Plant JPM
i

Examinee: _____ **Date:** _____

Examiner: _____

Facility: Davis-Besse **JPM No**: OPS-JPM-223

Task Title: Perform in progress WGDT 3 release

Task No: 071-005-01-0402 **System:** 071 Chem and Volume Control System

K/A Reference: 071 A1.08 / 2.7 **Safety Function**: 9 Radioactive Release

Time Critical Task: No **Alternate Path:** No

Validation Time: 22 minutes

Method of testing / Location:

Simulated Performance __X__ Actual Performance _____

Classroom ____ Simulator _____ Plant __X__

Task Standard:
Stop the WGDT 3 release when 50-2-I, WST GAS SYS RAD MNTR FLOW is received, and sample flow cannot be adjusted.

Required Materials:
DB-OP-03012, Radioactive Gaseous Batch Release in progress

General References:
None

Notes:
- The stand-by candidate can be allowed to review the procedure and prints prior to JPM to allow the JPM to start ASAP.
- JPM is performed in the Aux Building

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

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

EXAMINER COPY

INITIAL CONDITIONS:

The Zone 3 operator has just started a Radioactive Gaseous Batch Release of WGDT 3.

DB-OP-03012, Radioactive Gaseous Batch Release, is complete up to step 4.3.21.

FIC1821 is being used for the release and is set to 45 scfm.

Both RE1822A and RE1822B are operable and monitoring the release.

All release paperwork has been reviewed and is in order.

INITIATING CUES:

The Shift Manager (SM) directs you to complete the release starting at Step 4.3.22.

(Hand copy of the following to the examinee:
DB-OP-03012 "Radioactive Gaseous Batch Release" signed off through step 4.3.21,
Attachment 1 "Radioactive Gaseous Batch Release Permit" signed off through step 6 (release start) and step 9 (Waste Gas Decay Tank release rate) to examinee.)

CANDIDATE COPY

INITIAL CONDITIONS:

The Zone 3 operator has just started a Radioactive Gaseous Batch Release of WGDT 3.

DB-OP-03012, Radioactive Gaseous Batch Release, is complete up to step 4.3.21.

FIC1821A is being used for the release and is set to 45 scfm.

Both RE1822A and RE1822B are operable and monitoring the release.

All release paperwork has been reviewed and is in order.

INITIATING CUES:

The Shift Manager (SM) directs you to complete the release starting at Step 4.3.22.

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: Review the steps performed throughout the release. (Step 4.3.22)

   STANDARD: Review steps 4.3.23 through 4.3.27

   CUE: ROLE PLAY as Zone 3 operator to answer examinee's turnover questions. WHEN turnover has been completed, THEN provide the following cue:
   Annunciator alarm 50-2-I WST GAS SYS RAD MNTR FLOW has just been received.

   NOTE: May also refer to DB-OP-02050, 50-2-I WST GAS RAD MNTR FLOW LO (Same initial actions)

SAT UNSAT

2. PERFORMANCE STEP: Raise RE flow by throttling closed WG130 WASTE GAS TO STATION VENT CONTROL VALVE OUTLET ISOLATION. (Step 4.3.26 a.)

   STANDARD: WG130 handwheel rotated clockwise.

   COMMENT: Radiation Element low flow alarm WILL NOT clear even with WG130 fully closed.

   CUE: **WG130 handwheel has been rotated clockwise. FYIS1822 indicates zero.**
   (When checked back at panel) **Annunciator 50-2-I is still in alarm.**

SAT UNSAT

3. PERFORMANCE STEP: Close WG1819 WASTE GAS VENT 1 (Step 4.3.26 b. 1.)
   C

   STANDARD: CLOSE button pressed on HIS1819.

   CUE: **CLOSE button has been pressed on HIS1819. Red light goes OFF. Green light comes ON.**

SAT UNSAT

4. PERFORMANCE STEP: Close WG1820 WASTE GAS VENT 2
C (Step 4.3.26 b. 2.)

STANDARD: CLOSE button pressed on HIS1820.

