OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: a- **ALTERNATE PATH**

TASK NUMBER: U-085-AB-03

TASK TITLE: CRD Pump Trip at <900 psig Reactor Pressure

K/A NUMBER: 201001 A2.01 K/A RATING: RO 3.2 SRO 3.3

TASK STANDARD: Withdraws Control Rod, if withdrawn to position 48; performs a coupling check, ranges IRMs to prevent a full scram signal, and inserts a manual scram; when unable to restore CRD drive water pressure >940 psig.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-85 and 3-AOI-85-3

VALIDATION TIME: 15 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS:

You are the Reactor Operator. Plant startup is in progress. Last completed Control Rod was 38-43 from 16 to 48, Sequence A2 Group 12. Other Operators are assigned heat up rate monitoring and Reactor Level Control.

INITIATING CUE:

The Unit Supervisor directs you to continue withdrawing controls rods for plant startup, the next control rod is 30-35. Rod Out Notch Override is authorized, complete the withdrawal of group 12 and then continue with group 13.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

You are the Reactor Operator. Plant startup is in progress. Last completed Control Rod was 38-43 from 16 to 48, Sequence A2 Group 12. Other Operators are assigned heat up rate monitoring and Reactor Level Control.

INITIATING CUE:

The Unit Supervisor directs you to continue withdrawing controls rods for plant startup, the next control rod is 30-35. Rod Out Notch Override is authorized, complete the withdrawal of group 12 and then continue with group 13.

NRC Examiner: Steps 1 through 5 are for single notch withdrawal, steps 6 through 15 are for continuous withdrawal.

START TIME_____

****

Performance Step 1: Critical X Not Critical

6.6.3 Control Rod Notch Withdrawal

[1] **SELECT** the desired control rod by depressing the appropriate CRD ROD SELECT pushbutton, 3-XS-85-40.

Standard:

Selects Control Rod 30-35 by depressing 30-35 pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical _ Not Critical X

[2] **OBSERVE** the following for selected control rod:

- CRD ROD SELECT pushbutton is brightly ILLUMINATED.
- White light on the Full Core Display ILLUMINATED.
- Rod Out Permit light ILLUMINATED.

Standard:

Observes the above indications.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

[3] **VERIFY** ROD WORTH MINIMIZER operable and LATCHED in to correct ROD GROUP, when Rod Worth Minimizer is enforcing.

Standard:

Verifies Rod Worth Minimizer responded correctly and verified Control Rod 30-35 is going from position 16 to 48.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[4] **PLACE** CRD CONTROL SWITCH, 3-HS-85-48, in ROD OUT NOTCH, and **RELEASE**.

[5] **OBSERVE** the control rod settles into the desired position and the ROD SETTLE light extinguishes.

Standard:

Withdraws control rod 30-35.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required, have operator take the actions of 3-AOI-85-3 CRD System Failure.

****

Performance Step 5: Critical X Not Critical

[6] **IF** control rod is notch withdrawn to rod notch Position 48, **THEN PERFORM** control rod coupling integrity check as follows:

[6.1] **PLACE** CRD CONTROL SWITCH, 3-HS-85-48, in ROD OUT NOTCH, and **RELEASE**.

[6.2] **CHECK** control rod coupled by observing the following:

- Four rod display digital readout **AND** the full cores display digital readout **AND** background light remain illuminated.
- CONTROL ROD OVERTRAVEL annunciator, 3-XA-55-5A, Window 14, does **NOT** alarm.

[6.3] **CHECK** the control rod settles into Position 48 and the ROD SETTLE light extinguishes.

Standard:

If Control Rod is withdrawn to position 48, performs a coupling check.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

6.6.4 Continuous Rod Withdrawal

NOTES

1) Continuous control rod withdrawal may be used when a control rod is to be withdrawn greater than three notches.
2) When in areas of high notch worth, single notch withdrawal should be used instead of continuous rod withdrawal. Information concerning high notch worth is identified by Reactor Engineering in Control Rod Coupling Integrity Check, 3-SR-3.1.3.5A.
3) When continuously withdrawing a control rod, the CRD Notch Override Switch is held in the Override position and the CRD Control Switch is held in the Rod Out Notch position.
   - When the control rod reaches two notches below its intended position, both switches should be released.
   - If the rod settles in a notch below the intended position, the CRD Control Switch should be used to withdraw the rod to the intended position.
   - **EXAMPLE**: If a control rod is to be withdrawn from position 00 to position 12, the CRD Notch Override Switch and the CRD Control Switch would be used to move the control rod until reaching position 08, then both switches would be released. If the control rod settles at a notch below the intended position of 12, the CRD Control Switch would be used to withdraw the control rod to position 12.

[1] **SELECT** the desired control rod by depressing the appropriate CRD ROD SELECT pushbutton, 3-XS-85-40.

Standard:

Selects Control Rod 30-35 by depressing 30-35 pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical _ Not Critical X

[2] **OBSERVE** the following for selected control rod:

- CRD ROD SELECT pushbutton is brightly ILLUMINATED.
- White light on the Full Core Display ILLUMINATED.
- Rod Out Permit light ILLUMINATED.

Standard:

Observes the above indications.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical _ Not Critical X

[3] **VERIFY** ROD WORTH MINIMIZER operable and LATCHED in to correct ROD GROUP, when Rod Worth Minimizer is enforcing.

Standard:

Verifies Rod Worth Minimizer responded correctly.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical _ Not Critical X

[4] **VERIFY** Control Rod is being withdrawn to a position greater than three notches.

Standard:

Verifies Control Rod 30-35 is going from position 16 to 48.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical _ Not Critical X

[5] **IF** withdrawing the control rod to a position other than "48", **THEN PERFORM** the following: (Otherwise N/A)

Standard:

Step is NA.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical X Not Critical

NOTE

When continuously withdrawing a control rod to position 48, the control rod coupling integrity check can be performed by one of the two following methods:

1) Coupling integrity check while maintaining the CRD Notch Override Switch in the Override position and the CRD Control Switch in the Rod Out Notch position. If this method is selected, perform Step 6.6.4[6] and N/A Step 6.6.4[7].
2) Coupling integrity check after releasing the CRD Notch Override Switch and the CRD Control Switch. If this method is selected, perform Step 6.6.4[7] and N/A Step 6.6.4[6].

[6] **IF** continuously withdrawing the control rod to position 48 and performing the control rod coupling integrity check in conjunction with withdrawal, **THEN PERFORM** the following: (Otherwise N/A)

[6.1] **PLACE** and **HOLD** CRD NOTCH OVERRIDE, 3-HS-85-47, in NOTCH OVERRRIDE.

[6.2] **PLACE** and **HOLD** CRD CONTROL SWITCH, 3-HS-85-48, in ROD OUT NOTCH.

Standard:

Continuously withdraws Control Rod 30-35 by holding switch, 3-HS-85-47, in Notch Override and, 3-HS-85-48, in Rod Out Notch.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required, have operator take the actions of 3-AOI-85-3 CRD System Failure.

****

Performance Step 12: Critical X Not Critical

[6.3] **MAINTAIN** the CRD Notch Override Switch in the Override position and the CRD Control Switch in the Rod Out Notch position, with the control rod at position 48.

[6.4] **CHECK** control rod coupled by observing the following:
- Four rod display digital readout **AND** the full core display digital readout **AND** background light remain illuminated.
- CONTROL ROD OVERTRAVEL annunciator, 3-XA-55-5A, Window 14, does **NOT** alarm.

[6.5] **RELEASE** both CRD NOTCH OVERRIDE, 3-HS-85-47, and CRD CONTROL SWITCH, 3-HS-85-48.

[6.6] **CHECK** control rod settles into position 48 and ROD SETTLE light extinguishes.

Standard:

If control rod is withdrawn to position 48, performs a coupling check.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical X Not Critical

[7] **IF** continuously withdrawing the control rod to position 48, the control rod coupling integrity check will be performed after the CRD NOTCH OVERRIDE, 3-HS-85-47, and CRD CONTROL SWITCH, 3-HS-85-48 are to be released. **THEN PERFORM** control rod coupling integrity check as follows (otherwise N/A):

[7.1] **PLACE AND HOLD** CRD NOTCH OVERRIDE, 3-HS-85-47, in NOTCH OVERRRIDE.

[7.2] **PLACE AND HOLD** CRD CONTROL SWITCH, 3-HS-85-48, in ROD OUT NOTCH.

Standard:

Continuously withdraws Control Rod 30-35 by holding switch, 3-HS-85-47, in Notch Override and 3-HS-85-48, in Rod Out Notch.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required, have operator take the actions of 3-AOI-85-3 CRD System Failure.

****

Performance Step 14: Critical _ Not Critical X

[7.3] **WHEN** position 48 is reached, **THEN RELEASE** CRD NOTCH OVERRIDE, 3-HS-85-47, and CRD CONTROL SWITCH, 3-HS-85-48.

[7.4] **VERIFY** control rod settles into position 48.

Standard:

Stops withdraw of Control Rod 30-35 at position 48 by releasing hand switches and verifies rod settles at position 48.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15: Critical X Not Critical

[7.5] **PLACE** CRD CONTROL SWITCH, 3-HS-85-48, in ROD OUT NOTCH, and **RELEASE**.

[7.6] **CHECK** control rod coupled by observing the following:

- Four rod display digital readout **AND** full core display digital readout **AND** background light will remain illuminated.
- CONTROL ROD OVERTRAVEL annunciator (3-XA-55-5A, Window 14) does **NOT** alarm.

[7.7] **CHECK** control rod settles into position 48 and ROD SETTLE light extinguishes.

Standard:

If control rod is withdrawn to position 48, performs a coupling check.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 16: Critical X Not Critical

Operator Ranges IRMs as necessary; to maintain greater than the downscale reading of 7.5/125 and less than the upscale reading of 104.6/125.

Note: the High-High of 116.4/125 will produce a scram signal.

Standard:

Ranges IRMs to clear or prevent a Rod Block signal.

Note: A Full Scram signal from IRMs while withdrawing control rods will be a failure.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required , have operator take the actions of 3-AOI-85-3 CRD System Failure.

****

Performance Step 17: Critical _ Not Critical X

4.1 Immediate Actions

[1] **IF** operating CRD PUMP has failed **AND** the standby CRD Pump is available, **THEN PERFORM** the following at Panel 3-9-5:

[1.1] **PLACE** CRD SYSTEM FLOW CONTROL, 3-FIC-85-11, in MAN at minimum setting.

Standard:

Places CRD System Flow Control in Manual and at Minimum setting.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 18: Critical _ Not Critical X

[1.2] **START** associated standby CRD Pump using one of the following:

- CRD Pump 3B, using 3-HS-85-2A
- CRD Pump 3A, using 3-HS-85-1A

Standard:

Attempts to start standby CRD Pump and may also attempt to start tripped CRD Pump.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 19: Critical X Not Critical

[2] **IF** Reactor Pressure is less than 900 PSIG and either of the following conditions exists:

- In-service CRD Pump tripped and neither CRD Pump can be started, **OR**
- Charging Water Pressure can **NOT** be restored and maintained above 940 PSIG, **THEN PERFORM** the following:

[2.1] **MANUALLY SCRAM** Reactor, **IMMEDIATELY PLACE** the reactor mode switch in the SHUTDOWN position.

Standard:

Insert a Manual Scram and places Mode Switch in Shutdown.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: After Scram report another operator will continue in 3-AOI-100-1.

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: a- **ALTERNATE PATH**

TASK NUMBER: U-085-AB-03

TASK TITLE: CRD Pump Trip at <900 psig Reactor Pressure

K/A NUMBER: 201001 A2.01 K/A RATING: RO 3.2 SRO 3.3

TASK STANDARD: Withdraws Control Rod, if withdrawn to position 48; performs a coupling check, ranges IRMs to prevent a full scram signal, and inserts a manual scram; when unable to restore CRD drive water pressure >940 psig.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-85 and 2-AOI-85-3

VALIDATION TIME: 15 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS:

You are the Reactor Operator. Plant startup is in progress. Last completed Control Rod was 38-43 from 16 to 48, Sequence A2 Group 12. Other Operators are assigned heat up rate monitoring and Reactor Level Control.

INITIATING CUE:

The Unit Supervisor directs you to continue withdrawing controls rods for plant startup, the next control rod is 30-35. Rod Out Notch Override is authorized, complete the withdrawal of group 12 and then continue with group 13.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

You are the Reactor Operator. Plant startup is in progress. Last completed Control Rod was 38-43 from 16 to 48, Sequence A2 Group 12. Other Operators are assigned heat up rate monitoring and Reactor Level Control.

INITIATING CUE:

The Unit Supervisor directs you to continue withdrawing controls rods for plant startup, the next control rod is 30-35. Rod Out Notch Override is authorized, complete the withdrawal of group 12 and then continue with group 13.

NRC Examiner: Steps 1 through 5 are for single notch withdrawal, steps 6 through 15 are for continuous withdrawal.

START TIME_____

****

Performance Step 1: Critical X Not Critical

6.6.3 Control Rod Notch Withdrawal

[1] **SELECT** the desired control rod by depressing the appropriate CRD ROD SELECT pushbutton, 2-XS-85-40.

Standard:

Selects Control Rod 30-35 by depressing 30-35 pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical _ Not Critical X

[2] **OBSERVE** the following for selected control rod:

- CRD ROD SELECT pushbutton is brightly ILLUMINATED.
- White light on the Full Core Display ILLUMINATED.
- Rod Out Permit light ILLUMINATED.

Standard:

Observes the above indications.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

[3] **VERIFY** ROD WORTH MINIMIZER operable and LATCHED in to correct ROD GROUP, when Rod Worth Minimizer is enforcing.

Standard:

Verifies Rod Worth Minimizer responded correctly and verified Control Rod 30-35 is going from position 16 to 48.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[4] **PLACE** CRD CONTROL SWITCH, 2-HS-85-48, in ROD OUT NOTCH, and **RELEASE**.

[5] **OBSERVE** the control rod settles into the desired position and the ROD SETTLE light extinguishes.

Standard:

Withdraws control rod 30-35.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical X Not Critical

[6] **IF** control rod is notch withdrawn to rod notch Position 48, **THEN PERFORM** control rod coupling integrity check as follows:

[6.1] **PLACE** CRD CONTROL SWITCH, 2-HS-85-48, in ROD OUT NOTCH, and **RELEASE**.

[6.2] **CHECK** control rod coupled by observing the following:

- Four rod display digital readout **AND** the full cores display digital readout **AND** background light remain illuminated.
- CONTROL ROD OVERTRAVEL annunciator(2-XA-55-5A, Window 14), does **NOT** alarm.

[6.3] **CHECK** the control rod settles into Position 48 and the ROD SETTLE light extinguishes.

Standard:

If Control Rod is withdrawn to position 48, performs a coupling check.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

6.6.4 Continuous Rod Withdrawal

NOTES

1) Continuous control rod withdrawal may be used when a control rod is to be withdrawn greater than three notches.
2) When in areas of high notch worth, single notch withdrawal should be used instead of continuous rod withdrawal. Information concerning high notch worth is identified by Reactor Engineering in Control Rod Coupling Integrity Check, 2-SR-3.1.3.5A.
3) When continuously withdrawing a control rod to a position other than position 48 the CRD Notch Override Switch is held in the Override position and then the CRD Control. Switch is held in the Rod Out Notch position
   - Both switches should be released when the control rod reaches two notches prior to its intended position.
     (Example: If a control rod is to be withdrawn from position 00 to position 12, the CRD Notch Override Switch and the CRD Control Switch would be used to move the control rod until reaching position 08, then both switches would be released.)
   - If the rod settles in a notch prior to the intended position, the CRD Control Switch should be used to withdraw the rod to the intended position.
     (using the above example; If the control rod settles at a notch prior to the intended position of 12, the CRD Control Switch would be used to withdraw the control rod to position 12.

