

Recommended Start Location: (Completion time based on the start location)

Plant/ RP Access Point

Simulator Set-up (if required):

N/A

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

N2-OP-19, Section E.2.0.
K/A 300000 A2.01 2.9/2.8

Tools and Equipment:

N/A

Task Standard:

Dryer 2IAS-DRY1B IN SERVICE and 2IAS-V298 dryers 1A & 1B bypass CLOSED

Initial Conditions:

Degrading instrument air dewpoint requires starting the second air dryer.

Initiating Cues:

“(Operators name), place Dryer 2IAS-DRY1B in service per N2-OP-19, Section E.2.0.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary</i> RECORD START TIME _____	<input type="checkbox"/> Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat
2. Obtain a copy of the reference procedure and review/utilize the correct section.	<input type="checkbox"/> N2-OP-19 obtained. Precautions & Limitations reviewed.	Sat/Unsat
3. Verify CLOSED 2IAS-V280 (282), Air Dryer 1A (1B) Inlet.	<input type="checkbox"/> Verifies CLOSED 2IAS-V282, Air Dryer 1B Inlet.	Sat/Unsat
4. Verify CLOSED 2IAS-V281 (V283), air Dryer 1A (1B) Outlet.	<input type="checkbox"/> Verifies CLOSED 2IAS-V283, air Dryer 1B Outlet.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
5. Verify OPEN 2IAS-V288 (V290), dryer drain trap isolation valve.	<input type="checkbox"/> Verifies OPEN 2IAS-V290, dryer drain trap isolation valve.	Sat/Unsat
6. Place ON-OFF switch to ON, at dryer.	<input type="checkbox"/> Places ON-OFF switch to ON, at dryer.	PASS/FAIL
7. Verify COMPRESSOR ON light is lit AND compressor is operating. CUE: Compressor ON light is LIT	<input type="checkbox"/> Verifies COMPRESSOR ON light is lit AND compressor is operating.	Sat/Unsat
8. Allow dryer to run 15 minutes. Cue: 15 minutes has elapsed, you may continue.	<input type="checkbox"/> Allows dryer to run 15 minutes.	Sat/Unsat
9. Slowly OPEN 2IAS-V280 (V282) Air Dryer 1A (1B) Outlet.	<input type="checkbox"/> OPENS 2IAS-V282 Air Dryer 1B Outlet.	PASS/FAIL
10. Check dryer for air leaks.	<input type="checkbox"/> Checks dryer for air leaks.	Sat/Unsat
11. Slowly OPEN 2IAS-V281 (V283), Air Dryer 1A (1B) Outlet.	<input type="checkbox"/> OPENS 2IAS- V283, Air Dryer 1B Outlet.	PASS/FAIL
12. Verify CLOSED 2IAS-V298, Air Dryers 1A & 1B Bypass.	<input type="checkbox"/> Verifies CLOSED 2IAS-V298, Air Dryers 1A & 1B Bypass.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
13. Monitor dryer operation by periodically checking the following: <ul style="list-style-type: none"> • Dryer Inlet pressure. • Dryer Outlet pressure • Dryer Inlet AND Outlet temperature. Cue: Dryer inlet is _120 psig. Dryer outlet is 116 psig. Inlet Temperature is 90 degrees F. Outlet Temp is 85 degrees F.	<input type="checkbox"/> Monitors dryer operation by periodically checking the following: <ul style="list-style-type: none"> • Dryer Inlet pressure. • Dryer Outlet pressure • Dryer Inlet AND Outlet temperature. 	Sat/Unsat
14. Reports completion. TERMINATING CUE: RECORD STOP TIME_____	<input type="checkbox"/> Reports completion. 2IAS-V298 dryers 1A & 1B bypass CLOSED and dryer 2IAS-DRY1B IN SERVICE.	Sat/Unsat

TURNOVER SHEET

INITIAL CONDITIONS: Degrading instrument air dewpoint requires starting the second air dryer.

INITIATING CUES: "(Operators name), place Dryer 2IAS-DRY1B in service per N2-OP-19, Section E.2.0."