CUE: **CLOSE button has been pressed on HIS1820. Red light goes OFF. Green light comes ON.**

SAT UNSAT

5. PERFORMANCE STEP: Notify the Shift Manager (SM). (Step 4.3.26 b. 3.)

STANDARD: Notify the SM that the low Radiation Element flow condition can NOT be cleared.

CUE: **The SM directs you to stop the release.**

SAT UNSAT

6. PERFORMANCE STEP: Close WG1840, WGDT 3 FILTER
C (Step 4.3.28 c. 1.)

STANDARD: CLOSE button pressed on HIS1840.

CUE: **CLOSE button has been pressed on HIS1840. Red light goes OFF. Green light comes ON.**

SAT UNSAT

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

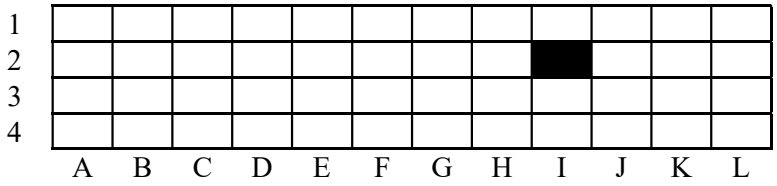
END TIME

RADWASTE CONTROL ALARM PANEL 50 ANNUNCIATORS

50-2-I

WST GAS RAD MNTR FLOW LO

Panel 50



COLOR: White

ACTUATING DEVICE(S)		SET POINTS	
1.	FYIS1822	1.	6.0 SLPM (6000 SCCM)
2.	ZS1820	2.	N/A
3.	ZS1819	2.	N/A

1.0 SYMPTOMS

1.1 Annunciator Alarm (50-2-I) WST GAS RAD MNTR FLOW LO.

1.2 Annunciator Alarm (7-2-C) WST GAS DECAY TKS TRBL.

1.3 Low Radioactive Gaseous Rad Monitor flow as indicated on FYIS1822 locally.

2.0 IMMEDIATE ACTIONS

None

3.0 SUPPLEMENTARY ACTIONS

3.1 Confirm the low flow condition by checking for low flow locally at FYIS1822, RADIOACTIVE GASEOUS RAD MONITOR LOW FLOW.

3.2 IF a Radioactive Gaseous Batch Release is in progress,
THEN raise RE flow by throttling closed WG130, WASTE GAS TO STATION VENT CONTROL VALVE OUTLET ISOLATION, REFER TO DB-OP-03012, Radioactive Gaseous Batch Release.

3.3 IF the low flow condition is from the termination of a Radioactive Gaseous Batch Release,
THEN GO TO DB-OP-03012, Radioactive Gaseous Batch Release.

3.4 IF FYI1822, RAD MONITOR FLOW INSTRUMENTATION, is inoperable,
THEN GO TO DB-OP-03012, Radioactive Gaseous Batch Release.

4.0 REFERENCES

4.1 Developmental

4.1.1 M-038C, Gaseous Radioactive Waste System

4.1.2 OS-030, Sh. 1, Gaseous Radwaste System

4.2 Implementation

4.2.1 DB-OP-03012, Radioactive Gaseous Batch Release

Plant JPM
j

Examinee: _____ **Date:** _____

Examiner: _____

Facility: Davis-Besse **JPM No**: OPS-JPM-075

Task Title: Reset AFPT Overspeed Trip Mechanism

Task No: 061-020-04-0100 **System:** 061 Aux Feedwater System

K/A Reference: 061K4.07 / 3.7 **Safety Function**: 4S Heat Removal-Secondary

Time Critical Task: No **Alternate Path:** No

Validation Time: 10 minutes

Method of testing / Location:

Simulated Performance __X__ Actual Performance _____

Classroom ___ Simulator _____ Plant __X__

Task Standard:
Reset the AFPT Overspeed Trip Mechanism

Required Materials:
DB-OP-06233 R46, Auxiliary Feedwater System R46, Section 5.12

General References:
DB-OP-02010 Annunciator 10-2-H, AFPT 2 OVRSPD TRIP

Notes:
Will require Plant Security support to guard hatch
Protected Train equipment (Protected Train 1 week)
Steep stairs to AFP Rooms

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

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

EXAMINER COPY

INITIAL CONDITIONS:

A Loss of Offsite Power has occurred due to the switchyard taking a lightning strike.