[1] **SELECT** the desired control rod by depressing the appropriate CRD ROD SELECT pushbutton, 2-XS-85-40.

Standard:

Selects Control Rod 30-35 by depressing 30-35 pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical _ Not Critical X

[2] **OBSERVE** the following for selected control rod:

- CRD ROD SELECT pushbutton is brightly ILLUMINATED.
- White light on the Full Core Display ILLUMINATED.
- Rod Out Permit light ILLUMINATED.

Standard:

Observes the above indications.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical _ Not Critical X

[3] **VERIFY** ROD WORTH MINIMIZER operable and LATCHED in to correct ROD GROUP, when Rod Worth Minimizer is enforcing.

Standard:

Verifies Rod Worth Minimizer responded correctly.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical _ Not Critical X

[4] **VERIFY** Control Rod is being withdrawn to a position greater than three notches.

Standard:

Verifies Control Rod 30-35 is going from position 16 to 48.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical _ Not Critical X

[5] **IF** withdrawing the control rod to a position other than "48", **THEN PERFORM** the following: (Otherwise N/A)

Standard:

Step is NA.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical X Not Critical

NOTE

When continuously withdrawing a control rod to position 48, the control rod coupling integrity check can be performed by one of the two following methods:

1) Coupling integrity check while maintaining the CRD Notch Override Switch in the Override position and the CRD Control Switch in the Rod Out Notch position. If this method is selected, perform Step 6.6.4[6] and N/A Step 6.6.4[7].
2) Coupling integrity check after releasing the CRD Notch Override Switch and the CRD Control Switch. If this method is selected, perform Step 6.6.4[7] and N/A Step 6.6.4[6].

[6] **IF** continuously withdrawing the control rod to position 48 and performing the control rod coupling integrity check in conjunction with withdrawal, **THEN PERFORM** the following: (Otherwise N/A)

[6.1] **PLACE** and **HOLD** CRD NOTCH OVERRIDE, 2-HS-85-47, in NOTCH OVERRRIDE.

[6.2] **PLACE** and **HOLD** CRD CONTROL SWITCH, 2-HS-85-48, in ROD OUT NOTCH.

Standard:

Continuously withdraws Control Rod 30-35 by holding switch, 2-HS-85-47, in Notch Override and, 2-HS-85-48, in Rod Out Notch.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required, have operator take the actions of 2-AOI-85-3 CRD System Failure.

****

Performance Step 12: Critical X Not Critical

[6.3] **MAINTAIN** the CRD Notch Override Switch in the Override position and the CRD Control Switch in the Rod Out Notch position, with the control rod at position 48.

[6.4] **CHECK** control rod coupled by observing the following:
- Four rod display digital readout **AND** full core display digital readout **AND** background light remain illuminated.
- CONTROL ROD OVERTRAVEL annunciator (2-XA-55-5A, Window 14) does **NOT** alarm.

[6.5] **RELEASE** both CRD NOTCH OVERRIDE, 2-HS-85-47, and CRD CONTROL SWITCH, 2-HS-85-48.

[6.6] **CHECK** control rod settles into position 48 and ROD SETTLE light extinguishes.

Standard:

If control rod is withdrawn to position 48, performs a coupling check.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical X Not Critical

[7] **IF** continuously withdrawing the control rod to position 48, the control rod coupling integrity check will be performed after the CRD NOTCH OVERRIDE, 2-HS-85-47, and CRD CONTROL SWITCH, 2-HS-85-48 are to be released. **THEN PERFORM** control rod coupling integrity check as follows (otherwise N/A):

[7.1] **PLACE AND HOLD** CRD NOTCH OVERRIDE, 2-HS-85-47, in NOTCH OVERRRIDE.

[7.2] **PLACE AND HOLD** CRD CONTROL SWITCH, 2-HS-85-48, in ROD OUT NOTCH.

Standard:

Continuously withdraws Control Rod 30-35 by holding switch, 2-HS-85-47, in Notch Override and, 2-HS-85-48, in Rod Out Notch.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required, have operator take the actions of 2-AOI-85-3 CRD System Failure.

****

Performance Step 14: Critical _ Not Critical X

[7.3] **WHEN** position 48 is reached, **THEN RELEASE** CRD NOTCH OVERRIDE, 2-HS-85-47, and CRD CONTROL SWITCH, 2-HS-85-48.

[7.4] **VERIFY** control rod settles into position 48.

Standard:

Stops withdraw of Control Rod 30-35 at position 48 by releasing hand switches and verifies rod settles at position 48.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15: Critical X Not Critical

[7.5] **PLACE** CRD CONTROL SWITCH, 2-HS-85-48, in ROD OUT NOTCH, and **RELEASE**.

[7.6] **CHECK** control rod coupled by observing the following:

- Four rod display digital readout **AND** full core display digital readout **AND** background light will remain illuminated.
- CONTROL ROD OVERTRAVEL annunciator (2-XA-55-5A, Window 14) does **NOT** alarm.

[7.7] **CHECK** control rod settles into position 48 and ROD SETTLE light extinguishes.

Standard:

If control rod is withdrawn to position 48, performs a coupling check.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 16: Critical X Not Critical

Operator Ranges IRMs as necessary; to maintain greater than the downscale reading of 7.5/125 and less than the upscale reading of 90/125.

Note: the High-High of 116.4/125 will produce a scram signal.

Standard:

Ranges IRMs to clear or prevent a Rod Block signal.
Note: A Full Scram signal from IRMs while withdrawing control rods will be a failure.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: At direction of Evaluator, after or during withdraw of control rod 30-35, trip operating CRD Pump.

CUE: If required, have operator take the actions of 2-AOI-85-3 CRD System Failure.

****

Performance Step 17: Critical _ Not Critical X

4.1 Immediate Actions

[1] **IF** operating CRD PUMP has failed **AND** standby CRD Pump is available, **THEN PERFORM** the following at Panel 2-9-5:

[1.1] **PLACE** CRD SYSTEM FLOW CONTROL, 2-FIC-85-11, in MAN at minimum setting.

Standard:

Places CRD System Flow Control in Manual and at Minimum setting.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 18: Critical _ Not Critical X

[1.2] **START** associated standby CRD Pump using one of the following:

- CRD Pump 1B, using 2-HS-85-2A
- CRD Pump 2A, using 2-HS-85-1A

Standard:

Attempts to start standby CRD Pump and may also attempt to start tripped CRD Pump.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical

[2] **IF** Reactor Pressure is less than 900 PSIG and either of the following conditions exists:

- In-service CRD Pump tripped and neither CRD Pump can be started, **OR**
- Charging Water Pressure can **NOT** be restored and maintained above 940 PSIG, **THEN PERFORM** the following:

[2.1] **MANUALLY SCRAM** Reactor, **IMMEDIATELY PLACE** the reactor mode switch in the SHUTDOWN position.

Standard:

Insert a Manual Scram and places Mode Switch in Shutdown.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: After Scram report another operator will continue in 2-AOI-100-1.

END OF TASK

STOP TIME ___

JPM b

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: b- **ALTERNATE PATH**

TASK NUMBER: U-003-AL-01

TASK TITLE: Place RFPT 'A' in Service

K/A NUMBER: 259001 A4.04 K/A RATING: RO 3.1 SRO 2.9

PRA:

TASK STANDARD: Removes RFPT A from service, trips RFPT A and closes discharge valve

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-3

VALIDATION TIME: 20 minutes

MAX. TIME ALLOWED: (Completed for Time Critical JPMs only)

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 3A. RFPT 3A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 3A from service in accordance with 3-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 3A. RFPT 3A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 3A from service in accordance with 3-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

START TIME_____

****

Performance Step 1: Critical Not Critical X

7.1 RFP/RFPT Shutdown

CAUTIONS

1) FAILURE to monitor SJAE/OG CNDR CNDS FLOW, 3-FI-2-42, on Panel 3-9-6 for proper flow (between 2 x 10^6 and 3 x 10^6 lbm/hr) may result in SJAE isolation.
2) Changes in Condensate System flow may require adjustment to SPE CNDS BYPASS, 3-FCV-002-0190.
3) When isolating the Reactor Feedwater Pump(s) for maintenance, the associated injection water should also be isolated to prevent high seal differential pressure and allow the RFW Pump shafts to rotate freely. (BFNPER123395)

[1] **REFER TO** Section 3.0 and **REVIEW** Precautions and Limitations.

[2] **VERIFY** Reactor power is less than 80% prior to removing RFP from service.

NOTE

It may be necessary to switch to SINGLE ELEMENT mode from THREE ELEMENT mode earlier than recommended if Feedwater control becomes unstable.

[3] **IF** RFP being removed from service is last operating RFP **OR IF** at any time Feedwater control becomes unstable**, THEN** (Otherwise N/A).

Standard:

Given in initial conditions that step 1 is complete and step 2 is NA.
Operator verifies Reactor Power is <80%
Given in initial conditions that step 3 is NA

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical Not Critical X

[4] **VERIFY** in AUTO, RFPT 3A TURNING GEAR MOTOR, 3-HS-3-101A.

Standard:

Verifies 3-HS-3-101A in AUTO

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical __ Not Critical X

NOTES

1) When selected, Column 1 on individual RFPT Speed Control Panel Display Stations (PDS) displays actual pump speed and is not controlled in any mode.
2) When selected, Column 2 on individual RFPT Speed Control PDS displays pump flow bias and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in AUTO.
3) When selected, Column 3 on individual RFPT Speed Control PDS displays RFPT speed demand and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in MANUAL.
4) Illustration 2 can be referred to for additional information on the RFPT Speed Control PDSs.

[5] **LOWER** speed of RFPT/RFP being removed from service by either of the following:

• **IF** Using individual RFPT Manual Governor switch, **THEN**

GO TO Step 7.1[6].

• **IF** Using individual RFPT Speed Control PDS in MANUAL, **THEN**

GO TO Step 7.1[7].

Standard:

Operator proceeds to step 6 or step 7. NOTE most operators will go to step 6 (performance step 4).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[6] **LOWER** speed of RFPT, using individual RFPT 3A SPEED CONT RAISE/LOWER switch, 3-HS-46-8A as follows (Panel 3-9-5):

[6.1] **DEPRESS** RFPT Speed Control Raise/Lower switch to MANUAL GOVERNOR.

• **VERIFY** illuminated amber light at switch.

Standard:

Depresses 3-HS-46-8A to Manual

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: *Critical X Not Critical

*[6.2] **SLOWLY LOWER** RFPT speed, by placing RFPT Speed Control switch in RAISE or LOWER positions, as necessary.

[6.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO as RFW Control System maintains Reactor water level.

Standard:

Lowers speed of RFPT 3A and verifies RFPT 3B and 3C respond.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[7] **SLOWLY LOWER** speed of RFPT, using individual RFPT 3A SPEED CONTROL PDS, 3-SIC-46-8 as follows (Panel 3-9-5):

[7.1] **PLACE** PDS in MANUAL AND **VERIFY** Column 3 is selected.

Standard:

Places 3-SIC-46-8 in Manual.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: *Critical X Not Critical

*[7.2] **SLOWLY LOWER** RFPT speed, using Ramp Up/Ramp Down pushbuttons as necessary.

[7.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO as RFW Control System maintains Reactor water level..

Standard:

Lowers speed of RFPT 3A and verifies RFPT 3B and 3C respond.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

ALTERNATE PATH STARTS ON THE NEXT STEP

****

Performance Step 8: *Critical X Not Critical

CAUTION
RFP Discharge Check Valve failure may be experienced while removing RFP from service.

[8] **IF** at any time RFP Discharge Check Valve failure is experienced while removing RFP from service, **THEN PERFORM** the following: (Otherwise N/A)

[8.1] **DEPRESS** RFP Discharge Testable Check valve push-button for approximately ten seconds (Panel 3-9-6).

Standard:

*****When Operator lowers speed far enough they will notice the failure of RFP Discharge Check Valve due to check valve failing to close and Reactor Water level lowering. Operator will complete step 7.1[8].

Operator depresses 3-HS-3-94A, Check Valve fails to close.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical Not Critical X

[8.2] **CHECK** reverse flow through check valve has stopped.

[8.3] **IF** RFP Discharge Testable Check Valve failure is still being experienced, **THEN PERFORM** one of the following:

[8.3.1] **IMMEDIATELY RETURN** RFP to service.

Standard:

Operator may raise speed of RFPT 3A and attempt to return to service.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Remove RFPT 3A from service.

NOTE: Operator may lower pump speed to 600 RPM prior to tripping pump.

****

Performance Step 10: *Critical X Not Critical

[8.3.2] **PERFORM** the following:

A. **VERIFY** open RFP Minimum Flow Valve.

*B. **CLOSE** RFP Discharge Valve.

*C. **TRIP** RFPT.

Standard:

Verifies RFP 3A min flow valve Open, Closes RFP 3A Discharge Valve 3-HS-3-19A AND Trips RFPT 3A.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: This completes the task.

END OF TASK

STOP TIME _____

JPM b

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: b- **ALTERNATE PATH**

TASK NUMBER: U-003-AL-01

TASK TITLE: Remove RFPT 'A' from Service

K/A NUMBER: 259001 A4.04 K/A RATING: RO 3.1 SRO 2.9

PRA:

TASK STANDARD: Removes RFPT A from service, trips RFPT A and closes discharge valve

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-3

VALIDATION TIME: 20 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 2A. RFPT 2A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 2A from service in accordance with 2-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Unit Operator. An oil leak has been identified on RFPT 2A. RFPT 2A needs to removed from service.

INITIATING CUES: The Unit Supervisor directs you to remove RFPT 2A from service in accordance with 2-OI-3, Reactor Feedwater System section 7.1. Precautions and Limitations have been reviewed.

START TIME_____

****

Performance Step 1: Critical Not Critical X

7.1 RFP/RFPT Shutdown

CAUTIONS

1) FAILURE to monitor SJAE/OG CNDR CNDS FLOW, 2-FI-2-42, on Panel 2-9-6 for proper flow (between 2 x 10^6 and 3 x 10^6 lbm/hr) may result in SJAE isolation.

2) Changes in Condensate System flow may require adjustment to SPE CNDS BYPASS, 2-FCV-002-0190.

3) When isolating the Reactor Feedwater Pump(s) for maintenance, the associated injection water should also be isolated to prevent high seal differential pressure and allow the RFW Pump shafts to rotate freely. (BFNPER123395)

4) When a Reactor Feed Pump is isolated (suction, discharge, and minimum flow valve closed) with injection water aligned to the pump, there is a potential of rising pump casing pressure and seal water leakoff flows reaching the point where seal water drains are overcome and seal water is forced into the oil system through the bearing housings. Therefore, the time that a RFP is isolated with injection water aligned to the pump should be minimized.

[1] **REFER TO** Section 3.0 and **REVIEW** Precautions and Limitations.

[2] Verify Reactor Power is ≤95%. (Ref. P&L 3.0 VV)

[3] **IF** any Condensate or Condensate Booster Pump is NOT in service, **THEN** (Otherwise N/A).

[4] **IF** RFP being removed from service is last operating RFP, **THEN** (Otherwise N/A)

Standard:

Given in initial conditions that step 1 is complete
Operator verifies Reactor Power is <95%
Given in initial conditions that step 3 and 4 are N/A.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical Not Critical X

[5] **VERIFY** in AUTO, RFPT 2A TURNING GEAR MOTOR, 2-HS-3-101A.

Standard:

Verifies 2-HS-3-101A in AUTO

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical Not Critical X

NOTES

1) When selected, Column 1 on individual RFPT Speed Control Panel Display Stations (PDS) displays actual pump speed and is not controlled in any mode.

2) When selected, Column 2 on individual RFPT Speed Control PDS displays pump flow bias and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in AUTO.