NRC JPM P-2
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Hydro Pump Boron Injection

Revision: NRC 2008

Task Number: 2009090504

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: _____ Perform X Simulate

Evaluation Location: X Plant _____ Simulator

Expected Completion Time: 30 min. Time Critical Task: No Alternate Path Task:
No

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

RB 289 Outside CRD Maintenance Room

Simulator Set-up (if required):

None

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

1. N2-EOP-6, Att. 15, "SLS Hydro Injection"
2. NUREG 1123: 295037 EA1.10 3.7/3.9

Tools and Equipment:

1. F2-57 Key available in CRO desk to open EOP Box

Task Standard:

Using hydro pump and hoses staged, establish a flowpath from SLS tank to the Reactor Vessel complete with an air supply to the pump and commence Boron injection.

Initial Conditions:

1. Boron injection is required.
2. The Standby Liquid Control pumps will not start.
3. Instructor to ask operator for any questions.

Initiating Cues:

“(Operator’s name), Commence boron injection with the hydro pump lined up to 2SLS*P1A piping in accordance with EOP-6, Attachment 15.”

Performance Steps	Standard	Grade
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary.</i>	Proper communications used for repeat back (GAP-OPS-01/NIP-HUP-02).	Sat/Unsat
RECORD START TIME _____		
2. Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N2-EOP-6, Att. 15 obtained. Precautions & limitations reviewed & section 3.1 referenced.	Sat/Unsat
3. Locate equipment.	At EOP box, open box, remove equipment, and check to ensure specified equipment contained.	Sat/Unsat
NOTE: For simulation purposes, actual layout of hoses and connection to pump or plant equipment is not required. Identification of hose and use along with connection points is all that is required.		
4. Remove test conn. Plug @ SLS*V42. Cue: Simulate plug removed.	At 2SLS*V42, remove test conn. Plug by rotating plug counter clockwise.	Pass/Fail
5. Connect suction hose to 2SLS*V42. Cue: Simulate hose connected.	At 2SLS*V42, connect 25’ black suction hose by rotating brass coupling clockwise into the test connection.	Pass/Fail

Performance Steps	Standard	Grade
6. Connect hose to the suction of the hydro pump. Cue: Simulate hose connected.	At hydro pump, connect 25' black suction hose by rotating brass coupling clockwise onto the suction connection. (Located on the bottom of the pump.)	Pass/Fail
7. Remove 2SLS*V35 cap. Cue: Simulate cap removed.	At 2SLS*V35, remove pipe cap by rotating cap counter clockwise.	Pass/Fail
8. Connect discharge hose to 2SLS*V35. Cue: Simulate hose connected.	AT 2SLS*V35, connect 25' hydro hose by rotating hose coupling clockwise onto the drain connection.	Pass/Fail
9. Connect discharge hose to the hydro pump. Cue: Simulate hose connected.	At hydro pump, connect 25' hydro hose by inserting hose coupling into pump discharge disconnect. (Located middle of hydro unit. Downstream of Relief Valve.)	Pass/Fail
10. Close 2MWS-V24 MWS to SLS System Cue: 2MWS-V24 is closed.	Close 2MWS-V24.	Sat/Unsat
11. Open 2SLS*MOV1A. Cue: SM permission obtained. Cue: 2EHS*MCC102-17D is OFF, MOV1A is OPEN.	Open supply breaker to 2SLS*MOV1A, then manually open MOV by rotating handle counter clockwise.	Pass/Fail
12. Open 2SLS*V42. Cue: Simulate V42 Open.	At 2SLS*V42, rotate the valve handwheel counter clockwise until the valve is at the full open position.	Pass/Fail
13. Establish discharge flowpath. Cue: Simulate V35 Open.	At 2SLS*V35, rotate the valve handwheel counter clockwise until the valve is in the full open position.	Pass/Fail
14. Establish discharge flowpath. Cue: Simulate V34 Open.	At 2SLS*V34, rotate the valve handwheel counter clockwise until the valve is in the full open position.	Pass/Fail
15. Verify either 2SLS*MOV5A or 2SLS*MOV5B open. Cue: Simulate valve open.	Contact control room and request valve position for 2SLS*MOV5A/B.	Pass/Fail
16. Connect air hose. Cue: Simulate hose connected.	At hydro pump, connect air hose fitting onto hydro pump air line quick disconnect fitting.	Pass/Fail