Auxiliary Feedwater Pump Turbine (AFPT) 2 has initiated and subsequently tripped due to overspeed.

HIS521A, AFPT 2 GOVERNOR CONTROL, has been placed in the LOWER position. The Governor Green Low Speed Stop indicating light is LIT.

INITIATING CUES:

The Shift Manager directs you to reset AFPT 2 Overspeed Trip Mechanism and Trip Throttle Valve in accordance with section 5.12 of DB-OP-06233.

(Hand a copy of DB-OP-06233 section 5.12 to the examinee)

CANDIDATE COPY

INITIAL CONDITIONS:

A Loss of Offsite Power has occurred due to the switchyard taking a lightning strike.

Auxiliary Feedwater Pump Turbine (AFPT) 2 has initiated and subsequently tripped due to overspeed.

HIS521A, AFPT 2 GOVERNOR CONTROL, has been placed in the LOWER position. The Governor Green Low Speed Stop indicating light is LIT.

INITIATING CUES:

The Shift Manager directs you to reset AFPT 2 Overspeed Trip Mechanism and Trip Throttle Valve in accordance with section 5.12 of DB-OP-06233.

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: Local inspection of #2 Auxiliary Feedwater Pump Turbine by local operator. (Step 5.12.1)

   STANDARD: Look over the turbine and pump checking for apparent damage. Check governor and linkage for apparent damage.

   CUE: **NO DAMAGE is readily apparent to any component, AFPT 2 is intact.**

SAT UNSAT

2. PERFORMANCE STEP: **C** Pull connecting rod, using the handle, past the "reset" position while pushing the tappet down. (Step 5.12.3 a.)

   STANDARD: Push down on the tappet assembly then pull the connecting rod past the "RESET" position.

   CUE: **The trip tappet is depressed. The connecting rod has been pulled past the RESET position and RELEASED.**
   (If asked) The pointer indicates to the left of RESET.

SAT UNSAT

3. PERFORMANCE STEP: **C** Release the connecting rod. (Step 5.12.3 b.)

   STANDARD: Release the connecting rod.

   CUE: **NONE**

SAT UNSAT

4. PERFORMANCE STEP: **C** Unseal ICS 38D, Auxiliary Feedwater Pump Turbine Trip Throttle. (Step 5.12.3 c.)

   STANDARD: Unseal ICS 38D

   CUE: **ICS 38D is unsealed.**

SAT UNSAT

5. PERFORMANCE STEP: Turn ICS 38D, Auxiliary Feedwater Pump Turbine Trip Throttle, clockwise until latch-up lever contacts stop on yoke trip hook and handwheel will turn no further. (Step 5.12.3 d.)
C

STANDARD: Clockwise rotation on ICS 38D watching yoke trip hook move down to latch-up lever. Handwheel motion stops.

CUE: **Latch-up lever and yoke are in contact with one another with no further movement of ICS 38D.**

SAT UNSAT

6. PERFORMANCE STEP: Push on Trip Hook until there is no gap. (Step 5.12.3 e.)
C

STANDARD: Verify no gap exists on Trip Hook Assembly.

CUE: **No gap exists.**

SAT UNSAT

7. PERFORMANCE STEP: Verify Latch-up Lever, and Trip Hook are completely engaged. (Step 5.12.3 f.)

STANDARD: Verify no gaps.

CUE: **No gap exists.**

SAT UNSAT

8. PERFORMANCE STEP: Verify the reset arrow on the RESET/TRIPPED indicator aligns with the pointer on the connecting rod. (Step 5.12.3 g.)
C

STANDARD: Check RESET arrow aligned with pointer on connecting rod.

CUE: **The pointer is aligned to the RESET arrow.**

SAT UNSAT

9. PERFORMANCE STEP: IF Auxiliary Feedwater Pump Turbine 2 is being reset after an overspeed trip, THEN inform Control Room the trip throttle is reset, AND standing by to open ICS 38D. (Step 5.12.3 h.)