3) When selected, Column 3 on individual RFPT Speed Control PDS displays RFPT speed demand and is changed with the Ramp Up/Ramp Down pushbuttons with the controller in MANUAL.

4) Illustration 2 can be referred to for additional information on the RFPT Speed Control PDSs.

[6] **LOWER** speed of RFPT/RFP being removed from service by either of the following methods:

• **IF** Using individual RFPT Manual Governor switch, **THEN**

GO TO Step 7.1[7].

• **IF** Using individual RFPT Speed Control PDS in MANUAL, **THEN**

GO TO Step 7.1[8].

Standard:

Operator proceeds to step 7 or step 8. NOTE most operators will go to step 7 (performance step 4).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[7] **SLOWLY LOWER** speed of RFPT, using individual RFPT 2A SPEED CONT RAISE/LOWER switch, 2-HS-46-8A on Panel 2-9-5, by performing the following:

[7.1] **DEPRESS** RFPT Speed Control Raise/Lower switch to MANUAL GOVERNOR.

• **CHECK** amber light at switch illuminated.

Standard:

Depresses 2-HS-46-8A to Manual

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: *Critical X Not Critical

*[7.2] **SLOWLY LOWER** RFPT speed, by placing RFPT Speed Control switch in RAISE and LOWER positions, as necessary.

[7.3] **IF** this is the **NOT** the last operating feed pump, **THEN OBSERVE** rise in speed of any remaining RFPT operating in AUTO.

Standard:

Lowers speed of RFPT 2A and verifies RFPT 2B and 2C respond

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[8] **SLOWLY LOWER** speed of RFPT, using individual RFPT 2A SPEED CONTROL PDS, 2-SIC-46-8 by performing the following (Panel 2-9-5):

[8.1] **PLACE** PDS in MANUAL AND **VERIFY** Column 3 is selected.

Standard:

Places 2-SIC-46-8 in Manual

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: *Critical X Not Critical

*[8.2] **SLOWLY LOWER** RFPT speed, using Ramp Up/Ramp Down pushbuttons as necessary.

[8.3] **IF** this is the **NOT** the last operating feed pump, **THEN**

OBSERVE rise in speed of any remaining RFPT operating in AUTO.

Standard:

Lowers speed of RFPT 2A and verifies RFPT 2B and 2C respond

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

ALTERNATE PATH STARTS ON THE NEXT STEP

****

Performance Step 8: Critical X Not Critical

CAUTION
RFP Discharge Check Valve may fail to close when removing a RFP from service.

[9] **IF** at any time RFP Discharge Check Valve failure is experienced while removing RFP from service, **THEN**

REFER TO Step 7.1[15].

Standard:

When Operator lowers speed far enough they will notice the failure of RFP Discharge Check Valve due to check valve failing to close and Reactor Water level lowering. Operator will transition to step 7.1[15].

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical Not Critical X

[10] **CONTINUE** to slowly lower RFPT speed to minimum speed setting (approximately 600 rpm).

Standard:

Operator will continue to lower speed, once speed has lowered far enough that RFPT 2A discharge pressure is below the discharge pressure of RFPT 2B and 2C, the operator will respond to a failure of RFPT 2A Discharge Check Valve Failure

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical Not Critical X

[15] **IF** RFP Discharge Check Valve failure is experienced, **THEN**

[15.1] **DEPRESS** RFP 2A(2B)(2C) DISCHARGE TESTABLE CK VLV pushbutton, 2-HS-3-94A.

• **VERIFY** Discharge Check Valve closed.

Standard:

Operator depresses 2-HS-3-94A, Check Valve fails to close

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical Not Critical X

[15.2] **IF** RFP Discharge Check Valve failure is still being experienced, **THEN PERFORM** either of the following:

[15.2.1] **IMMEDIATELY RETURN** RFP to service.

Standard:

Operator may raise speed of RFPT 2A and attempt to return to service.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Remove RFPT 2A from service.

NOTE: Operator may lower pump speed to 600 RPM prior to tripping pump.

****

Performance Step 12: *Critical X Not Critical

[15.2.2] **PERFORM** the following:

A. **VERIFY OPEN** RFP 2A MIN FLOW VALVE, 2-FCV-3-20

*B. **CLOSE** RFP 2A DISCHARGE VALVE using 2-HS-3-19A

*C. **VERIFY** RFP tripped.

Standard:

Verifies RFP 2A min flow valve Open, Closes RFP 2A Discharge Valve 2-HS-3-19A AND Trips RFPT 2A.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: This completes the task.

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: c- **ALTERNATE PATH**

TASK NUMBER: U-001-AB-01

TASK TITLE: RESPOND TO STUCK OPEN SRV

K/A NUMBER: 239002A2.03 K/A RATING: RO 4.1 SRO 4.2

TASK STANDARD: Perform control room operations necessary to respond to a stuck open SRV as directed by 3-AOI-1-1

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-AOI-1-1

VALIDATION TIME: 6 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator. Unit 3 is at 100% power. Annunciator MAIN STEAM RELIEF VALVE OPEN, 3-XA-55-3C, Window 25 is in alarm.

INITIATING CUE: The Unit Supervisor directs you to respond to the alarm as directed by 3-AOI-1-1.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. Unit 2 is at 100% power. Annunciator MAIN STEAM RELIEF VALVE OPEN, 3-XA-55-3C, Window 25 is in alarm.

INITIATING CUE: The Unit Supervisor directs you to respond to the alarm as directed by 3-AOI-1-1.

START TIME _____

Simulator Driver: This JPM requires SRV 1-31 stuck open (imf ad01e 100).

****

Performance Step 1: Critical _ Not Critical X

NOTE
Once a MSRV is operated, a time delay of 15 to 30 seconds can be expected before a response can be detected on 3-TR-1-1, MSRV DISCHARGE TAILPIPE TEMPERATURE. ICS can be used to monitor the discharge tailpipe temperature, but the appropriate indications on 3-TR-1-1 must be confirmed.

4.1 Immediate Action

[1] **IDENTIFY** stuck open relief valve by **OBSERVING** the following:

- SRV TAILPIPE FLOW MONITOR, 3-FMT-1-4, on Panel 3-9-3,

  OR

- MSRV DISCHARGE TAILPIPE TEMPERATURE recorder, 3-TR-1-1 on Panel 3-9-47.

Standard:

Identified MSRV 1-31 OPEN as indicated on 3-FMT-1-4 SRV Tailpipe Flow Monitor on Panel 3-9-3 or elevated tailpipe temperature as indicated on 3-TR-1-1, Panel 3-9-47.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[2] **IF** relief valve transient occurred while operating above 90% power, **THEN**

REDUCE reactor power to ≤90% RTP with recirc flow. (Otherwise N/A)

Standard:

Operator Reduces reactor power to ≤90% RTP with recirc flow.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

[3] **WHILE OBSERVING** the indications for the affected Relief valve on the Acoustic Monitor;

CYCLE the affected relief valve control switch as required up to three times:

- CLOSE to OPEN to CLOSE positions

Standard:

Placed 3-HS-1-31 in the CLOSE-OPEN-CLOSE position up to three times. Determines valve DID NOT close as indicated by MSRV TAILPIPE FLOW MONITOR or NO indicated increase in generator Mwe.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

[4] **IF** all SRVs are CLOSED, **THEN**

CONTINUE at Step 4.2.4. (Otherwise N/A)

Standard:

Verified that the SRV did not close and continues in the procedure at step 4.2.1

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical _ Not Critical X

NOTES
1) Once initial transient of SRV opening has stabilized (pressure regulator compensation) the Heat balance will indicate bad data.
2) The SRV TAILPIPE FLOW MONITOR may seal-in an OPEN position indication.

4.2 Subsequent Action

4.2.1 Action if a fire exists with SRV stuck open

[1] **IF** an SRV is open and a fire exists in ANY Appendix R fire area, **THEN** (Otherwise N/A):

INITIATE a manual scram before the Suppression Pool temperature exceeds 95°F.

Standard:

No fire is indicated. This step is not applicable.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical Not Critical X

4.2 Subsequent Action

4.2.2 Attempt to close valve from Panel 9-3:

[1] **PLACE** the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the OFF position.

[2] **PLACE** the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the ON position.

[3] **IF** all SRVs are CLOSED, **THEN**

CONTINUE at Step 4.2.4. (Otherwise N/A)

Standard:

Placed the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the off position and verifies the power is off. Placed the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the ON Position and verifies SRV 1-31 did not close and continues at step [4].

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: When the MSRV AUTO ACTUATION LOGIC SWITCH is in INHIBIT, dmf ad01e
****

Performance Step 7: Critical X Not Critical

[4] **PLACE** MSRV AUTO ACTUATION LOGIC INHIBIT, 3-XS-1-202 in INHIBIT:

[5] **IF** relief valve closes, **THEN**

OPEN breaker or **PULL** fuses as necessary using Attachment 1 (Unit 3 SRV Solenoid Power Breaker/Fuse Table).

Standard:

Placed MSRV AUTO ACTUATION LOGIC INHIBIT, 3-XS-1-202 in INHIBIT. Verifies SRV 1-31 closes. Directs AUO/US to open the breaker 8C1 on 250V RMOV Board 3B, or pull fuses 3-FU1-001-0031A and 3-FU1-001-0031B.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical _ Not Critical X

[6] **PLACE** MSRV AUTO ACTUATION LOGIC INHIBIT 3-XS-1-202, in AUTO.

Standard:

Places MSRV AUTO ACTUATION LOGIC INHIBIT 3-XS-1-202, in AUTO. If switched is placed in Auto prior to power being removed this would be a failure.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: If 3-XS-1-202 is placed in auto prior to removing fuses imf ad01e to open SRV

CUE: That completes this task.

END OF TASK

STOP TIME: _____

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: c- **ALTERNATE PATH**

TASK NUMBER: U-001-AB-01

TASK TITLE: RESPOND TO STUCK OPEN SRV

K/A NUMBER: 239002A2.03 K/A RATING: RO 4.1 SRO 4.2

TASK STANDARD: Perform control room operations necessary to respond to a stuck open SRV as directed by 2-AOI-1-1

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-AOI-1-1

VALIDATION TIME: 6 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator. Unit 2 is at 100% power. Annunciator MAIN STEAM RELIEF VALVE OPEN, 2-XA-55-3C, Window 25 is in alarm.

INITIATING CUE: The Unit Supervisor directs you to respond to the alarm as directed by 2-AOI-1-1.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. Unit 2 is at 100% power. Annunciator MAIN STEAM RELIEF VALVE OPEN, 2-XA-55-3C, Window 25 is in alarm.

INITIATING CUE: The Unit Supervisor directs you to respond to the alarm as directed by 2-AOI-1-1.

START TIME _____

Simulator Driver: This JPM requires SRV 1-31 stuck open (imf ad01e 100).

****

Performance Step 1: Critical _ Not Critical X

NOTE
Once a MSRV is operated, a time delay of 15 to 30 seconds can be expected before a response can be detected on 2-TR-1-1, MSRV DISCHARGE TAILPIPE TEMPERATURE. ICS can be used to monitor the discharge tailpipe temperature, but the appropriate indications on 2-TR-1-1 must be confirmed.

4.1 Immediate Action

[1] **IDENTIFY** stuck open relief valve by **OBSERVING** the following:

- SRV TAILPIPE FLOW MONITOR, 2-FMT-1-4, on Panel 2-9-3,

  OR

- MSRV DISCHARGE TAILPIPE TEMPERATURE recorder, 2-TR-1-1 on Panel 2-9-47.

Standard:

Identified MSRV 1-31 OPEN as indicated on 2-FMT-1-4 SRV Tailpipe Flow Monitor on Panel 2-9-3 or elevated tailpipe temperature as indicated on 2-TR-1-1, Panel 2-9-47.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[2] **IF** relief valve transient occurred while operating above 90% power, **THEN**

REDUCE reactor power to ≤90% RTP with recirc flow. (Otherwise N/A)

Standard:

Operator Reduces reactor power to ≤90% RTP with recirc flow.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

[3] **WHILE OBSERVING** the indications for the affected Relief valve on the Acoustic Monitor;

CYCLE the affected relief valve control switch as required up to three times:

- CLOSE to OPEN to CLOSE positions

Standard:

Placed 2-HS-1-31 in the CLOSE-OPEN-CLOSE position up to three times. Determines valve DID NOT close as indicated by MSRV TAILPIPE FLOW MONITOR or NO indicated increase in generator Mwe.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 4: Critical _ Not Critical X

[4] **IF** all SRVs are CLOSED, **THEN**

CONTINUE at Step 4.2.4. (Otherwise N/A)

Standard:

Verified that the SRV did not close and continues in the procedure at step 4.2.1

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical _ Not Critical X

NOTES
1) Once initial transient of SRV opening has stabilized (pressure regulator compensation) the Heat balance will indicate bad data.
2) The SRV TAILPIPE FLOW MONITOR may seal-in an OPEN position indication.

4.2 Subsequent Action

4.2.1 Action if a fire exists with SRV stuck open

[1] **IF** an SRV is open and a fire exists in ANY Appendix R fire area, **THEN** (Otherwise N/A):

INITIATE a manual scram before the Suppression Pool temperature exceeds 95°F.

Standard:

No fire is indicated. This step is not applicable.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical Not Critical X

4.2 Subsequent Action

4.2.2 Attempt to close valve from Panel 9-3:

[1] **PLACE** the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the OFF position.

[2] **PLACE** the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the ON position.

[3] **IF** all SRVs are CLOSED, **THEN**

CONTINUE at Step 4.2.4. (Otherwise N/A)

Standard:

Placed the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the off position and verifies the power is off. Placed the SRV TAILPIPE FLOW MONITOR POWER SWITCH in the ON Position and verifies SRV 1-31 did not close and continues at step [4].

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: When the MSRV AUTO ACTUATION LOGIC SWITCH is in INHIBIT, dmf ad01e
****

Performance Step 7: Critical X Not Critical

[4] **PLACE** MSRV AUTO ACTUATION LOGIC INHIBIT, 2-XS-1-202 in INHIBIT:

[5] **IF** relief valve closes, **THEN**

OPEN breaker or **PULL** fuses as necessary using Attachment 1 (Unit 2 SRV Solenoid Power Breaker/Fuse Table).

Standard:

Placed MSRV AUTO ACTUATION LOGIC INHIBIT, 2-XS-1-202 in INHIBIT. Verifies SRV 1-31 closes. Directs AUO/US to open the breaker 8B2 on 250V RMOV Board 2B, or pull fuses FU2-1-31 (Fuse holder 1FU) and FU2-1-31 (Fuse Holder 2FU).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical _ Not Critical X

[6] **PLACE** MSRV AUTO ACTUATION LOGIC INHIBIT 2-XS-1-202, in AUTO.

Standard:

Places MSRV AUTO ACTUATION LOGIC INHIBIT 2-XS-1-202, in AUTO. If switched is placed in Auto prior to power being removed this would be a failure.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: If 2-XS-1-202 is placed in auto prior to removing fuses imf ad01e to open SRV

CUE: That completes this task.

END OF TASK

STOP TIME: _____

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: d- **ALTERNATE PATH**

TASK NUMBER: U-047-NO-20

TASK TITLE: Control Valve Tightness Test

K/A NUMBER: 245000 A3.08 K/A RATING: RO 3.0 SRO: 3.1

TASK STANDARD: Control Valve Tightness Test IAW 3-OI-47 section 6.9, responds to high turbine vibrations and trips the Main Turbine

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-OI-47

VALIDATION TIME: 20 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator on Unit 3. The Turbine-Generator has been operating at 200 MWe for the past 3 hours, 45 minutes ago the Generator was taken off line. The Precautions and Limitations in of 3-OI-47 Turbine-Generator System have been reviewed. The Main Turbine Vibration Trip Bypass, 3-HS-47-26, is in Trip Bypass. The Turbine Turning Gear Motor control switch, 3-HS-47-10A, is in On. Steps 1 through 8 of section 6.9 are complete.