Performance Steps	Standard	Grade
17. Line up hydro pump. Cue: Isolation valves shut, regulator spring tension backed off.	At hydro pump, close air inlet isolation and back off air regulator spring tension.	Sat/UnSat
18. Connect air hose. Cue: Simulate hose connected.	At 2SAS-V529, connect air hose fitting into service air quick disconnect fitting.	Pass/Fail
19. Open 2SAS-V529 Cue: Simulate V529 open.	At 2SAS-V529, open the valve by rotating the T-handle counter clockwise to the in- line position.	Pass/Fail
20. Start hydro pump. Cue: Simulate Hydro Pump is running.	At hydro pump, open air line isolation valve by rotating T-handle counter clockwise to the in-line position, adjusting spring tension on air regulator.	Pass/Fail
21. Report completion.	Report completion.	Sat/Unsat

Terminating Cue: Hydro pump running with flowpath established from SLS tank to Reactor Vessel.

RECORD STOP TIME _____

Turnover Sheet

Initial Conditions:

1. Boron injection is required.
2. The Standby Liquid Control pumps will not start.
3. Instructor to ask operator for any questions.

Initiating Cues:

“Commence boron injection with the hydro pump lined up to 2SLS*P1A piping in accordance with EOP-6, Attachment 15.”

NRC JPM P-3
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Placing a Battery Charger In Service (Alternate)

Revision: NRC 2008

Task Number: 2630070104

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____ (RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: _____ Perform X Simulate

Evaluation Location: X Plant _____ Simulator

Expected Completion Time: 20 Time Critical Task: NO Alternate Path Task: YES

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Plant – Bring copy of N2-OP-73A

Simulator Set-up (if required):

N/A

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a “•”.
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - No verification shall be demonstrated.

References:

1. N2-OP-73A
2. NUREG 1123 263000 A1.01 2.5/2.8

Tools and Equipment:

1. Per N2-OP-73A

2. Appropriate PPE IAW Personnel Safety Manual
 Task Standard: Battery Charger 2BYS-CHGR1A1 is placed in service.

Initial Conditions:

1. Electrical Maintenance has just completed corrective maintenance on 2BYS-CHGR1A1.
2. Battery Charger 2BYS-CHGR1A1 is ready to be placed into service.
3. Instructor to ask operator for any questions.

Initiating Cues:

Place battery charger 2BYS-CHGR1A1 into service IAW N2-OP-73A, Section E.4.0.

Performance Steps	Standard	Grade
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary.</i>	Proper communications used for repeat back (GAP-OPS-01/ CNG-HU-1.01-1001).	Sat/Unsat
RECORD START TIME _____		
2. Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N2-OP-73A obtained. Precautions & limitations and section reviewed E.4.0.	Sat/Unsat
3. Verify breakers positions.	AC Power and DC power breakers are verified to be OPEN (Off).	Sat /Unsat
4. Verify equalizer float of timer.	Equalize float timer is verified to be OFF.	Sat /Unsat
5. Verify float/equalize Switch in float.	Float/Equalize Switch verified to float.	Sat /Unsat
6. Close breaker 2BYS-SWG001A-2B. Cue: If asked, initial breaker position is open.	Breaker 2BYS-SWG001A-2B, 125V DC Bat Charger 2BYS-CHGR1A1, is closed.	Pass/Fail
7. Close breaker 2NJS-US5-5D. Cue: If asked, initial breaker position is open.	Breaker 2NJS-US5-5D, 125V DC Norm Bat CHGR 2BYS-CHGR1A1, is closed.	Pass/Fail
8. Close DC Breaker.	DC Power breaker on charger is closed.	Pass/Fail
9. Verify voltage. Cue: If asked, voltage is 110 VDC	Battery voltage is observed to be between 105 and 140VDC on 2BYS-CHGR1C1.	Sat /Unsat
10. Close AC breaker.	AC Power breaker on charger is closed.	Pass/Fail

