cooling System Room 2 is imminent.

INITIATING CUES:

The Shift Manager has directed you to isolate the water curtain supply from the Auxiliary Building by closing FP 266 #4 Mechanical Penetration Room 314 Water Curtain Isolation, located in the southeast corner of #4 Mechanical Penetration Room.

Radiation Protection coverage is not available and you are required to obtain a portable radiation detector prior to entering the Auxiliary Building.

The On-Site Emergency Response Facilities are not yet manned.

The Shift Manager directs you to check out a Fluke 451B radiation detector.

CANDIDATE COPY**INITIAL CONDITIONS:**

A large break Loss of Coolant Accident has occurred.

RE 8421 is reading 50 mRem/hr for #4 Mechanical Penetration Room general area dose rates.

The water curtain between Mechanical Penetration Room 4 and the Heater Bay has actuated inadvertently and flooding of Emergency Core Cooling System Room 2 is imminent.

INITIATING CUES:

The Shift Manager has directed you to isolate the water curtain supply from the Auxiliary Building by closing FP 266 #4 Mechanical Penetration Room 314 Water Curtain Isolation, located in the southeast corner of #4 Mechanical Penetration Room.

Radiation Protection coverage is not available and you are required to obtain a portable radiation detector prior to entering the Auxiliary Building.

The On-Site Emergency Response Facilities are not yet manned.

The Shift Manager directs you to check out a Fluke 451B radiation detector.

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: Refer to Posted Operator Aid For Emergency Checkout of Fluke 451B

STANDARD: Refer to Posted Operator Aid For Emergency Checkout of Fluke 451B.

CUE: **None**

SAT UNSAT

2. PERFORMANCE STEP: Obtain a Portable Radiation Detector.
C

STANDARD: Obtain a Fluke 451B

CUE: **None**

SAT UNSAT

3. PERFORMANCE STEP: Ensure instrument is not past its calibration due date.

STANDARD: Check the date on the "Calibration" sticker has not been exceeded.

CUE: **None**

SAT UNSAT

4. PERFORMANCE STEP: Ensure the daily instrument check is current.

STANDARD: Check the daily instrument check has been completed for the current day and month.

CUE: **None**

SAT UNSAT

-
5. PERFORMANCE STEP: Inspect meter for physical damage.

STANDARD: Physically inspect the instrument for any damage including mylar window.

CUE: **None**

SAT UNSAT

-
6. PERFORMANCE STEP: Turn the meter on
 C

STANDARD: Press the Power button

CUE: **None**

SAT UNSAT

-
7. PERFORMANCE STEP: Wait for meter to complete start up sequence
 C

STANDARD: The meter should stabilize less than 0.5 mr/hr within 30 – 40 seconds

CUE: None

COMMENT:

SAT UNSAT

-
8. PERFORMANCE STEP: Slide open the meter beta shield.
 C

STANDARD: Utilize beta shield release button to enable opening of beta shield

COMMENT: **If not completed, meter response will be low when exposed to the source.**

CUE: **None**

SAT UNSAT

-
9. PERFORMANCE STEP: Remove the shield plug from source 1.1.117.
 C

STANDARD: Ensure slide attenuator is fully inserted and remove shield plug and set in a safe position on the cabinet.

CUE: **None**

SAT UNSAT

-
10. PERFORMANCE STEP: Align meter over source 1.1.117 as indicated in picture.
C

STANDARD: Ensure meter is aligned as indicated in picture on Operator Aid, dimples indicating meter effective center should be aligned over the source.

CUE: **None**

SAT UNSAT

-
11. PERFORMANCE STEP: Slide source attenuator out to the #1 position. (line on attenuator even with edge of cabinet upper lip).
C

STANDARD: Slide source attenuator out to the #1 position. (line on attenuator even with edge of cabinet upper lip)

CUE: **None**

SAT UNSAT

-
12. PERFORMANCE STEP: Ensure meter responds to between 4.4 – 6.6 mR/hr. Adjust meter and attenuator slide alignment if necessary.
C

STANDARD: Meter should respond to between 4.4 – 6.6 mR/hr, adjustments to meter and attenuator slide may be necessary to show proper response.

COMMENT: If examinee slides attenuator out too far, meter may respond off scale high and will take several seconds after adjustment to respond on scale.
If examinee failed to open beta shield, meter will indicate below desired scale.

CUE: **None**

SAT UNSAT

-
13. PERFORMANCE STEP: Push source attenuator slide in fully.

STANDARD: Source attenuator slide should be pushed into the cabinet as far as it will go.

CUE: **None**

SAT UNSAT

-
14. PERFORMANCE STEP: Remove the meter.

STANDARD: Remove the meter.

COMMENT: Examinee should be careful with meter at this point as beta window is exposed.

CUE: **None**

SAT UNSAT

-
15. PERFORMANCE STEP: Close the meter beta shield.

C

STANDARD: Close the meter beta shield.

CUE: **None**

SAT UNSAT

-
16. PERFORMANCE STEP: Place the shield plug over source 1.1.117.

C

STANDARD: Place the shield plug over source 1.1.117.

CUE: **None**

SAT UNSAT

-
17. PERFORMANCE STEP: Adjust scale as necessary based on radiation fields encountered.
Consideration should also be given to using audible feature of meter.

STANDARD: Examinee should select a low scale based on current radiation field and may choose to turn the audible response on.

CUE: **None**

SAT UNSAT

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

END TIME

Verification of Completion**Job Performance Measure No.** A – 4**Examinee's Name:** _____**Examiner's Name:** _____**Date Performed:** _____**Facility Evaluator:** _____**Number of Attempts:** _____**Time to Complete:** _____**Question Documentation:****Question:** _____

_____**Response:** _____

_____**Result:** Satisfactory/Unsatisfactory**Examiner's signature and date:** _____