INITIATING CUE: The Unit Supervisor directs you to complete the Control Valve Tightness Test IAW 3-OI-47 section 6.9 starting at step 9.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator on Unit 3. The Turbine-Generator has been operating at 200 MWe for the past 3 hours, 45 minutes ago the Generator was taken off line. The Precautions and Limitations in of 3-OI-47 Turbine-Generator System have been reviewed. The Main Turbine Vibration Trip Bypass, 3-HS-47-26, is in Trip Bypass. The Turbine Turning Gear Motor control switch, 3-HS-47-10A, is in On. Steps 1 through 8 of section 6.9 are complete.

INITIATING CUE: The Unit Supervisor directs you to complete the Control Valve Tightness Test IAW 3-OI-47 section 6.9 starting at step 9.

START TIME _____

****

Performance Step 1: Critical X Not Critical

6.9 Control Valve Tightness Test

[9] **DEPRESS** Turbine TRIP pushbutton 3-HS-47-67D.

Standard:

Trips the Turbine.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[10] **DEPRESS** Turbine RESET pushbutton 3-HS-47-67E.

Standard:

Resets the Turbine.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

[11] **VERIFY** ISVs are full open prior to continuing with the next step.

Standard:

Verifies ISVs FULL Open prior to step 12

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

CUE:	If a question is raised whether the ISVs are Full Open, inform the Operator that the ISVs are Full Open

****

Performance Step 4: Critical X Not Critical

[12] **DEPRESS** the Start Up Rate FAST pushbutton, 3-HS-47-77C.

Standard:

Depresses the Start Up Rate Fast pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 5: Critical _ Not Critical X

[13] **VERIFY** CV POSITION LIMIT, 3-XI-47-157, is set to approximately 66%.

Standard:

Verifies CV Position Limit set to about 66%

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 6: Critical X Not Critical

[14] **DEPRESS** SYNC SPEED pushbutton, 3-HS-47-77H.

Standard:

Depresses Synch Speed pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical _ Not Critical X

[15] **WHEN** turbine speed is greater than 900 RPM, **THEN**

PLACE Bearing Lift Pumps in Auto by placing the TURBINE TURNING GEAR MOTOR control switch, 3-HS-47-10A, in AUTO.

Standard:

When turbine speed > 900 RPM places bearing lift pumps in Auto.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver:	When Turbine Speed is greater than 900 RPM insert bat NRC/turbvibe

****

Performance Step 8: Critical _ Not Critical X

[16] **OBSERVE** turbine speed is rising and the TURBINE ACCEL light, 3-ZI-47-77A, illuminates.

Standard:

Observe turbine speed is rising and Turbine Acceleration light On

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical

Monitors and Recognizes a High Vibration Condition exists.

Standard:

Determines that a Turbine Trip is required with Turbine Journal Bearing Vibration greater than 12 Mils with Turbine speed greater than 1400 RPM.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical X Not Critical

NOTE
Step 6.9[4] and 6.9[5] contain conditions for tripping the turbine.

[4] **IF** any of the following conditions are met, **THEN** **DEPRESS** turbine TRIP pushbutton, 3-HS-47-67D:

- THRUST/JOURNAL BRG TEMPERATURE, 3-TR-47-23, indicates thrust bearing metal temperature exceeding 180°F.
- TURB DIFF EXPANSION, 3-XR-47-20, Point 14, located on Panel 3-9-8, indicates less than 100 Mi (Mils) or greater than 400 Mi.
- THRUST/JOURNAL BRG TEMPERATURE, 3-TR-47-23, indicates bearing metal temperatures exceeding 225°F.

TABLE 2
NORMAL VIBRATION LIMITS

SPEED (RPM)	**TRIP AFTER** ANY JOURNAL VIBRATION EXCEEDS ____MILS FOR _____MINUTES		**TRIP IMMEDIATELY IF** JOURNAL BEARING VIBRATION EXCEEDS	NORMAL VIBRATION LEVEL FOR CONTINUED OPERATION
LESS THAN 800			8 MILS	
800 - 1400	10	2	14 MILS	7 MILS
1400 - RUNNING SPEED	10	15	12 MILS	≤ 5 MILS

[5] **MONITOR** Turbine Vibrations and **DEPRESS** the turbine TRIP pushbutton, 3-HS-47-67D, if any vibration limits listed in the above Table 1 or Table 2 (as applicable) are exceeded.

Standard:

Depresses Turbine Trip Pushbutton

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical _ Not Critical X

[17] **WHEN** turbine speed reaches 1800 RPM, **THEN**
OBSERVE AT SET SPEED light, 3-IL-47-77B, illuminates and the TURBINE ACCEL light, 3-IL-47-77A extinguishes.

Standard:

At 1800 RPM observes at Set speed light On and Turbine Acceleration light Off

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12: Critical _ Not Critical X

[18] **RECORD** test results in the Narrative Log.

[19] **NOTIFY** Unit Supervisor of test results.

Standard:

Narrative Logs are not modeled on the simulator. Step [18] is not applicable.
Notifies the Unit Supervisor of Turbine Trip.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

STOP TIME _____

END OF TASK

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: d- **ALTERNATE PATH**

TASK NUMBER: U-047-NO-20

TASK TITLE: Control Valve Tightness Test

K/A NUMBER: 245000 A3.08 K/A RATING: RO 3.0 SRO: 3.1

TASK STANDARD: Control Valve Tightness Test IAW 2-OI-47 section 6.9, responds to high turbine vibrations and trips the Main Turbine

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-OI-47

VALIDATION TIME: 20 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator on Unit 2. The Turbine-Generator has been operating at 200 MWe for the past 3 hours, 45 minutes ago the Generator was taken off line. The Precautions and Limitations in of 2-OI-47 Turbine-Generator System have been reviewed. The Main Turbine Vibration Trip Bypass, 2-HS-47-26, is in Trip Bypass. The Turbine Turning Gear Motor control switch, 2-HS-47-10A, is in On. Steps 1 through 8 of section 6.9 are complete.

INITIATING CUE: The Unit Supervisor directs you to complete the Control Valve Tightness Test IAW 2-OI-47 section 6.9 starting at step 9.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator on Unit 2. The Turbine-Generator has been operating at 200 MWe for the past 3 hours, 45 minutes ago the Generator was taken off line. The Precautions and Limitations in of 2-OI-47 Turbine-Generator System have been reviewed. The Main Turbine Vibration Trip Bypass, 2-HS-47-26, is in Trip Bypass. The Turbine Turning Gear Motor control switch, 2-HS-47-10A, is in On. Steps 1 through 8 of section 6.9 are complete.

INITIATING CUE: The Unit Supervisor directs you to complete the Control Valve Tightness Test IAW 2-OI-47 section 6.9 starting at step 9.

START TIME _____

****

Performance Step 1: Critical X Not Critical

6.9 Control Valve Tightness Test

[9] **DEPRESS** Turbine TRIP pushbutton 2-HS-47-67D.

Standard:

Trips the Turbine.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

[10] **DEPRESS** Turbine RESET pushbutton 2-HS-47-67E.

Standard:

Resets the Turbine.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical _ Not Critical X

[11] **VERIFY** ISVs are full open prior to continuing with the next step.

Standard:

Verifies ISVs FULL Open prior to step 12

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	If a question is raised whether the ISVs are Full Open, inform the Operator that the ISVs are Full Open

****

Performance Step 4: Critical X Not Critical

[12] **DEPRESS** the Start Up Rate FAST pushbutton, 2-HS-47-77C.

Standard:

Depresses the Start Up Rate Fast pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical _ Not Critical X

[13] **VERIFY** CV POSITION LIMIT, 2-XI-47-157, is set to approximately 66%.

Standard:

Verifies CV Position Limit set to about 66%

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[14] **DEPRESS** SYNC SPEED pushbutton, 2-HS-47-77H.

Standard:

Depresses Synch Speed pushbutton.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical _ Not Critical X

[15] **WHEN** turbine speed is greater than 900 RPM, **THEN**

PLACE Bearing Lift Pumps in Auto by placing the TURBINE TURNING GEAR MOTOR control switch, 2-HS-47-10A, in AUTO.

Standard:

When turbine speed > 900 RPM places bearing lift pumps in Auto.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: When Turbine Speed is greater than 900 RPM insert bat NRC/turbvibe

****

Performance Step 8: Critical _ Not Critical X

[16] **OBSERVE** turbine speed is rising and the TURBINE ACCEL light, 2-ZI-47-77A, illuminates.

Standard:

Observe turbine speed is rising and Turbine Acceleration light On

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical

Monitors and Recognizes a High Vibration Condition exists.

Standard:

Determines that a Turbine Trip is required with Turbine Journal Bearing Vibration greater than 12 Mils with Turbine speed greater than 1400 RPM.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical X Not Critical

NOTE
Step 6.9[4] and 6.9[5] contain conditions for tripping the turbine.

[4] **IF** any of the following conditions are met, **THEN**
DEPRESS turbine TRIP pushbutton, 2-HS-47-67D:

- THRUST/JOURNAL BRG TEMPERATURE, 2-TR-47-23, indicates thrust bearing metal temperature exceeding 180°F.
- TURB DIFF EXPANSION, 2-XR-47-20, Point 14, located on Panel 2-9-8, indicates less than 100 Mi (Mils) or greater than 400 Mi.
- THRUST/JOURNAL BRG TEMPERATURE, 2-TR-47-23, indicates bearing metal temperatures exceeding 225°F.

[5] **MONITOR** Turbine Vibrations
AND
IF any of the vibration limits listed in the following Table 1 or Table 2 (as applicable) are exceeded, **THEN ,**
DEPRESS turbine TRIP pushbutton, 2-HS-47-67D. (otherwise N/A)

TABLE 2
NORMAL VIBRATION LIMITS

SPEED (RPM)	**TRIP AFTER** ANY JOURNAL VIBRATION EXCEEDS ____MILS FOR	_____MINUTES	**TRIP IMMEDIATELY IF** JOURNAL BEARING VIBRATION EXCEEDS	NORMAL VIBRATION LEVEL FOR CONTINUED OPERATION
LESS THAN 800			8 MILS	
800 - 1400	10	2	14 MILS	7 MILS
1400 - RUNNING SPEED	10	15	12 MILS	≤ 5 MILS

Standard:

Depresses Turbine Trip Pushbutton

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 11: Critical _ Not Critical X

[17] **WHEN** turbine speed reaches 1800 RPM, **THEN**
OBSERVE AT SET SPEED light, 2-IL-47-77B, illuminates and the TURBINE ACCEL light, 2-IL-47-77A extinguishes.

Standard:

At 1800 RPM observes at Set speed light On and Turbine Acceleration light Off

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

****

Performance Step 12: Critical _ Not Critical X

[18] **RECORD** test results in the Narrative Log.

[19] **NOTIFY** Unit Supervisor of test results.

Standard:

Narrative Logs are not modeled on the simulator. Step [18] is not applicable.
Notifies the Unit Supervisor of Turbine Trip.

SAT___ UNSAT___ N/A ___COMMENTS:_____
_____

STOP TIME _____

END OF TASK

JPM e

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: e

TASK NUMBER: U-064-NO-03

TASK TITLE: Vent Drywell IAW 2-AOI-64-1

K/A NUMBER: 223001 EA1.14 K/A RATING: RO 4.2 SRO: 4.1

TASK STANDARD: Vent the Drywell with Standby Gas Treatment Fan.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-AOI-64-1

VALIDATION TIME:

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ___ UNSATISFACTORY ___

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Reactor Operator. The Unit 2 reactor is at 100%. 2-EOI-2 has been entered on suppression pool water level high. All available drywell cooling is in service. Drywell pressure is 1.8 PSIG and rising slowly.

INITIATING CUE: The Unit Supervisor has directed you to vent the drywell in accordance with 2-AOI-64-1.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator. The Unit 2 reactor is at 60%. 2-EOI-2 has been entered on suppression pool water level high. All available drywell cooling is in service. Drywell pressure is 1.8 PSIG and rising slowly.

INITIATING CUE: The Unit Supervisor has directed you to vent the drywell in accordance with 2-AOI-64-1.

START TIME_____

****

Performance Step 1: Critical _ Not Critical X

4.2 Subsequent Actions

[1] **IF** any EOI entry condition is met, **THEN**
ENTER appropriate EOI(s). (Otherwise N/A)

Standard:

N/A.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical _ Not Critical X

[2] **IF** Drywell Pressure is High, **THEN**
PERFORM the following: (Otherwise N/A)

[2.1] **CHECK** Drywell pressure using multiple indications.

[2.2] **IF** Drywell pressure rising rate indicates Reactor Scram at 2.45 psi is imminent, **THEN REDUCE** Reactor power via Recirc flow to minimize the impact of a scram from high power.

[2.3] **CHECK** Drywell pressure using multiple indications.

[2.4] **ALIGN and START** additional Drywell coolers and fans as necessary. **REFER TO** 2-OI-64.

Standard:

Given in initial conditions.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

CAUTION
Stack release rates exceeding 1.4 X 10^7 μci/sec, or a SI-4.8.B.1.a.1 release fraction above one will result in ODCM release limits being exceeded.

[2.5] **VENT** Drywell as follows:

[2.5.1] **CLOSE** SUPPR CHBR INBD ISOLATION VLV 2-FCV-64-34 (Panel 2-9-3).

Standard:

Closes 2-FCV-63-34.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical __ Not Critical X

[2.5.2] **VERIFY OPEN**, DRYWELL INBD ISOLATION VLV, 2-FCV-64-31 (Panel 2-9-3).

Standard:

Verifies 2-FCV-64-31 is open.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical __ Not Critical X

[2.5.3] **VERIFY** 2-FIC-84-20 is in AUTO and SET at 100 scfm (Panel 2-9-55).

Standard:

Verifies 2-FIC-84-20 is in AUTO and SET at 100 scfm.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[2.5.4] **VERIFY RUNNING** a Standby Gas Treatment Fan STGTS TRAIN C(A)(B) (Panel 2-9-25).

Standard:

Starts SGTS TRAIN C FAN (Panel 2-9-25).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

Driver: If requested as Unit 1 Operator to start SGTS Fan A or B, report: Unit 1 Control Room Staff are unavailable to start the SGTS fans.

****

Performance Step 7: Critical __ Not Critical X

[2.5.5] **IF** required, **THEN REQUEST** Unit 1 Operator to START Standby Gas Treatment Fans A or B. (Otherwise N/A)

CAUTION
If 2-FCV-84-20 closes after 2-HS-64-35 is opened, the reason for valve closure must be cleared and 2-HS-64-35 must be returned to OPEN in order for 2-FCV-84-20 to re-open.

[2.5.6] **IF** required, **THEN RECORD** venting data in 2-SI-4.7.A.2.a (Otherwise N/A)

Standard:

N/A

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: IF asked as Unit Supervisor, then report: 2-SI-4.7.A.2.a is NOT required.

****

Performance Step 8: Critical X Not Critical

[2.5.7] **PLACE** 2-FCV-84-20 CONTROL DW/SUPPR CHBR VENT, 2-HS-64-35, in OPEN (Panel 2-9-3).

Standard:

Places 2-HS-64-35, in OPEN.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical __ Not Critical X

[2.5.8] **MONITOR** stack release rates to prevent exceeding ODCM limits.

Standard:

Calls for rounds operator to perform 0-SI-4.8.B.1.a.1, Airborne Effluent Release rate (Gas Log).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: As rounds operator when requested to perform the Gas Log, report: The rounds operator is performing 0-SI-4.8.B.1.a.1, Airborne Effluent Release rate (Gas Log).

****

Performance Step 10: Critical X Not Critical

[2.5.9] **WHEN** Drywell pressure has been reduced as required, **THEN**

STOP SGT Train(s).