Performance Steps	Standard	Grade
11. Verify amperage. Cue: Charging current is 680 amps or off scale high	Battery charging current verified to be a positive value but less than the 600 amp limit specified. (Cue: Operator should recognize current value above amount specified.)	Pass/Fail
12. Contact Electrical Maintenance. Cue: Elect. Maint. contacted. Cue: If asked, operator to correct condition.	Electrical Maintenance Contacted. Operator will probably also contact the Control Room.	Sat /Unsat
13. [Perform Section H.14.0 Manual Current Limiting] Open AC Breaker.	AC Power Breaker on charger is open.	Pass/Fail
14. Loosen float potentiometer lock nut.	Float potentiometer lock nut is loosened by turning counterclockwise.	Sat/Unsat
15. Adjust potentiometer counter clockwise.	Float potentiometer is rotated fully counterclockwise.	Pass/Fail
16. Close AC Breaker.	AC Power breaker on charger is closed.	Pass/Fail
17. Adjust potentiometer. Cue: Initial adjustment leaves Output voltage at 123VDC and current at 490amps.	While maintaining amperage less than 500 amps, potentiometer is adjusted clockwise until output voltage is 135VDC.	Pass/Fail
18. Obtain multimeter. Cue: Multimeter obtained.	Obtain/simulate obtaining calibrated multimeter (DVM).	Pass/Fail
19. Connect multimeter. Cue: Simulator meter connected, when described by operator PPE must be worn.	Connect leads of Digital Multimeter to terminal posts of VOLTS meter of battery charger.	Pass/Fail
20. Adjust potentiometer. Cue: When adjusted volt meter reads 134.5 VDC.	Adjust FLOAT potentiometer UNTIL output voltage as indicated on Digital Multimeter is between 134.0 AND 135.0 volts.	Pass/Fail
21. Tighten lock nut.	WHILE maintaining FLOAT potentiometer setting, tighten FLOAT potentiometer lock nut.	Sat/Unsat

Performance Steps	Standard	Grade
22. Place in Equalize.	Place in EQUALIZE the Float/Equalize selector switch.	Pass/Fail
23. Loosen lock nut.	Loosen EQUALIZE potentiometer lock nut.	Pass/Fail
24. Adjust potentiometer. Cue: When adjusted volt meter reads 139.8 VDC.	Adjust EQUALIZE potentiometer UNTIL output voltage as indicated on Digital Multimeter is between 139.5 AND 140.0 volts.	Pass/Fail
25. Tighten lock nut.	WHILE maintaining EQUALIZE potentiometer setting, tighten EQUALIZE potentiometer lock nut.	Sat/Unsat
26. Place in float.	Place in FLOAT the Float/Equalize selector switch.	Pass/Fail
27. Remove DVM	Remove Digital Multimeter from VOLTS meter terminals.	Sat/Unsat
28. Verify completion of E.4.0 Section	Operator should verify completeness.	Sat/Unsat
29. Report completion.	Report completion.	Sat/Unsat

Terminating Cue: 2BYS-CHGR-1A1 is in service.

RECORD STOP TIME _____

Turnover Sheet

Initial Conditions:

1. Electrical Maintenance has just completed corrective maintenance on 2BYS-CHGR1A1.
2. Battery Charger 2BYS-CHGR1A1 is ready to be placed into service.
3. Instructor to ask operator for any questions.

Initiating Cues:

Place battery charger 2BYS-CHGR1A1 into service IAW N2-OP-73A, Section E.4.0.