STANDARD: Contact Control Room via previous communications established and inform them the trip throttle is reset AND standing by to open ICS 38D.

CUE: **Open ICS38D, AFPT 1-2 TRIP THROTTLE**

SAT UNSAT

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10. PERFORMANCE STEP: Open ICS 38D, Auxiliary Feedwater Pump Turbine Trip Throttle Valve. (Step 5.12.3 i.)

C

STANDARD: Turn handwheel counterclockwise until completely OPEN.

CUE: **ICS 38D has been rotated counterclockwise and will move no further**

SAT UNSAT

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11. PERFORMANCE STEP: Close ICS 38D, Auxiliary Feedwater Pump Turbine 2 Trip Throttle Valve, one-quarter turn. (Step 5.12.3 j.)

STANDARD: Rotate handwheel one-quarter turn in the clockwise direction.

CUE: **ICS 38D has been rotated one-quarter turn clockwise.**

SAT UNSAT

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12. PERFORMANCE STEP: Seal ICS 38D, Auxiliary Feedwater Pump Turbine 2 Trip Throttle Valve. (Step 5.12.3 k.)

STANDARD: Proper use of sealing equipment.

CUE: **The trip throttle valve is sealed.**

SAT UNSAT

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

END TIME

5.12 Resetting AFPT 2 Overspeed Trip Mechanism and Trip Throttle Valve

Prerequisites

NOTE 5.12.1

- This subsection should be used in conjunction with DB-OP-02010, Alarm Panel 10, Annunciator 10-2-H, AFPT 2 OVRSPD TRIP.
- The alarm procedure will have the CTRM lower the AFPT to the LSS and have the local operator verify freedom of movement of L1 governor linkage.

_____ 5.12.1 The local operator has inspected AFPT 2, AND has determined AFPT 2 is intact.

_____ 5.12.2 Shift Manager has given permission to reset AFPT 2.

Prerequisites completed by _____ Date _____

Procedure

5.12.3 Perform the following to reset ICS38D, AFPT 1-2 TRIP THROTTLE.

_____ a. Pull the Connecting Rod, using the handle, past the "Reset" position, while pushing the trip tappet down.

_____ b. Release the Connecting Rod.

_____ c. Unseal ICS38D, AFPT 1-2 TRIP THROTTLE.

_____ d. Turn ICS38D, AFPT 2 TRIP THROTTLE, handwheel clockwise until Latch-Up Lever contacts stop on valve yoke and handwheel will turn no further.

_____ e. Push on the Trip Hook until there is no gap.

_____ f. Verify the Latch-Up Lever, AND Trip Hook are completely engaged.

_____ g. Verify the "Reset" arrow on the RESET/TRIPPED indicator aligns with corresponding pointer on the connecting rod.

_____ h. IF AFPT 2 is being reset after a overspeed trip, THEN inform CTRM AFPT 2 Trip Throttle Valve is reset AND standing by to open ICS38D, AFPT 1-2 TRIP THROTTLE

CAUTION 5.12.3.i

When opening the Trip Throttle Valve, caution shall be exercised not to apply excessive force against the Mechanical Stop.

_____ i. Open ICS38D, AFPT 1-2 TRIP THROTTLE.

_____ j. Turn ICS38D, AFPT 1-2 TRIP THROTTLE handwheel 1/4 turn closed.

_____ k. Seal ICS38D, AFPT 1-2 TRIP THROTTLE handwheel.

_____ l. Verify ICS38D, AFPT 1-2 TRIP THROTTLE is reset, AND sealed open.

_____
IV

Independent Verification by _____ Date _____

m. Check the following:

_____ • Computer Point S017, AFPT 2 OVERSPEED, indicates "NORM".

_____ • Computer Point Z002, AFPT 2 STOP/GOV/STM IN ISO VLVS, indicates "NORM".

_____ • Annunciator, AFPT 2 OVRSPD TRIP (10-2-H), is EXTINGUISHED.

_____ • Annunciator, AFP 2 TRBL (10-4-H), is EXTINGUISHED.

_____ 5.12.4 IF AFPT 2 has been reset following an overspeed trip, THEN GO TO Subsection 5.10, AFW Train 2 Operation following Automatic Start.