Standard:

Stops the running SBGT Train.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: When Performance Step 9 is complete, and at the discretion of the evaluator: Report to the candidate that time compression will be used and Drywell Pressure has lowered to 1.5 PSIG . Drywell venting is no longer required.

****

Performance Step 11: Critical X Not Critical

[2.5.10] **VERIFY** 2-HS-64-35, in AUTO and 2-FCV-84-20 CLOSED (Panel 2-9-3).

Standard:

Verifies 2-HS-64-35 in AUTO
Verifies 2-FCV-84-20 CLOSED (Green Light ON and Red Light OFF on 2-ZI-84-20)

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 12: Critical X Not Critical

[2.5.11] **OPEN** SUPPR CHBR INBD ISOLATION VLV 2-FCV-64-34 (Panel 2-9-3).

Standard:

Opens 2-FCV-64-34.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 13: Critical _ Not Critical X

[2.5.12] **VERIFY** Drywell DP compressor operates correctly to maintain required Drywell to Suppression Chamber DP.

Standard:

Monitors Drywell to Suppression Chamber DP.

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 14: Critical _ Not Critical X

[2.5.13] **RECORD** SGTS Train(s) run time in appropriate Control Room Reactor narrative log for transfer to 1-SR-2.

Standard:

Narrative Logs are not modeled on the simulator. Step [2.5.13] is not applicable. Records SGTS Train C run time in narrative log.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

STOP TIME_____

END OF TASK

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: f

TASK NUMBER: S-57A-NO-01

TASK TITLE: Perform Control Room Transfer of 4kV Unit Board 2B Power Supplies

K/A NUMBER: 262001A4.03 K/A RATING: RO 3.2 SRO 3.4

TASK STANDARD: Perform control room operation required to successfully transfer 4kV unit board 2B power supply from normal to alternate power supply.

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 0-OI-57A

VALIDATION TIME: 8 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS:

You are the Reactor Operator. Preventative maintenance is required on 4kV Unit Board 2B Normal Feeder Breaker, 1214.

INITIATING CUE:

The Shift Manager has directed you to transfer 4kV Unit Board 2B from the USST to the Start Bus per 0-OI-57A, section 8.13.1.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

You are the Reactor Operator. Preventative maintenance is required on 4KV Unit Board 2B Normal Feeder Breaker, 1214.The Precautions and limitations of 0-OI-57A, Switchyard and 4160V AC Electrical System, have been reviewed.
.

INITIATING CUE:

The Shift Manager has directed you to transfer 4kV Unit Board 2B from the USST to the Start Bus per 0-OI-57A, section 8.13.1.

START TIME_____

****

Performance Step 1: Critical __ Not Critical X

8.13 Control Room Transfer of 4kV Unit Board 2B Power Supplies

8.13.1 Transfer 4kv Unit Board 2B from USST to Start Bus

[1] **REVIEW** all Precautions and Limitations.

[2] **NOTIFY** NSS of possible loss of power to Security Systems prior to transferring 4kV UNIT BD 2B.

Standard:

Review of precautions and limitations given in initial conditions.
Notifies NSS of possible loss of power to security systems.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CAUTIONS

1) Capacitor bank fuses are subject to clearing when the unit boards are being supplied from the 161 source and large pumps are started. Unit Supervisors should evaluate placing the Capacitor Banks in Manual prior to starting Condensate, CBP, RHR, CS or CCW pumps.

2) If 4kV Unit Board 2B is fed from the Alternate Power Supply, then Auto Transfer must be blocked for 4kV Unit Boards: 1A, 1B, 2A, 3A and 3B. (Ref. 2-45E721 OPL3 & 1-45E721 OPL5)

3) If 4kV Unit Board 2B is fed from the Alternate Power Supply (Start Bus), then Shutdown Bus 1 Auto transfer must be blocked.(Ref. 2-45E721 OPL3)\

4) If either 4kV UNIT BD 1A, 1B, 2A, 3A or 3B is aligned to a Start Bus, prior to aligning UNIT BD 2B to Start Bus, check Technical Specifications 3.8.1.a and 3.8.2.a to determine operability of qualified AC circuits between the offsite transmission network and the onsite Class 1E Electrical Power Distribution System.

NOTES

1) All procedural steps are performed from Control Room Panel 2-9-8.

2) This procedure section contains actions to ensure electrical load restrictions are not exceeded when 4kV UNIT BD 2B is placed on the Alternate Supply (Start Bus).

****

Performance Step 2: Critical __ Not Critical X

[3] **ENSURE** 4kV Start Busses are aligned Normal:

[3.1] On Panel 9-23-2, **VERIFY** 4kV Start Bus 1A ALT FDR BKR 1518 OPEN.

[3.2] On Panel 9-23-2, **VERIFY** 4kV Start Bus 1B ALT FDR BKR 1414 OPEN.

Standard:

Verifies Start Busses are aligned normal by Verifying the alt bkrs 1518 and 1414 are open.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical __ Not Critical X

[4] On panel 0-9-23-7, **VERIFY** Shutdown Bus 1 is fed from Normal Supply (4kV Unit Board 1A).

Standard:

Verifies Shutdown Bus 1 is fed from Normal Supply.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: *Critical X Not Critical_

*[5] On panel 0-9-23-7, **MOMENTARILY DEPRESS** 0-HS-211-AB1, 4kV SD BUS 1 AUTO TO MANUAL TRIP push-button, and **CHECK** the following:

A. 0-HS-211-AB1, 4kV SD BUS 1 AUTO TO MANUAL TRIP push-button, light extinguished.

B. 0-43-211-AB1, 4kV SD BUS 1 AUTO/LOCKOUT RESET, trips.

Standard:

*Depresses 0-HS-211-AB1
Verifies the light extinguished and 0-43-211-AB1 trips

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical __ Not Critical X

[6] **RE-ALIGN** 4kV Auto Transfers to meet Load Restrictions.

[6.1] On Panel 1-9-8, **VERIFY** 1-XS-57-4, 4kV UNIT BD 1A MAN/AUTO SELECT switch to MAN.

[6.2] On Panel 1-9-8, **VERIFY** 1-XS-57-7, 4kV UNIT BD 1B MAN/AUTO SELECT switch to MAN.

Standard:

Contacts Unit 1 Operator to place 1-XS-57-4 and 1-XS-57-7 to Manual on panel 1-9-8.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: [As Unit 1 Operator, Report] 1-XS-57-4 and 1-XS-57-7 are in Manual.

****

Performance Step 6: Critical X Not Critical

[6.3] **VERIFY** 2-XS-57-4, 4kV UNIT BD 2A MAN/AUTO SELECT switch to MAN.

[6.4] **VERIFY** 2-XS-57-7, 4kV UNIT BD 2B MAN/AUTO SELECT switch to MAN.

Standard:

Places 2-XS-57-4 and 2-XS-57-7 switch to manual.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical __ Not Critical X

[6.5] On Panel 3-9-8, **VERIFY** 3-XS-57-4, 4kV UNIT BD 3A MAN/AUTO SELECT switch to MAN.

[6.6] On Panel 3-9-8, **VERIFY** 3-XS-57-7, 4kV UNIT BD 3B MAN/AUTO SELECT switch to MAN.

Standard:

Contacts Unit 3 Operator to place 3-XS-57-4 and 3-XS-57-7 to Manual on panel 3-9-8.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: [As Unit 3 Operator, Report] 3-XS-57-4 and 3-XS-57-7 are in Manual.

****

Performance Step 8: Critical __ Not Critical X

[7] **TRANSFER** 4kv UNIT BD 2B to the ALT FDR, BKR 1526

[7.1] **PLACE** 2-XS-202-1, 4kV BD/BUS/XFMR VOLTAGE SELECT switch to START BUS 1B.

[7.2] **CHECK** START BUS 1B Voltage on 2-EI-57-28 is between 3950 and 4400 Volts.

Standard:

Placed 2-XS-202-1 switch to START BUS 1B.
Checked START BUS 1B Voltage on 2-EI-57-28 is between 3950 and 4400 Volts.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical X Not Critical

[7.3] **PLACE** and **HOLD** 2-HS-57-8, 4kV UNIT BD 2B ALT FDR BKR 1526 switch to CLOSE.

Standard:

Places and Holds 2-HS-57-8, 4kV UNIT BD 2B ALT FDR BKR 1526 switch to CLOSE.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical X Not Critical

[7.4] **PLACE** 2-HS-57-6, 4kV UNIT BD 2B NORM FDR BKR 1214 switch to TRIP.

Standard:

Places 2-HS-57-6, 4kV UNIT BD 2B NORM FDR BKR 1214 switch to TRIP.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical __ Not Critical X

[7.5] **CHECK CLOSED** the 4kV UNIT BD 2B, ALT FDR BREAKER 1526.

[7.6] **CHECK OPEN** the 4kV UNIT BD 2B, NORM FDR BREAKER 1214.

[7.7] **RELEASE** BKRs 1526 and 1214 control switches.

Standard:

Checked CLOSED the 4kV UNIT BD 2B, ALT FDR BKR 1526.
Checked OPEN the 4kV UNIT BD 2B, NORM FDR BREAKER 1214
RELEASED BKRs 1526 and 1214 control switches

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12: Critical __ Not Critical X

[7.8] **PLACE** 2-XS-202-1, 4kV BD/BUS/XFMR VOLTAGE SELECT SWITCH TO UNIT BD 2B.

[7.9] **CHECK** 4kV UNIT BD 2B voltage is between 3950 and 4400 Volts.

Standard:

Places 2-XS-202-1, 4kV BD/BUS/XFMR VOLTAGE SELECT SWITCH to UNIT BD 2B
Checked 4kV UNIT BD 2B voltage is between 3950 and 4400 Volts.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical __ Not Critical X

[7.10] **VERIFY LOCALLY** 4kV BKR 1526 closing spring target indicates charged and the amber breaker spring charged light is on.

Standard:

Dispatched AUO to verify breaker 1526 closing spring recharged.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	**[After Dispatched, the AUO Reports] Breaker 1526 closing spring target indicates charged and the amber breaker spring charged lamp is illuminated.**

CUE:	**That completes this task.**

END OF TASK

STOP TIME ___

JPM g

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: g – Alternate Path

TASK NUMBER: U-085-AL-12

TASK TITLE: RPS Channel Functional

K/A NUMBER: 201002 A2.02 K/A RATING: RO 3.2 SRO: 3.3

TASK STANDARD: Perform RPS Channel Functional, successful test on RPS A, when RPS B tested two control rods will scram, requiring the operator to insert a manual scram IAW AOI-85-5, Rod Drift In

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 3-SR-3.3.1.1.8(11), 3-AOI-85-5

VALIDATION TIME: 10 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ___ UNSATISFACTORY ___

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator on Unit 3.

INITIATING CUE: The Unit Supervisor has directed you to perform the quarterly scheduled surveillance 3-SR-3.3.1.1.8(11) Reactor Protection System Manual Scram Functional Test.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator on Unit 3.

INITIATING CUE: The Unit Supervisor has directed you to perform the quarterly scheduled surveillance 3-SR-3.3.1.1.8(11) Reactor Protection System Manual Scram Functional Test.

START TIME_____

EXAMINER NOTE: NPG-SPP-06.9.2, Surveillance Test Program, directs the use of computerized Surveillance Task Sheet (STS) in the place of Attachment 1, unless MAXIMO is unavailable.

****

Performance Step 1: Critical Not Critical X

[8] **RECORD** the start date, start time, reason for the test, plant conditions, and any pre-test remarks on Attachment 1, Surveillance Procedure Review Form.

Standard:

Records current date and time on the Surveillance Task Sheet (STS).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

7.2 RPS Manual Scram Channel A Functional Test

[1] **MOMENTARILY DEPRESS** Reactor Scram A push-button, Panel 3-9-5.

Standard:

Depresses Reactor Scram A push-button

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical Not Critical X

[2] **VERIFY** the following on Panel 3-9-5:

- Control Rod Logic Reset Solenoid Group A indicating lights (4) extinguished.
- One System A Back-Up Scram Valve light 3-IL-99-5A/AB and System B Back-Up Scram Valve light 3-IL-99-5A/CD extinguished.
- Reactor Scram A push-button illuminated.
- Annunciator REACTOR CHANNEL A MAN SCRAM (3-XA-55-5B, window 8) in alarm.

[3] **VERIFY** the following ICS points indicate TRIP:

- SOE033
- SOE178

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[4] **MOMENTARILY PLACE** Scram Reset switch, Panel 3-9-5, to Reset Gp 1/4 position.

Standard:

Places Scram Reset switch to GP 1/4 position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical Not Critical X

[5] **VERIFY** the following on Panel 3-9-5:

- Control Rod Logic Reset Solenoid Group A lights 1 and 4 illuminated, and lights 2 and 3 extinguished.
- Both System A Backup Scram Valve lights 3-IL-99-5A/AB illuminated.
- One System B Backup Scram Valve light 3-IL-99-5A/CD illuminated, and one System B Backup Scram Valve light 3-IL-99-5A/CD extinguished.
- Annunciator REACTOR CHANNEL A MAN SCRAM (XA-55-5B, window 8) will **NOT** reset.
- Reactor Scram A push-button illuminated.

[6] **VERIFY** ICS point SOE178 indicates NOTTRIP.

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[7] **MOMENTARILY DEPRESS** Reactor Scram A push-button.

Standard:

Depresses Reactor Scram A push-button

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical Not Critical X

[8] **VERIFY** the following on Panel 3-9-5:

• Control Rod Logic Reset Solenoid Group A lights 1 and 4 extinguished.

• One System A Backup Scram Valve light 3-IL-99-5A/AB extinguished.

[9] **VERIFY** the following ICS points indicate TRIP:

• SOE033
• SOE178

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical X Not Critical

[10] **MOMENTARILY PLACE** Scram Reset switch, Panel 3-9-5 to Reset Gp 2/3 position.

Standard:

Places Scram Reset switch to GP 2/3 position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical Not Critical X

[11] **VERIFY** the following on Panel 3-9-5:

- Control Rod Logic Reset Solenoid Group A lights 2 and 3 illuminated, and lights 1 and 4 extinguished.
- Both System B Backup Scram Valve lights 3-IL-99-5A/CD illuminated.
- One System A Backup Scram Valve light 3-IL-99-5A/AB on System A Backup Scram Valve light illuminated, and one System A Backup Scram Valve light 3-IL-99-5A/AB extinguished.
- Annunciator REACTOR CHANNEL A MAN SCRAM (3-XA-55-5B, window 8) will **NOT** reset.
- Reactor Scram A push-button illuminated.

[12] **VERIFY** ICS point SOE033 indicates NOTTRIP.

[13] **VERIFY** ICS point SOE178 indicates TRIP.

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical X Not Critical

[14] **MOMENTARILY PLACE** Scram Reset switch, Panel 3-9-5, to Reset Gp 1/4 position.

Standard:

Places Scram Reset switch to GP 1/4 position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical Not Critical X

[15] **VERIFY** the following on Panel 3-9-5:

- Control Rod Logic Reset Solenoid Group A red indicating lights (4) illuminated.
- Control Rod Logic Reset Solenoid Group B red indicating lights (4) illuminated.
- System A Back-Up Scram Valve lights 3-IL-99-5A/AB illuminated.
- System B Back-Up Scram Valve lights 3-IL-99-5A/CD illuminated.
- Reactor Scram A push-button extinguished.
- Annunciator REACTOR CHANNEL A MAN SCRAM (3-XA-55-5B, window 8) reset.

[16] **VERIFY** the following computer points indicates NOTTRIP.

- ICS point SOE033
- ICS point SOE034
- ICS point SOE178
- ICS point SOE179

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12: Critical X Not Critical

7.3 RPS Manual Scram Channel B Functional Test

[1] **MOMENTARILY DEPRESS** Reactor Manual Scram B push-button, Panel 3-9-5.