NRC JPM S-1
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Place Main Turbine Shell Warming In Service IAW N2-OP-21 Revision: NRC 2008

Task Number:

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: _____Perform _____Simulate

Evaluation Location: _____Plant _____Simulator

Expected Completion Time: 20 min. Time Critical Task: No Alternate Path Task: Yes

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Simulator

Simulator Set-up (if required):

IC-157

Malfunction EG09 – TG Oil Pump Failure
Remote TC03 – Turbine Turning Gear rolloff
Neck Spray in service

TRG1

TRG1

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

4. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a “•”.
5. During Evaluated JPM:
 - Self-verification shall be demonstrated.
6. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

Tools and Equipment:

None

Task Standard:

1. Shell warming placed in service.
2. Shell warming secured.

Initial Conditions:

- Reactor Pressure is 60 psig.
- Main Turbine Turning Gear is in operation.
- N2-OP-21 "Main Turbine System" Section E.3.0. is complete through step E.3.1

Initiating Cues:

"(Operators name), Place main turbine shell warming in service IAW N2-OP-21, Section E.3.0. beginning at step E.3.2 ."

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
3. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary</i>	<input type="checkbox"/> Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat

RECORD START TIME _____

4. Obtain a copy of the reference procedure and review/utilize the correct section.	<input type="checkbox"/> N2-OP-21 obtained. Precautions & Limitations reviewed.	Sat/Unsat
3. Push Turbine RESET pushbutton UNTIL the Turbine TRIPPED light goes out AND verify the following: <ul style="list-style-type: none"> • Turbine RESET light lit. • CONDENSER VACUUM TRIP RESET light lit. • MECHANICAL TRIP RESET light lit. • Intermediate Stop Valves ISV1 through ISV6 ALL indicate 100% on COMBINED INTERMEDIATE STOP VALVE POSITION indicators. 	<input type="checkbox"/> Pushes Turbine RESET pushbutton UNTIL the Turbine TRIPPED light goes out AND verifies the following: <ul style="list-style-type: none"> • Turbine RESET light lit. • CONDENSER VACUUM TRIP RESET light lit. • MECHANICAL TRIP RESET light lit. • Intermediate Stop Valves ISV1 through ISV6 ALL indicate 100% on COMBINED INTERMEDIATE STOP VALVE POSITION indicators. 	PASS/FAIL Sat/Unsat Sat/Unsat Sat/Unsat Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
<ul style="list-style-type: none"> Intercept Valves IV1 through IV6 ALL indicate 0% on COMBINED INTERCEPT VALVE POSITION indicators. Main Stop Valves MSV1 through MSV4 ALL indicate 0% on MAIN STOP VALVE POSITION indicators. Control Valves CV1 through CV4 ALL indicate 0% on CONTROL VALVE POSITION indicators. 	<ul style="list-style-type: none"> Intercept Valves IV1 through IV6 ALL indicate 0% on COMBINED INTERCEPT VALVE POSITION indicators. Main Stop Valves MSV1 through MSV4 ALL indicate 0% on MAIN STOP VALVE POSITION indicators. Control Valves CV1 through CV4 ALL indicate 0% on CONTROL VALVE POSITION indicators. 	Sat/Unsat
4. Verify 2MSS-AOV92A, REHEATER 1A STM SUPPLY VLV is CLOSED.	☐ Verifies 2MSS-AOV92A, REHEATER 1A STM SUPPLY VLV is CLOSED.	Sat/Unsat
5. Verify 2MSS-AOV92B, REHEATER 1B STM SUPPLY VLV is CLOSED.	☐ Verifies 2MSS-AOV92B, REHEATER 1B STM SUPPLY VLV is CLOSED.	Sat/Unsat
6. Place TURBINE SHELL/CHEST WARMING switch in ON position at 2CEC-PNL824, MAIN REHEAT & AUX ST DR TURB BLDG MISC DR.	☐ Places TURBINE SHELL/CHEST WARMING switch in ON position at 2CEC-PNL824, MAIN REHEAT & AUX ST DR TURB BLDG MISC DR.	PASS/FAIL
7. Close the following valves at 2CEC-PNL824: <ul style="list-style-type: none"> CRS-MOV7A, COLD REHEAT STM DRAIN VLV CRS-MOV7B, COLD REHEAT STM DRAIN VLV CRS-MOV8A, COLD REHEAT STM DRAIN VLV CRS-MOV8B, COLD REHEAT STM DRAIN VLV CRS-MOV9A, COLD REHEAT STM DRAIN VLV CRS-MOV9B, COLD REHEAT STM DRAIN VLV CRS-MOV18A, COLD REHEAT STM DRAIN VLV 	☐ Closes the following valves at 2CEC-PNL824: <ul style="list-style-type: none"> CRS-MOV7A, COLD REHEAT STM DRAIN VLV CRS-MOV7B, COLD REHEAT STM DRAIN VLV CRS-MOV8A, COLD REHEAT STM DRAIN VLV CRS-MOV8B, COLD REHEAT STM DRAIN VLV CRS-MOV9A, COLD REHEAT STM DRAIN VLV CRS-MOV9B, COLD REHEAT STM DRAIN VLV CRS-MOV18A, COLD REHEAT STM DRAIN VLV 	PASS/FAIL