Subsection 5.12 completed by _____ Date _____

Plant JPM
k

Examinee: _____ **Date:** _____

Examiner: _____

Facility: Davis-Besse **JPM No**: OPS-JPM-027

Task Title: Use Circ Water to Supply Service Water Primary Loads

Task No: 076-004-04-0100, 076-012-04-0400 **System:** 075 Circulating Water System

K/A Reference: 076 K1.14 / 2.7 **Safety Function**: 8 Plant Service Systems

Time Critical Task: No **Alternate Path:** No

Validation Time: 14 minutes

Method of testing / Location:

Simulated Performance X Actual Performance ___

Classroom ___ Simulator ___ Plant X

Task Standard:
Line up Circulating Water to supply Service Water Loop 2 primary loads

Required Materials:
Attachment 9 of DB-OP-02511 R22

General References:
None

Notes:
- Obtain Key to Intake Structure prior to JPM.
- Check door status, may need security support

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

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

EXAMINER COPY

INITIAL CONDITIONS:

The plant is in Mode 3

A loss of all service water is in progress

INITIATING CUES:

The Unit Supervisor directs you to line up Circulating Water to supply Service Water Loop 2 Primary Loads, using Attachment 9 of DB-OP-02511, Loss of Service Water Pumps/System

(Provide the examinee a copy of Attachment 9 of DB-OP-02511)

CANDIDATE COPY

INITIAL CONDITIONS:

The plant is in Mode 3

A loss of all service water is in progress

INITIATING CUES:

The Unit Supervisor directs you to line up Circulating Water to supply Service Water Loop 2 Primary Loads, using Attachment 9 of DB-OP-02511, Loss of Service Water Pumps/System

PERFORMANCE INFORMATION

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

START TIME: _____

1. PERFORMANCE STEP: Obtain a key for the intake structure.

   STANDARD: Obtain a key from the Work Support Center key locker

   COMMENT: ***Trainee may use the card reader to enter the service water tunnel from the Turbine Building instead of obtaining the key for the intake structure/water treatment entrance.***

   CUE: **If required, provide key to candidate.**

SAT UNSAT

2. PERFORMANCE STEP: Verify CT 2955, TPCW HX SUPPLY FROM CIRC WTR, is OPEN — ATT 9 Step 1

   C

   STANDARD: Check valve OPEN by pointer, local indicating light or requesting indicating light from the Control Room

   CUE:
   - **(If used) CT 2955 local position is pointing to OPEN**
   - **(If used) NV 2955 Red light is LIT. (Local Switch)**
   - **(If Control Room is called) CT 2955 indicates open. HIS 2955 Red light is LIT**

SAT UNSAT

3. PERFORMANCE STEP: Verify CT 56, CIRCULATING WATER SUPPLY TO TURBINE PLANT COOLING WATER HEAT EXCHANGER STOP VALVE, is OPEN — ATT 9 Step 2

   STANDARD: Check valve OPEN by local position indicator
   May also rotate valve in the closed position then reopen

   NOTE: CT56 is normally open, step becomes critical if they close it

   CUE: **CT 56 valve indicator is pointing to "O"**

SAT UNSAT

4. PERFORMANCE STEP: Verify SW 51, TPCW HEAT EXCHANGER 1 INLET ISOLATION, is Closed. ATT 9 Step 3

C

STANDARD: Manually close SW 51

CUE: **If asked, the CSRO directs you to isolate SW to all 3 HXs.**

SW 51 handwheel has been rotated clockwise and the valve position indicator moves from vertical to horizontal

SAT UNSAT

5. PERFORMANCE STEP: Verify SW 52, TPCW HEAT EXCHANGER 2 INLET ISOLATION, is Closed. ATT 9 Step 3

C

STANDARD: Manually close SW 52

CUE: **SW 52 handwheel has been rotated clockwise and the valve position indicator moves from vertical to horizontal**

SAT UNSAT

6. PERFORMANCE STEP: Verify SW 53, TPCW HEAT EXCHANGER 3 INLET ISOLATION, is Closed. ATT 9 Step 3

C

STANDARD: Manually close SW 53

CUE: **SW 53 handwheel has been rotated clockwise and the valve position indicator moves from vertical to horizontal**

SAT UNSAT

7. PERFORMANCE STEP: Open Breaker BF 1277, SERVICE WATER HEADER 2 TO TPCW HEAT EXCHANGERS SW 1395 ATT 9 Step 4. a.

C

STANDARD: Move breaker handle down to Open BF 1277.