Standard:

Depresses Reactor Scram B push-button

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical X Not Critical

Determines that multiple rods are drifting into the core

Standard:

Determines that more than on control rod has scrammed or drifted into the core.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14: Critical X Not Critical

Rod Drift In 3-AOI-85-5

4.1 Immediate Actions

[1] **IF** multiple rods are drifting into core, **THEN MANUALLY SCRAM** Reactor. Refer to 3-AOI-100-1.

DEPRESS REACTOR SCRAM A and B, 3-HS-99-5A/S3A and 3-HS-99-5A/S3B, on Panel 3-9-5.

Standard:

Inserts a Manual SCRAM

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15: Critical X Not Critical

Reactor Scram 3-AOI-100-1

[4] **PLACE** REACTOR MODE SWITCH, 3-HS-99-5A-S1, in SHUTDOWN.

Standard:

Places Reactor Mode Switch in Shutdown

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: After Scram report another operator will continue in 3-AOI-100-1.

STOP TIME_____

END OF TASK

Surveillance Task Sheet (STS)

Work Order #: 114494810

OM#: P3081

Procedure: 3-SR-3.3.1.1.8(11)

Title: 3-SR-3.3.1.1.8(11) - RPS MANUAL SCRAM FT

Unit Supervisor — Authorization to Begin: SRO

TODAY — Date & Time

Data Sheets Attached:

Perf Grp: OPS **Unit:** 3 **Loop/Div:** /NA

Test Reason: Periodic

Due Date: 12/07/13

Frequency: 91 DAYS **Tech Spec:** Y **ASME XI:**

Applicable Modes: **Perf Modes:**

Clearance Required: N **EQ:** **LCO Entered:** N

Dry-Cask Storage: N

Start Date & Time

Completion Date & Time

Was this a complete or partial performance?
(Explain "Partial" in Remarks below) Complete [ ] Partial [ ]

Performed By:

Print Name	Signature	Initial	Section

Were all Tech Spec / Tech Req / ISFSI CoC / ODCM / Fire Protection Req / AMSAC* acceptance criteria satisfied?
Yes [ ] No [ ] N/A [ ]

Were all other acceptance criteria satisifed?
Yes [ ] No [ ] N/A [ ]

If all Tech Spec / Tech Req / ISFSI CoC / ODCM / Fire Protection Req / AMSAC* criteria were not satisfied, was an LCO / TR / ODCM / OR action required? (Explain in Remarks)
Yes [ ] No [ ] N/A [ ]

Service Request #:

Alert Work Control Required? [ ]

*PWR only.

Subsequent Reviews:

Group	Signature	Date

Copy of STS sent to Work Control (next business day)

Initials / Date

Test Coord/Lead — Date

Acceptance Criteria Review: SRO — Date & Time

Independent Reviewer — Date & Time

Permanent Comments:

*RISK SENSITIVE*Frequency Notes: ONCE EVERY 92 DAYS. - *RISK SENSITIVE*Frequency Notes: ONCE EVERY 92 DAYS. Applicability Notes: APPLICABLE IN MODES 1 & 2.MODE 5 APPLICABLE WITH ANY CNTL ROD WITHDRAWN FROM A CORE CELL CONTAINING 1 OR MORE FUEL ASSEMBLIES.

Remarks:

JPM g

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: g – Alternate Path

TASK NUMBER: U-085-AL-12

TASK TITLE: RPS Channel Functional

K/A NUMBER: 201002 A2.02 K/A RATING: RO 3.2 SRO: 3.3

TASK STANDARD: Perform RPS Channel Functional, successful test on RPS A, when RPS B tested two control rods will scram, requiring the operator to insert a manual scram IAW AOI-85-5, Rod Drift In

LOCATION OF PERFORMANCE: Simulator

REFERENCES/PROCEDURES NEEDED: 2-SR-3.3.1.1.8(11), 2-AOI-85-5

VALIDATION TIME: 10 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ___ UNSATISFACTORY ___

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are an Operator on Unit 2.

INITIATING CUE: The Unit Supervisor has directed you to perform the quarterly scheduled surveillance 2-SR-3.3.1.1.8(11) Reactor Protection System Manual Scram Functional Test.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are an Operator on Unit 2.

INITIATING CUE: The Unit Supervisor has directed you to perform the quarterly scheduled surveillance 2-SR-3.3.1.1.8(11) Reactor Protection System Manual Scram Functional Test.

START TIME_____

EXAMINER NOTE: NPG-SPP-06.9.2, Surveillance Test Program, directs the use of computerized Surveillance Task Sheet (STS) in the place of Attachment 1, unless MAXIMO is unavailable.

****

Performance Step 1: Critical Not Critical X

[7] **RECORD** the start date, start time, reason for the test, plant conditions, and any pre-test remarks on Attachment 1, Surveillance Procedure Review Form.

Standard:

Records current date and time on the Surveillance Task Sheet (STS).

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

7.2 RPS Manual Scram Channel A Functional Test

[1] **MOMENTARILY DEPRESS** Reactor Scram A push-button, Panel 2-9-5.

Standard:

Depresses Reactor Scram A push-button

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical Not Critical X

[2] **VERIFY** the following on Panel 2-9-5:

- Control Rod Logic Reset Solenoid Group A indicating lights (4) extinguished.
- One System A Back-Up Scram Valve light 2-IL-99-5A/AB and System B Back-Up Scram Valve light 2-IL-99-5A/CD extinguished.
- Reactor Scram A push-button illuminated.
- Annunciator REACTOR CHANNEL A MAN SCRAM (2-XA-55-5B, window 8) in alarm.

[3] **VERIFY** ICS point SOE033 indicates TRIP.

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

[4] **MOMENTARILY PLACE** Scram Reset switch, Panel 2-9-5, to Reset Gp 1/4 position.

Standard:

Places Scram Reset switch to GP 1/4 position

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical Not Critical X

[5] **VERIFY** the following on Panel 2-9-5:

- Control Rod Logic Reset Solenoid Group A lights 1 and 4 illuminated, and lights 2 and 3 extinguished.
- Both System A Backup Scram Valve lights 2-IL-99-5A/AB illuminated.
- One System B Backup Scram Valve light 2-IL-99-5A/CD illuminated, and one System B Backup Scram Valve light 2-IL-99-5A/CD extinguished.
- Annunciator REACTOR CHANNEL A MAN SCRAM (XA-55-5B, window 8) will **NOT** reset.
- Reactor Scram A push-button illuminated.

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[6] **MOMENTARILY DEPRESS** Reactor Scram A push-button.

Standard:

Depresses Reactor Scram A push-button

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 7: Critical Not Critical X

[7] **VERIFY** the following on Panel 2-9-5:

• Control Rod Logic Reset Solenoid Group A lights 1 and 4 extinguished.

• One System A Backup Scram Valve light 2-IL-99-5A/AB extinguished.

Standard:

Verifies the conditions listed above are met.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 8: Critical X Not Critical

[8] **MOMENTARILY PLACE** Scram Reset switch, Panel 2-9-5 to Reset Gp 2/3 position.

Standard:

Places Scram Reset switch to GP 2/3 position.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 9: Critical Not Critical X

[9] **VERIFY** the following on Panel 2-9-5:

- Control Rod Logic Reset Solenoid Group A lights 2 and 3 illuminated, and lights 1 and 4 extinguished.
- Both System B Backup Scram Valve lights 2-IL-99-5A/CD illuminated.
- One System A Backup Scram Valve light 2-IL-99-5A/AB on System A Backup Scram Valve light illuminated, and one System A Backup Scram Valve light 2-IL-99-5A/AB extinguished.
- Annunciator REACTOR CHANNEL A MAN SCRAM (2-XA-55-5B, window 8) will **NOT** reset.
- Reactor Scram A push-button illuminated.

[10] **VERIFY** ICS point SOE033 indicates NOTTRIP.

Standard:

Verifies the conditions listed above are met.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 10: Critical X Not Critical

[11] **MOMENTARILY PLACE** Scram Reset switch, Panel 2-9-5, to Reset Gp 1/4 position.

Standard:

Places Scram Reset switch to GP 1/4 position.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 11: Critical Not Critical X

[12] **VERIFY** the following on Panel 2-9-5:

- Control Rod Logic Reset Solenoid Group A red indicating lights (4) illuminated.
- Control Rod Logic Reset Solenoid Group B red indicating lights (4) illuminated.
- System A Back-Up Scram Valve lights 2-IL-99-5A/AB illuminated.
- System B Back-Up Scram Valve lights 2-IL-99-5A/CD illuminated.
- Reactor Scram A push-button extinguished.
- Annunciator REACTOR CHANNEL A MAN SCRAM (2-XA-55-5B, window 8) reset.

[13] **VERIFY** the following computer points indicates NOTTRIP.

- ICS point SOE033
- ICS point SOE034

Standard:

Verifies the conditions listed above are met

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 12: Critical X Not Critical

7.3 RPS Manual Scram Channel B Functional Test

[1] **MOMENTARILY DEPRESS** Reactor Manual Scram B push-button, Panel 2-9-5.

Standard:

Depresses Reactor Scram B push-button

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 13: Critical X Not Critical

Determines that multiple rods are drifting into the core.

Standard:

Determines that more than on control rod has scrammed or drifted into the core.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 14: Critical X Not Critical

Rod Drift In 2-AOI-85-5

4.1 Immediate Actions

[1] **IF** multiple rods are drifting into core, **THEN MANUALLY SCRAM** Reactor. Refer to 2-AOI-100-1.

DEPRESS REACTOR SCRAM A and B, 2-HS-99-5A/S3A and 2-HS-99-5A/S3B, on Panel 2-9-5.

Standard:

Inserts a Manual SCRAM.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 15: Critical X Not Critical

Reactor Scram 2-AOI-100-1

[4] **PLACE** REACTOR MODE SWITCH, 2-HS-99-5A-S1, in SHUTDOWN.

Standard:

Places Reactor Mode Switch in Shutdown.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: After Scram report another operator will continue in 2-AOI-100-1.

STOP TIME_____

END OF TASK

Surveillance Task Sheet (STS)

Work Order #: 114475709

PM#: P2081
Procedure: 2-SR-3.3.1.1.8(11)
Title: 2-SR-3.3.1.1.8(11) - RPS MANUAL SCRAM FUNCTIONAL TEST

Data Sheets Attached:

Perf Grp: OPS Unit: 2 Loop/Div: /NA
Test Reason: Periodic
Due Date: 11/30/13
Frequency: 91 DAYS Tech Spec: Y ASME XI:
Applicable Modes: Perf Modes:
Clearance Required: N EQ: LCO Entered: N
Dry-Cask Storage: N

Unit Supervisor — Today
Authorization to Begin: SRO — Date & Time

Start Date & Time — Completion Date & Time

Was this a complete or partial performance?
(Explain "Partial" in Remarks below) Complete [ ] Partial [ ]

Were all Tech Spec / Tech Req / ISFSI CoC / ODCM / Fire Protection Req / AMSAC* acceptance criteria satisfied?
Yes [ ] No [ ] N/A [ ]

Were all other acceptance criteria satisifed?
Yes [ ] No [ ] N/A [ ]

If all Tech Spec / Tech Req / ISFSI CoC / ODCM / Fire Protection Req / AMSAC* criteria were not satisfied, was an LCO / TR / ODCM / OR action required? (Explain in Remarks)
Yes [ ] No [ ] N/A [ ]

Service Request #:

Alert Work Control Required? [ ]

*PWR only.

Performed By:

Print Name	Signature	Initial	Section

Subsequent Reviews:

Group	Signature	Date

Permanent Comments:

*RISK SENSITIVE*Frequency Notes: ONCE EVERY 92 DAYS. Applicability Notes:APPLICABLE IN MODES 1 & 2.MODE 5 APPLICABLE WITH ANY CNTL ROD WITHDRAWN FROM A CORE CELL CONTAINING 1 OR MORE FUEL ASSEMBLIES. -

Copy of STS sent to Work Control (next business day)
Initials / Date

Test Coord/Lead — Date

Acceptance Criteria Review: SRO — Date & Time

Independent Reviewer — Date & Time

Remarks:

JPM h

OPERATOR:_____

RO ____ SRO ____ DATE:_____

JPM NUMBER: h

TASK NUMBER: U-090-NO-01

TASK TITLE: Returning DW Radiation Monitor CAM, 3-RM-90-256 to service

K/A NUMBER: 272000 A2.10 K/A RATING: RO 3.9 SRO: 4.1

TASK STANDARD: DW Radiation Monitor CAM, 3-RM-90-256 is in service

LOCATION OF PERFORMANCE: SIMULATOR

REFERENCES/PROCEDURES NEEDED: 3-AOI-100-1

VALIDATION TIME: 15 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES __ NO __

RESULTS: SATISFACTORY _____ UNSATISFACTORY_____

SIGNATURE: _____ DATE: _____
EXAMINER

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. The Unit Supervisor is operating in 3-AOI-100-1, Reactor Scram.

INITIATING CUES: The Unit Supervisor directs you to perform step 33 of 3-AOI-100-1, Reactor Scram, to return the Drywell DP Air Compressor, the Drywell Floor and Equipment Drains, and the Drywell Continuous Air Monitor to service.

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. The Unit Supervisor is operating in 3-AOI-100-1, Reactor Scram.

INITIATING CUES: The Unit Supervisor directs you to perform step 33 of 3-AOI-100-1, Reactor Scram, to return the Drywell DP Air Compressor, the Drywell Floor and Equipment Drains, and the Drywell Continuous Air Monitor to service.

START TIME_____

****

Performance Step 1: Critical X Not Critical

[33] **VERIFY** the following systems/equipment in service or **RETURN** them to service at standby readiness, as necessary, in accordance with the following or the appropriate OI:

[33.1] **PLACE** Drywell DP Air Compressor in service at Panel 3-9-3 as follows:

- **PLACE** DRYWELL INBD ISOLATION VLV switch, 3-HS-64-31, in AUTO after OPEN.
- **PLACE** SUPPR CHBR INBD ISOLATION VLV switch, 3-HS-64-34, in AUTO after OPEN.

Standard:

Places 3-HS-64-31 and 34 in Auto after Open.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

- **DEPRESS** DRYWELL DP COMP SUCTION VLV RESET switch, 3-HS-64-139A.
- **DEPRESS** DRYWELL DP COMP DISCH VLV RESET switch, 3-HS-64-140A.

Standard:

Depresses 3-HS-64-139A and 3-HS-64-140A to reset.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

[33.2] **PLACE** Drywell Floor and Equipment Drains in service at Panel 3-9-4 as follows:

- **PLACE** DW EQPT DRAIN INBD ISOL VALVE switch, 3-HS-77-15A, in AUTO after OPEN.
- **PLACE** DW EQPT DRAIN OUTBD ISOL VALVE switch, 3-HS-77-15B, in AUTO after OPEN.

Standard:

Places 3-HS-77-15A and 3-HS-77-15B in Auto after Open.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

- **PLACE** DW FLOOR DRAIN INBD ISOL VALVE switch, 3-HS-77-2A, in AUTO after OPEN.
- **PLACE** DW FLOOR DRAIN OUTBD ISOL VALVE switch, 3-HS-77-2B, in AUTO after OPEN.

Standard:

Places 3-HS-77-2A and 2B in Auto after Open.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical X Not Critical

[33.3] **PLACE** DRYWELL RAD MONITOR in service at Panel 3-9-2 by DEPRESSING the following RESET pushbuttons:

- UPPER INBD SUPPLY ISOL VALVE RESET, 3-HS-90-254A-A
- LOWER INBD SUPPLY ISOL VALVE RESET, 3-HS-90-254B-A
- INBD RETURN ISOL VALVE RESET, 3-HS-90-257B-A
- OUTBD SUPPLY ISOL VALVE RESET, 3-HS-90-255A
- OUTBD RETURN ISOL VALVE RESET, 3-HS-90-257A-A

Standard:

Depresses the five listed reset pushbuttons to return the Drywell Rad Monitor to service

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[33.4] **PERFORM** the following to place the Drywell Atmosphere Monitor (H_2O_2) in service:

[33.4.1] **DEPRESS** H2/O2 ANALYZER ISOLATION RESET pushbutton, 3-HS-76-91 on Panel 3-9-54.