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
<ul style="list-style-type: none"> • CRS-MOV18B, COLD REHEAT STM DRAIN VLV • DSM-MOV79A, MOISTURE SEPARATOR A DRAIN VLV • DSM-MOV79B, MOISTURE SEPARATOR B DRAIN VLV • HRS-MOV1, CROSSAROUND PIPING DRAIN VLV • HRS-MOV2, CROSSAROUND PIPING DRAIN VLV • ESS-MOV28A, 5TH POINT HEATER A EXTRACTION STM ISOL VLV • ESS-MOV28B, 5TH POINT HEATER B EXTRACTION STM ISOL VLV • ESS-MOV28C, 5TH POINT HEATER C EXTRACTION STM ISOL VLV • ESS-MOV-3A, 6TH POINT HEATER A EXTRACTION STM ISOL VLV • ESS-MOV-3B, 6TH POINT HEATER B EXTRACTION STM ISOL VLV • ESS-MOV-3C, 6TH POINT HEATER C EXTRACTION STM ISOL VLV • 2DTM-AOV105, 5TH PP HTR EXTRACTION LINE INL HDR DRAIN VLV • 2DTM-AOV104, 6TH PP HTR EXTRACTION LINE INL HDR DRAIN VLV 	<ul style="list-style-type: none"> • CRS-MOV18B, COLD REHEAT STM DRAIN VLV • DSM-MOV79A, MOISTURE SEPARATOR A DRAIN VLV • DSM-MOV79B, MOISTURE SEPARATOR B DRAIN VLV • HRS-MOV1, CROSSAROUND PIPING DRAIN VLV • HRS-MOV2, CROSSAROUND PIPING DRAIN VLV • ESS-MOV28A, 5TH POINT HEATER A EXTRACTION STM ISOL VLV • ESS-MOV28B, 5TH POINT HEATER B EXTRACTION STM ISOL VLV • ESS-MOV28C, 5TH POINT HEATER C EXTRACTION STM ISOL VLV • ESS-MOV-3A, 6TH POINT HEATER A EXTRACTION STM ISOL VLV • ESS-MOV-3B, 6TH POINT HEATER B EXTRACTION STM ISOL VLV • ESS-MOV-3C, 6TH POINT HEATER C EXTRACTION STM ISOL VLV • 2DTM-AOV105, 5TH PP HTR EXTRACTION LINE INL HDR DRAIN VLV • 2DTM-AOV104, 6TH PP HTR EXTRACTION LINE INL HDR DRAIN VLV 	
8. Verify LOAD LIMIT SET potentiometer set at 8.69 (102.5%).	<input type="checkbox"/> Verifies Verify LOAD LIMIT SET potentiometer set at 8.69 (102.5%).	Sat/Unsat
9. Push FAST pushbutton at START UP RATE controls.	<input type="checkbox"/> Pushes FAST pushbutton at START UP RATE controls.	Sat/Unsat
10. Observe FAST pushbutton lit.	<input type="checkbox"/> Observes FAST pushbutton lit.	Sat/Unsat
11. Verify LOAD SET indication is 0 Megawatts.	<input type="checkbox"/> Verifies LOAD SET indication is 0 Megawatts.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
12. Push SHELL pushbutton at MAIN STOP VALVE POSITION DEMAND FOR CHEST/SHELL WARMING controls.	<input type="checkbox"/> Pushes SHELL pushbutton at MAIN STOP VALVE POSITION DEMAND FOR CHEST/SHELL WARMING controls.	PASS/FAIL
13. Verify the following indications: <ul style="list-style-type: none"> • SHELL pushbutton lit. • Control Valve CV1 through CV3 ALL indicate 100% on CONTROL VALVE POSITION indicators AND CV4 indicates approximately 40 – 60% control valve position. • Intermediate Stop Valves ISV1 through ISV6 ALL indicate 0% on COMBINED INTERMEDIATE STOP VALVE POSITION indicators. • Closed 2DSM-LV78A, 2DSM-TK4A Emergency Drain control Valve, at Panel 2ES-IPNL204. 	<input type="checkbox"/> Verifies the following indications: <ul style="list-style-type: none"> • SHELL pushbutton lit. • Control Valve CV1 through CV3 ALL indicate 100% on CONTROL VALVE POSITION indicators AND CV4 indicates approximately 40 – 60% control valve position. • Intermediate Stop Valves ISV1 through ISV6 ALL indicate 0% on COMBINED INTERMEDIATE STOP VALVE POSITION indicators. • Contacts field operator to Close 2DSM-LV78A, 2DSM-TK4A Emergency Drain control Valve, at Panel 2ES-IPNL204. 	<p>Sat/Unsat</p> <p>Sat/Unsat</p> <p>Sat/Unsat</p> <p>Sat/Unsat</p>
CUE: As field operator report the valve is closed		
<ul style="list-style-type: none"> • Closed 2DSM-LV78B, 2DSM-TK4B Emergency Drain control Valve, at Panel 2ES-IPNL204. 	<ul style="list-style-type: none"> • Contacts field operator to Close 2DSM-LV78B, 2DSM-TK4B Emergency Drain control Valve, at Panel 2ES-IPNL204. 	Sat/Unsat
CUE: As field operator report the valve is closed		
EXAMINER NOTE: The following procedure step (step 3.13) will be reviewed by the applicant but not performed at this time. The applicant must return to this step once the JPM malfunction is inserted.		
14. IF during shell warming the Turbine rolls off Turning Gear, immediately stop shell warming by performing the following:	<input type="checkbox"/> Closes 2MSS-MSV1D, MSV2, by pushing the DECREASE pushbutton UNTIL CHEST/SHELL WARMING DEMAND meter indicates < 0 Percent.	N/A at this time