CUE: **Breaker handle for SW1395 is down, indicates OFF.**

SAT UNSAT

8. PERFORMANCE STEP: Open SW 1395, TPCW HEAT EXCHANGER INLET HEADER ISOLATION ATT 9 Step 4. b.

C

STANDARD: Engage clutch on SW 1395
Turn handwheel counterclockwise

COMMENT: Indicating lights off because breaker has just been opened

CUE:
- **SW 1395 handwheel clutch has been DEPRESSED**
- **The handwheel has been turned counterclockwise**
- **The position indicator on SW 1395 is pointing up**

SAT UNSAT

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

END TIME

5.12 Resetting AFPT 2 Overspeed Trip Mechanism and Trip Throttle Valve

Prerequisites

NOTE 5.12.1

- This subsection should be used in conjunction with DB-OP-02010, Alarm Panel 10, Annunciator 10-2-H, AFPT 2 OVRSPD TRIP.
- The alarm procedure will have the CTRM lower the AFPT to the LSS and have the local operator verify freedom of movement of L1 governor linkage.

_____ 5.12.1 The local operator has inspected AFPT 2, AND has determined AFPT 2 is intact.

_____ 5.12.2 Shift Manager has given permission to reset AFPT 2.

Prerequisites completed by _____ Date _____

Procedure

5.12.3 Perform the following to reset ICS38D, AFPT 1-2 TRIP THROTTLE.

_____ a. Pull the Connecting Rod, using the handle, past the "Reset" position, while pushing the trip tappet down.

_____ b. Release the Connecting Rod.

_____ c. Unseal ICS38D, AFPT 1-2 TRIP THROTTLE.

_____ d. Turn ICS38D, AFPT 2 TRIP THROTTLE, handwheel clockwise until Latch-Up Lever contacts stop on valve yoke and handwheel will turn no further.

_____ e. Push on the Trip Hook until there is no gap.

_____ f. Verify the Latch-Up Lever, AND Trip Hook are completely engaged.

_____ g. Verify the "Reset" arrow on the RESET/TRIPPED indicator aligns with corresponding pointer on the connecting rod.

_____ h. IF AFPT 2 is being reset after a overspeed trip, THEN inform CTRM AFPT 2 Trip Throttle Valve is reset AND standing by to open ICS38D, AFPT 1-2 TRIP THROTTLE

CAUTION 5.12.3.i

When opening the Trip Throttle Valve, caution shall be exercised not to apply excessive force against the Mechanical Stop.

_____ i. Open ICS38D, AFPT 1-2 TRIP THROTTLE.

_____ j. Turn ICS38D, AFPT 1-2 TRIP THROTTLE handwheel 1/4 turn closed.

_____ k. Seal ICS38D, AFPT 1-2 TRIP THROTTLE handwheel.

_____ l. Verify ICS38D, AFPT 1-2 TRIP THROTTLE is reset, AND sealed open.

_____
IV

Independent Verification by _____ Date _____

m. Check the following:

_____ • Computer Point S017, AFPT 2 OVERSPEED, indicates "NORM".

_____ • Computer Point Z002, AFPT 2 STOP/GOV/STM IN ISO VLVS, indicates "NORM".

_____ • Annunciator, AFPT 2 OVRSPD TRIP (10-2-H), is EXTINGUISHED.

_____ • Annunciator, AFP 2 TRBL (10-4-H), is EXTINGUISHED.

_____ 5.12.4 IF AFPT 2 has been reset following an overspeed trip, THEN GO TO Subsection 5.10, AFW Train 2 Operation following Automatic Start.

Subsection 5.12 completed by _____ Date _____