Standard:

Depresses 3-HS-76-91to reset H2/O2 Analyzer

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Another operator is going to place the H2/O2 Analyzer in service. This completes your task.

END OF TASK

STOP TIME _____

JPM h

OPERATOR:_____

RO ____ SRO ____ DATE:_____

JPM NUMBER: h

TASK NUMBER: U-090-NO-01

TASK TITLE: Returning DW Radiation Monitor CAM, 2-RM-90-256 to service

K/A NUMBER: 272000 A2.10 K/A RATING: RO 3.9 SRO: 4.1

TASK STANDARD: DW Radiation Monitor CAM, 2-RM-90-256 is in service

LOCATION OF PERFORMANCE: SIMULATOR

REFERENCES/PROCEDURES NEEDED: 2-AOI-100-1

VALIDATION TIME: 15 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY _____ UNSATISFACTORY_____

SIGNATURE: _____ DATE: _____
EXAMINER

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. The Unit Supervisor is operating in 2-AOI-100-1, Reactor Scram.

INITIATING CUES: The Unit Supervisor directs you to perform step 33 of 2-AOI-100-1, Reactor Scram, to return the Drywell DP Air Compressor, the Drywell Floor and Equipment Drains, and the Drywell Continuous Air Monitor to service.

INITIAL CONDITIONS: You are a Unit Operator. Plant conditions are as found. The Unit Supervisor is operating in 2-AOI-100-1, Reactor Scram.

INITIATING CUES: The Unit Supervisor directs you to perform step 33 of 2-AOI-100-1, Reactor Scram, to return the Drywell DP Air Compressor, the Drywell Floor and Equipment Drains, and the Drywell Continuous Air Monitor to service.

START TIME_____

****

Performance Step 1: Critical X Not Critical

[33] **VERIFY** the following systems/equipment in service or **RETURN** them to service at standby readiness, as necessary, in accordance with the following or the appropriate OI:

[33.1] **PLACE** Drywell DP Air Compressor in service at Panel 2-9-3 as follows:

- **PLACE** DRYWELL INBD ISOLATION VLV switch, 2-HS-64-31, in AUTO after OPEN.
- **PLACE** SUPPR CHBR INBD ISOLATION VLV switch, 2-HS-64-34, in AUTO after OPEN.

Standard:

Places 2-HS-64-31 and 34 in Auto after Open.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

- **DEPRESS** DRYWELL DP COMP SUCTION VLV RESET switch, 2-HS-64-139A.
- **DEPRESS** DRYWELL DP COMP DISCH VLV RESET switch, 2-HS-64-140A.

Standard:

Depresses 2-HS-64-139A and 2-HS-64-140A to reset.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 3: Critical X Not Critical

[33.2] **PLACE** Drywell Floor and Equipment Drains in service at Panel 2-9-4 as follows:

- **PLACE** DW EQPT DRAIN INBD ISOL VALVE switch, 2-HS-77-15A, in AUTO after OPEN.
- **PLACE** DW EQPT DRAIN OUTBD ISOL VALVE switch, 2-HS-77-15B, in AUTO after OPEN.

Standard:

Places 2-HS-77-15A and 2-HS-77-15B in Auto after Open.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 4: Critical X Not Critical

- **PLACE** DW FLOOR DRAIN INBD ISOL VALVE switch, 2-HS-77-2A, in AUTO after OPEN.
- **PLACE** DW FLOOR DRAIN OUTBD ISOL VALVE switch, 2-HS-77-2B, in AUTO after OPEN.

Standard:

Places 2-HS-77-2A and 2B in Auto after Open.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 5: Critical X Not Critical

[33.3] **PLACE** DRYWELL RAD MONITOR in service at Panel 2-9-2 by DEPRESSING the following RESET pushbuttons:

- UPPER INBD SUPPLY ISOL VALVE RESET, 2-HS-90-254A-A
- LOWER INBD SUPPLY ISOL VALVE RESET, 2-HS-90-254B-A
- INBD RETURN ISOL VALVE RESET, 2-HS-90-257B-A
- OUTBD SUPPLY ISOL VALVE RESET, 2-HS-90-255A
- OUTBD RETURN ISOL VALVE RESET, 2-HS-90-257A-A

Standard:

Depresses the five listed reset pushbuttons to return the Drywell Rad Monitor to service

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 6: Critical X Not Critical

[33.4] **PERFORM** the following to place the Drywell Atmosphere Monitor (H_2O_2) in service:

[33.4.1] **DEPRESS** H2/O2 ANALYZER ISOLATION RESET pushbutton, 2-HS-76-91 on Panel 2-9-54.

Standard:

Depresses 2-HS-76-91to reset H2/O2 Analyzer

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Another operator is going to place the H2/O2 Analyzer in service. This completes your task.

END OF TASK

STOP TIME _____

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: i

TASK NUMBER: U-000-SS-32

TASK TITLE: Reactor Pressure Control at Panel 2-25-32

K/A NUMBER: 295016 AA1.08 K/A RATING: RO 4.0 SRO: 4.0

TASK STANDARD: Reactor Pressure control established at panel 2-25-32 and MSIVs closed.

PRA:

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 2-AOI-100-2

VALIDATION TIME: 15 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are a Unit Operator Unit 2 Control had to be abandoned. The Unit Supervisor is operating in 2-AOI-100-2 Control Room Abandonment. All control rods inserted when RPS was actuated. Another operator has Attachment 9 at Panel 2-25-32.

INITIATING CUE: The Unit Supervisor directs you establish pressure control at Panel 2-25-32 and to close the MSIVs. The directed Reactor Pressure band is 800 to 1000 psig.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. SELF CHECKING may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. Observe ALL plant radiological and safety precautions. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are a Unit Operator Unit 2 Control had to be abandoned. The Unit Supervisor is operating in 2-AOI-100-2 Control Room Abandonment. All control rods inserted when RPS was actuated. Another operator has Attachment 9 at Panel 2-25-32.

INITIATING CUE: The Unit Supervisor directs you establish pressure control at Panel 2-25-32 and to close the MSIVs. The directed Reactor Pressure band is 800 to 1000 psig.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT

START TIME _____

****

Performance Step 1: Critical __ Not Critical X

4.2 Unit 2 Subsequent Actions

[1] **IF** ALL control rods were **NOT** fully inserted **AND** RPS failed to deenergize, **THEN:** (Otherwise N/A)

Standard:

N/A

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical __ Not Critical X

NOTES	
1)	The following transfers Reactor Pressure Control to Panel 2-25-32 to allow for pressure control while completing the Panel Checklist.
2)	Attachment 9, Alarm Response Procedure Panel 2-25-32, provides for any alarms associated with this instruction.

CAUTION	
1)	Failure to place control switch in desired position prior to transferring to emergency position may result in inadvertent actuation of the component.
2)	Operation from Panel 2-25-32 bypasses logic and interlocks normally associated with the components.

[2] **PLACE** the following MSRV control switches in CLOSE/AUTO at Panel 2-25-32:

Switch No.	Description
2-HS-1-22C	MAIN STM LINE B RELIEF VALVE
2-HS-1-5C	MAIN STM LINE A RELIEF VALVE
2-HS-1-30C	MAIN STM LINE C RELIEF VALVE
2-HS-1-34C	MAIN STM LINE C RELIEF VALVE

Standard:

Simulates placing 2-HS-1-22C, 5C, 30C, and 34C in Close /Auto

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Cue: Switch is in Close/Auto, or as found. If Asked Reactor Pressure is stable at 960 psig

****

Performance Step 3: Critical X Not Critical

[3] **PLACE** the following MSRV disconnect switches in DISCT at Panel 2-25-32:

Switch No.	Description
2-XS-1-18	MAIN STM LINE B RELIEF VALVE DISCT
2-XS-1-4	MAIN STM LINE A RELIEF VALVE DISCT
2-XS-1-42	MAIN STM LINE D RELIEF VALVE DISCT
2-XS-1-23	MAIN STM LINE B RELIEF VALVE DISCT
2-XS-1-41	MAIN STM LINE D RELIEF VALVE DISCT
2-XS-1-180	MAIN STM LINE D RELIEF VALVE DISCT

Standard:

Simulates placing 2-XS-1-18, 4, 42, 23, 41, and 180 in Disct

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

Cue: Switches are in DISCONNECT.

****

Performance Step 4: Critical X Not Critical

[4] **PLACE** the following MSRV transfer switches in EMERG at Panel 2-25-32:

Switch No.	Description
2-XS-1-22	MAIN STM LINE B RELIEF VALVE XFR
2-XS-1-5	MAIN STM LINE A RELIEF VALVE XFR
2-XS-1-30	MAIN STM LINE C RELIEF VALVE XFR
2-XS-1-34	MAIN STM LINE C RELIEF VALVE XFR

Standard:

Simulates placing 2-XS-1-22, 5, 30 and 34 in Emergency

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Switches are in Emergency.

****

Performance Step 5: Critical X Not Critical

NOTE

Use of the following sequence when opening MSRVs should distribute heat evenly in the Suppression Pool.

[5] **MAINTAIN** Reactor Pressure between 800 and 1000 psig using the following sequence at Panel 2-25-32:

A. 2-HS-1-22C, MAIN STM LINE B RELIEF VALVE
B. 2-HS-1-5C, MAIN STM LINE A RELIEF VALVE
C. 2-HS-1-30C, MAIN STM LINE C RELIEF VALVE
D. 2-HS-1-34C, MAIN STM LINE C RELIEF VALVE

Standard:

Simulates cycling SRVs as necessary to maintain reactor pressure 800 to 1000 psig

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Initial Reactor Pressure is 960 psig, when the Inboard MSIVs are closed in the next step begin to raise and lower pressure depending upon actions of the applicant. Until JPM complete cycle reactor pressure between 800 to 1000 psig every two minutes. If candidate fails to check or ask give a high or low pressure as warranted.

****

Performance Step 6: Critical X Not Critical

CAUTION
Failure to place control switch in desired position prior to transferring to emergency position may result in inadvertent actuation of the component.

[6] **CLOSE** MSIVs using the following switch sequence at Panel 2-25-32:

[6.1] **PLACE** control switch in CLOSE.
[6.2] **PLACE** transfer switch in EMERG.

MSIV LINE	Control Switch	Required Position		Transfer Switch	Required Position	
A INBOARD	2-HS-1-14C	CLOSE	☐	2-XS-1-14	EMERG	☐
B INBOARD	2-HS-1-26C	CLOSE	☐	2-XS-1-26	EMERG	☐
C INBOARD	2-HS-1-37C	CLOSE	☐	2-XS-1-37	EMERG	☐
D INBOARD	2-HS-1-51C	CLOSE	☐	2-XS-1-51	EMERG	☐
A OUTBOARD	2-HS-1-15C	CLOSE	☐	2-XS-1-15	EMERG	☐
B OUTBOARD	2-HS-1-27C	CLOSE	☐	2-XS-1-27	EMERG	☐
C OUTBOARD	2-HS-1-38C	CLOSE	☐	2-XS-1-38	EMERG	☐
D OUTBOARD	2-HS-1-52C	CLOSE	☐	2-XS-1-52	EMERG	☐

Standard:

Simulates placing control switch in close and then the transfer switch for each MSIV

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Control switch is in Close, Transfer switch is in Emergency, MSIV green light On and Red light Off.
When the D Inboard MSIV is closed Reactor Pressure begins to rise.
When applicant demonstrates pressure control terminate JPM, once all MSIV are closed.

END OF TASK

STOP TIME ___

OPERATOR: _____

RO ____ SRO ____ DATE:_____

JPM NUMBER: j

TASK NUMBER: U-000-SS-10

TASK TITLE: Reset Battery Charger 1, 2B and 3

K/A NUMBER: 295004 A1.01 K/A RATING: RO 3.3 SRO 3.4

TASK STANDARD: Resets battery chargers 1, 2b, and 3 during a fire in the unit 1 reactor building EL 621 and 639 North of column line R.

LOCATION OF PERFORMANCE: Control Bay

REFERENCES/PROCEDURES NEEDED: 0-SSI-1-5

VALIDATION TIME: 20 minutes

PERFORMANCE TIME: 60 minutes maximum

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS:

A fire has occurred in Unit 1 Reactor Building. The Shift Manager has directed entry into the SSI's.

INITIATING CUE:

The Unit Supervisor directs you to perform Operator 2 Manual Actions, Section 2.0, of 0-SSI-1-5, Unit 1 Reactor Building Fire EL 621 and 639 North of Column Line R.

This JPM is Time Critical.

****

IN-SIMULATOR: I will explain the initial conditions and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's Correct". (OR "That's Incorrect", if applicable). When you have completed your assigned task, you will say, "my task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS:

A fire has occurred in Unit 1 Reactor Building. The Shift Manager has directed entry into the SSI's.

INITIATING CUE:

The Unit 2 Unit Supervisor directs you to perform Operator 2 Manual Actions, Section 2.0, of 0-SSI-1-5, Unit 1 Reactor Building Fire EL 621 and 639 North of Column Line R.

This JPM is Time Critical.

START TIME_____

****

Performance Step 1: Critical Not Critical X

0-SSI-1-5

2.0 RESET BATTERY CHARGERS 1, 2B AND 3

[1] Notification has been received from the Unit 2 Unit Supervisor to perform this section.

Standard:

Given in initial conditions.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical X Not Critical

(60 Min)

[2] **PROCEED** TO 250V BATTERY CHARGER 1, 1-CHGA-248-0001, AND **PLACE** POWER ON, 1-HS-248-0001, in EMERG.

Standard:

Simulates placing 1-HS-248-0001 POWER ON in EMERG at Battery Charger 1.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The POWER ON handswitch is in EMERGENCY.

****

Performance Step 3: Critical X Not Critical

[3] **PROCEED** TO 250V BATTERY CHARGER 3, CHGA-248-0003, AND **PLACE** POWER ON, 3-HS-248-0003, in EMERG.

Standard:

Simulates placing 1-HS-248-0003 POWER ON in EMERG at Battery Charger 3.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The POWER ON handswitch is in EMERGENCY.

****

Performance Step 4: *Critical X Not Critical

[4] **PROCEED TO** 250V BATTERY CHARGER 2A, 2-CHGA-248-0002A, AND **PERFORM** the following:

*[4.1] **PLACE** POWER ON, 2-HS-248-0002A, in OFF.

[4.2] **VERIFY** ALTERNATE SUPPLY INPUT FROM 480V CMN BD 1/3A, 2-BKR-248-0002AB, in OFF.

Standard:

Simulates placing POWER ON, 2-HS-248-0002A, in OFF. Verifies ALTERNATE SUPPLY INPUT FROM 480V CMN BD 1/3A in OFF.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The POWER ON handswitch is in OFF and the ALTERNATE SUPPLY INPUT is in OFF.

****

Performance Step 5: Critical X Not Critical

[4.3] **PLACE** NORMAL SUPPLY INPUT FROM 480V SD BD 2A/6D, 2-BKR-248-0002AA, in OFF.

[4.4] **PLACE** DC BREAKER, 2-BKR-248-0002A/DC, in OFF.

Standard:

Simulates placing the NORMAL SUPPLY INPUT in OFF. Places the DC BREAKER 2-BKR-248-0002A/DC, in OFF.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The NORMAL SUPPLY INPUT is in OFF and the DC BREAKER is in OFF.