Performance Steps	Standard	Grade
<ul style="list-style-type: none"> Close 2MSS-MSV1D, MSV2, by pushing the DECREASE pushbutton UNTIL CHEST/SHELL WARMING DEMAND meter indicates < 0 Percent. 		
<p>15. Start shell warming by preheating crossaround piping as follows:</p>	<ul style="list-style-type: none"> Reviews the note regarding soak time requirements. 	
<p>NOTE: The High Pressure Turbine Shell Inner Temperature will be utilized in determining soak time requirements of Attachment 1.</p>		
<p>16. Record High Pressure Turbine Shell Inner Temperature in Control Room Log, using Computer Point TMITA10 OR TMITA14, OR 2TMI-TJR137, Point 4.</p>	<ul style="list-style-type: none"> Records High Pressure Turbine Shell Inner Temperature in Control Room Log, using Computer Point TMITA10 OR TMITA14, OR 2TMI-TJR137, Point 4. 	Sat/Unsat
<p>CUE: When applicant checks temperature, ask for the value they determined and state that you will record the value in the logs</p>		
<p>17. Throttle 2MSS-MSV1D, MSV2 (Turbine Main Stop Valve), by intermittently pushing INCREASE or DECREASE pushbuttons as necessary at MAIN STOP VALVE POSITION DEMAND FOR CHEST/SHELL WARMING control.</p>	<ul style="list-style-type: none"> Throttles 2MSS-MSV1D, MSV2 (Turbine Main Stop Valve), by intermittently pushing INCREASE or DECREASE pushbuttons as necessary at MAIN STOP VALVE POSITION DEMAND FOR CHEST/SHELL WARMING control. 	Pass/Fail

Performance Steps	Standard	Grade
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EXAMINER NOTE: IAW P&L D.25, Low Pressure Turbine Shell Temperature changes should be limited to a rate of 125 degrees/hr OR about 30 degrees every 15 minutes.