****

Performance Step 6: Critical X Not Critical

[5] **PROCEED** TO BATTERY CHARGER 2A OUTPUT TRANSFER SWITCH, 2-XSW-248-0002A, AND **PLACE** OUTPUT XFER SW TO BKR 608, 2-BKR-248-0002AE, in OFF.

Standard:

Simulates placing OUTPUT XFER SW TO BKR 608, 2-BKR-248-0002AE, in OFF.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The OUTPUT XFER SW TO BKR 608, 2-BKR-248-0002AE, is in OFF.

****

Performance Step 7: Critical Not Critical X

[6] **PROCEED TO** 250V BATTERY BOARD 2 Breaker 607, AND **PLACE** 0-BKR-280-0002/607 250V BATTERY CHARGER 2B EMER TIE TO DC BD 2, in ON.

Standard:

Simulates placing BATTERY CHARGER 2B EMER TIE TO DC BD 2 in ON.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The BATTERY CHARGER 2B EMER TIE TO DC BD 2 is in ON.

****

Performance Step 8: Critical X Not Critical

[7] **PERFORM** the following at BATTERY CHARGER 2B OUTPUT TRANSFER SWITCH 2B, 0-XSW-248-0002B:

[7.1] **PLACE** BATTERY CHARGER 2B OUTPUT TRANSFER SWITCH 2B, 0-XSW-248-0002B, Mechanical interlock, in TO BATTERY BD 2 BKR 607 position.

[7.2] **PLACE** TO BATTERY BD 2 BKR 607 breaker, in ON.

Standard:

Simulates sliding the Mechanical Interlock left to the TO BATTERY BD 2 BKR 607 position, and placing TO BATTERY BD 2 BKR 607 breaker in ON.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The Mechanical interlock, is in TO BATTERY BD 2 BKR 607 position, and TO BATTERY BD 2 BKR 607 breaker is in ON.

****

Performance Step 9: Critical X Not Critical

[7.3] **PROCEED TO** 250V BATTERY CHARGER 2B, 0-CHGA-248-0002B, AND **PERFORM** the following:

[7.3.1] **PLACE** NORMAL SUPPLY INPUT FROM 480V SD BD 2B/6D, 0-BKR-248-0002BA, in ON.

[7.3.2] **PLACE** DC BREAKER, 0-BKR-248-0002B/DC, in ON.

Standard:

Simulates placing NORMAL SUPPLY INPUT FROM 480V SD BD 2B/6D in ON, and placing DC BREAKER in ON.

SAT___ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The NORMAL SUPPLY INPUT FROM 480V SD BD 2B/6D is in ON, and the DC BREAKER is in ON.

****

Performance Step 10: Critical X Not Critical

NOTE
The following step will place Battery Charger 2B in service with the 480V load shed logic trip bypassed.

[7.3.3] **PLACE** POWER ON, 0-HS-248-0002B, in EMERG.

Standard:

Simulates placing POWER ON, 0-HS-248-0002B, in EMERG.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: The POWER ON handswitch is in EMERGENCY.

****

Performance Step 11: Critical __ Not Critical X

[8] **NOTIFY** Unit 2 Unit Supervisor of completion of this section.

Standard:

Notifies the Unit 2 Unit Supervisor of completion of this section.

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Another Operator will perform Section 3.0. This completes your task.

END OF TASK

STOP TIME _____60 Minutes is the time-critical allowed maximum

JPM k

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: i

TASK NUMBER: U-000-EM-19

TASK TITLE: 3-EOI Appendix-1A Removal of RPS SCRAM Fuses

K/A NUMBER: 212000 A2.20 K/A RATING: RO 4.1 SRO 4.2

TASK STANDARD: Simulate removal of SCRAM Fuses IAW 3-EOI Appendix-1A

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 3-EOI Appendix-1A

VALIDATION TIME: 10 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Extra Operator. The Unit 3 reactor has scrammed and all control rods did not fully insert. All eight scram solenoid lights on Panel 9-5 are still illuminated. EOI-1 has been entered and followed to RC/Q-23. The Scram Discharge Volume Vent/Drain Valves indicate closed on panel 3-9-5.

INITIATING CUE: The Unit Supervisor directs you to remove the RPS scram solenoid fuses in accordance with 3-EOI Appendix 1A, Removal and Replacement of RPS Scram Solenoid Fuses.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Extra Operator. The Unit 3 reactor has scrammed and all control rods did not fully insert. All eight scram solenoid lights on Panel 9-5 are still illuminated. EOI-1 has been entered and followed to RC/Q-23. The Scram Discharge Volume Vent/Drain Valves indicate closed on panel 3-9-5.

INITIATING CUE: The Unit Supervisor directs you to remove the RPS scram solenoid fuses in accordance with 3-EOI Appendix 1A, Removal and Replacement of RPS Scram Solenoid Fuses.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

****

Performance Step 1: Critical __ Not Critical X

1. **VERIFY CLOSED** Scram Discharge Volume Vent and Drain Valves at the SCRAM DISCHARGE VOLUME VENT/DRAIN VLVS display on panel 9-5.

Standard:

Given in initial conditions

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 2: Critical __ Not Critical X

2. **DISPATCH** personnel to Unit 3 Auxiliary Instrument Room to perform the following:

   a. **REFER** to Attachment 1 and OBTAIN fuse pullers from EOI Equipment Storage box.

Standard:

Simulate unlocking EOI Equipment storage and obtaining fuse pullers

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE:	When location of EOI Storage Box identified, Operator has the fuse pullers

****

Performance Step 3: Critical X Not Critical

b. **LOCATE** Terminal Strip CC inside Panel 9-15, Bay 2, Rear.

c. **REMOVE** the following fuses (located at bottom of terminal strip CC, Panel 9-15):

RPS BUS "A"

BLOCK	NUMBER	FUSE ID
CC	FOUR (4)	3-FU1-085-0037AA
CC	FIVE (5)	3-FU1-085-0039A/2
CC	SIX (6)	3-FU1-085-0039A/3
CC	SEVEN (7)	3-FU1-085-0039A/4

Standard:

Identifies terminal strip and simulates removing listed fuses

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When location of proper Fuse is indicated the Fuse has been removed

****

Performance Step 4: Critical X Not Critical

d. **LOCATE** Terminal Strip CC inside Panel 9-17, Bay 2, Rear.

e. **REMOVE** the following fuses (located at bottom of terminal strip CC, Panel 9-17):

RPS BUS "B"

BLOCK	NUMBER	FUSE ID
CC	FOUR (4)	3-FU1-085-0037BA
CC	FIVE (5)	3-FU1-085-0039B/2
CC	SIX (6)	3-FU1-085-0039B/3
CC	SEVEN (7)	3-FU1-085-0039B/4

Standard:

Identifies terminal strip and simulates removing listed fuses

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When location of proper Fuse is indicated the Fuse has been removed

****

Performance Step 5: Critical _ Not Critical X

f. WHEN ALL fuses are removed, THEN **NOTIFY** Unit Operator.

Standard:

Notifies Unit 3 Operator All RPS Fuse removed

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Acknowledge Notification, SRO Does not direct replacement of fuses

END OF TASK

STOP TIME_____

JPM k

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: i

TASK NUMBER: U-000-EM-19

TASK TITLE: 2-EOI Appendix-1A Removal of RPS SCRAM Fuses

K/A NUMBER: 212000 A2.20 K/A RATING: RO 4.1 SRO 4.2

TASK STANDARD: Simulate removal of SCRAM Fuses IAW 2-EOI Appendix-1A

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 2-EOI Appendix-1A

VALIDATION TIME: 10 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Extra Operator. The Unit 2 reactor has scrammed and all control rods did not fully insert. All eight scram solenoid lights on Panel 9-5 are still illuminated. EOI-1 has been entered and followed to RC/Q-23. The Scram Discharge Volume Vent/Drain Valves indicate closed on panel 2-9-5.

INITIATING CUE: The Unit Supervisor directs you to remove the RPS scram solenoid fuses in accordance with 2-EOI Appendix 1A, Removal and Replacement of RPS Scram Solenoid Fuses.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Extra Operator. The Unit 2 reactor has scrammed and all control rods did not fully insert. All eight scram solenoid lights on Panel 9-5 are still illuminated. EOI-1 has been entered and followed to RC/Q-23. The Scram Discharge Volume Vent/Drain Valves indicate closed on panel 2-9-5.

INITIATING CUE: The Unit Supervisor directs you to remove the RPS scram solenoid fuses in accordance with 2-EOI Appendix 1A, Removal and Replacement of RPS Scram Solenoid Fuses.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

****

Performance Step 1: Critical __ Not Critical X

1. **VERIFY CLOSED** Scram Discharge Volume Vent and Drain Valves at the SCRAM DISCHARGE VOLUME VENT/DRAIN VLVS display on panel 9-5.

Standard:

Given in initial conditions

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

****

Performance Step 2: Critical __ Not Critical X

2. **DISPATCH** personnel to Unit 2 Auxiliary Instrument Room to perform the following:

   a. **REFER** to Attachment 1 and OBTAIN fuse pullers from EOI Equipment Storage box.

Standard:

Simulate unlocking EOI Equipment storage and obtaining fuse pullers

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE:	When location of EOI Storage Box identified, Operator has the fuse pullers

****

Performance Step 3: Critical X Not Critical

b. **LOCATE** Terminal Strip CC inside Panel 9-15, Bay 2, Rear.

c. **REMOVE** the following fuses (located at bottom of terminal strip CC, Panel 9-15):

RPS BUS "A"

BLOCK	NUMBER	FUSE ID
CC	FOUR (4)	2-FU1-085-0037AA
CC	FIVE (5)	2-FU1-085-0039A/2
CC	SIX (6)	2-FU1-085-0039A/3
CC	SEVEN (7)	2-FU1-085-0039A/4

Standard:

Identifies terminal strip and simulates removing listed fuses

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When location of proper Fuse is indicated the Fuse has been removed

****

Performance Step 4: Critical X Not Critical

d. **LOCATE** Terminal Strip CC inside Panel 9-17, Bay 2, Rear.

e. **REMOVE** the following fuses (located at bottom of terminal strip CC, Panel 9-17):

RPS BUS "B"

BLOCK	NUMBER	FUSE ID
CC	FOUR (4)	2-FU1-085-0037BA
CC	FIVE (5)	2-FU1-085-0039B/2
CC	SIX (6)	2-FU1-085-0039B/3
CC	SEVEN (7)	2-FU1-085-0039B/4

Standard:

Identifies terminal strip and simulates removing listed fuses

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When location of proper Fuse is indicated the Fuse has been removed

****

Performance Step 5: Critical _ Not Critical X

f. WHEN ALL fuses are removed, THEN **NOTIFY** Unit Operator.

Standard:

Notifies Unit 2 Operator All RPS Fuse removed

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Acknowledge Notification, SRO Does not direct replacement of fuses

END OF TASK

STOP TIME_____

JPM k

OPERATOR: _____

RO ____ SRO ____ DATE: _____

JPM NUMBER: i

TASK NUMBER: U-000-EM-19

TASK TITLE: 1-EOI Appendix-1A Removal of RPS SCRAM Fuses

K/A NUMBER: 212000 A2.20 K/A RATING: RO 4.1 SRO 4.2

TASK STANDARD: Simulate removal of SCRAM Fuses IAW 1-EOI Appendix-1A

LOCATION OF PERFORMANCE: Plant

REFERENCES/PROCEDURES NEEDED: 1-EOI Appendix-1A

VALIDATION TIME: 10 minutes

PERFORMANCE TIME:

COMMENTS: _____
_____
_____

Additional comment sheets attached? YES ___ NO ___

RESULTS: SATISFACTORY ____ UNSATISFACTORY ____

SIGNATURE: _____ DATE: _____
EXAMINER

INITIAL CONDITIONS: You are the Extra Operator. The Unit 1 reactor has scrammed and all control rods did not fully insert. All eight scram solenoid lights on Panel 9-5 are still illuminated. EOI-1 has been entered and followed to RC/Q-23. The Scram Discharge Volume Vent/Drain Valves indicate closed on panel 1-9-5.

INITIATING CUE: The Unit Supervisor directs you to remove the RPS scram solenoid fuses in accordance with 1-EOI Appendix 1A, Removal and Replacement of RPS Scram Solenoid Fuses.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

****

IN-PLANT: I will explain the initial conditions and state the task to be performed. ALL STEPS WILL BE SIMULATED. Do NOT operate any plant equipment. Touch STAAR may be carried out to the point of touching a label. If it becomes necessary to physically touch a control switch, use a non-conductive pointing device. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. When your task is given, you will repeat the task and I will acknowledge "That's correct" (or That's incorrect", if applicable). When you have completed your assigned task, you will say, "My task is complete" and I will acknowledge that your task is complete.

****

INITIAL CONDITIONS: You are the Extra Operator. The Unit 1 reactor has scrammed and all control rods did not fully insert. All eight scram solenoid lights on Panel 9-5 are still illuminated. EOI-1 has been entered and followed to RC/Q-23. The Scram Discharge Volume Vent/Drain Valves indicate closed on panel 1-9-5.

INITIATING CUE: The Unit Supervisor directs you to remove the RPS scram solenoid fuses in accordance with 1-EOI Appendix 1A, Removal and Replacement of RPS Scram Solenoid Fuses.

CAUTION: DO NOT OPERATE ANY PLANT EQUIPMENT!

START TIME_____

****

Performance Step 1: Critical __ Not Critical X

1. **VERIFY CLOSED** Scram Discharge Volume Vent and Drain Valves at the SCRAM DISCHARGE VOLUME VENT/DRAIN VLVS display on panel 1-9-5.

Standard:

Given in initial conditions

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

****

Performance Step 2: Critical __ Not Critical X

2. **DISPATCH** personnel to the Auxiliary Instrument Room to perform the following:

   a. **REFER** to Attachment 1 and OBTAIN fuse pullers from EOI Equipment Storage box.

Standard:

Simulate unlocking EOI Equipment storage and obtaining fuse pullers

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE:	When location of EOI Storage Box identified, Operator has the fuse pullers

****

Performance Step 3: Critical X Not Critical

b. **LOCATE** Terminal Strip CC inside 1-PNLA-009-0015, Bay 2, Rear.

c. **REMOVE** the following fuses (located at bottom of terminal strip CC, 1-PNLA-009-0015):

RPS BUS "A"

BLOCK	**NUMBER**	**FUSE ID**
CC	FOUR (4)	1-FU1-085-0037AA
CC	FIVE (5)	1-FU1-085-0039A/2
CC	SIX (6)	1-FU1-085-0039A/3
CC	SEVEN (7)	1-FU1-085-0039A/4

Standard:

Identifies terminal strip and simulates removing listed fuses

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When location of proper Fuse is indicated the Fuse has been removed

****

Performance Step 4: Critical X Not Critical

d. **LOCATE** Terminal Strip CC inside 1-PNLA-009-0017, Bay 2, Rear.

e. **REMOVE** the following fuses (located at bottom of terminal strip CC, 1-PNLA-009-0017):

RPS BUS "B"

BLOCK	**NUMBER**	**FUSE ID**
CC	FOUR (4)	1-FU1-085-0037BA
CC	FIVE (5)	1-FU1-085-0039B/2
CC	SIX (6)	1-FU1-085-0039B/3
CC	SEVEN (7)	1-FU1-085-0039B/4

Standard:

Identifies terminal strip and simulates removing listed fuses

SAT__ UNSAT__ N/A __COMMENTS:_____

_____

CUE: When location of proper Fuse is indicated the Fuse has been removed

****

Performance Step 5: Critical _ Not Critical X

f. WHEN ALL fuses are removed, THEN **NOTIFY** Unit Operator.

Standard:

Notifies Unit 1 Operator All RPS Fuse removed

SAT__ UNSAT___ N/A ___COMMENTS:_____

_____

CUE: Acknowledge Notification, SRO Does not direct replacement of fuses

END OF TASK

STOP TIME_____