The examiner should ensure that shell temperatures are being closely monitored

EXAMINER & SIMULATOR OPERATOR NOTE: Insert malfunction for turning gear after the applicant begins to check crossaround piping temperatures as required in the next step.

19. At 2CEC*PNL842, monitor Crossaround Piping Temperature on 2TMI-TR137/ZDR135, TURBINE TEMP.	Monitors Crossaround Piping Temperature on 2TMI-TR137/ZDR135, TURBINE TEMP.	Sat/Unsat
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EXAMINER NOTE: With the malfunction inserted, the applicant must now secure shell warming because the turbine is no longer on the turning gear. The applicant must refer back to procedure step 3.13. That step was previously shown in this JPM (step 15) and is repeated below.

<p>20. IF during shell warming the Turbine rolls off Turning Gear, immediately stop shell warming by performing the following:</p> <ul style="list-style-type: none"> • Close 2MSS-MSV1D, MSV2, by pushing the DECREASE pushbutton UNTIL CHEST/SHELL WARMING DEMAND meter indicates < 0 Percent. 	<p>□ Closes 2MSS-MSV1D, MSV2, by pushing the DECREASE pushbutton UNTIL CHEST/SHELL WARMING DEMAND meter indicates < 0 Percent.</p>	PASS/FAIL
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TERMINATING CUE: Shell warming secured IAW Step 20.

RECORD STOP TIME _____

TURNOVER SHEET

INITIAL CONDITIONS: Reactor Pressure is 60 psig. Main Turbine Turning Gear is in operation.

N2-OP-21 "Main Turbine System" Section E.3.0. is complete through step E.3.1

INITIATING CUES: "(Operators name), Place main turbine shell warming in service IAW N2-OP-21, Section E.3.0. beginning at step E.3.2"

NRC JPM S-2
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Initiate Division I H2/O2 Monitoring to
Monitor Sample Path 4, Post LOCA
Restart Required

Revision: NRC 2008

Task Number:

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: Perform _____ Simulate

Evaluation Location: _____ Plant Simulator

Expected Completion Time: 15 min. Time Critical Task: No Alternate Path Task: No

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Simulator

Simulator Set-up (if required):

IC-183

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

7. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
8. During Evaluated JPM:
 - Self-verification shall be demonstrated.
9. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

N2-OP-82, Revision 06
K/A 223001 A4.04 3.5/3.6, A4.05 3.6/3.6

Tools and Equipment:

None

Task Standard:

H2O2 Analyzers ON and sampling from the suppression chamber

Initial Conditions:

The plant is shutdown following a LOCA.

Initiating Cues:

“(Operators name), perform a post LOCA restart of 2CMS*CAB10A per N2-OP-82, Section H.1.0, and sample the Suppression Chamber per Section F.1.0.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
5. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary</i>	<input type="checkbox"/> Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat

RECORD START TIME _____

6. Obtain a copy of the reference procedure and review/utilize the correct section.	<input type="checkbox"/> N2-OP -82 obtained. Precautions & Limitations reviewed.	Sat/Unsat
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3. Obtain SSS/ASSS permission to restart 2CMS*CAB10A(B) Cue: Give SSS permission when asked.	<input type="checkbox"/> Obtains SSS/ASSS permission to restart 2CMS*CAB10A	Sat/Unsat
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4. PRIOR to overriding the LOCA isolation signal, notify Radiation Protection of the intent to restart 2CMS*CAB10A(B) AND that radiological conditions could change. Cue: As RP, acknowledge.	<input type="checkbox"/> Prior to overriding the LOCA isolation signal, notifies Radiation Protection of the intent to restart 2CMS*CAB10AAND that radiological conditions could change.	Sat/Unsat
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<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
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- | | | |
|--|--|------------------|
| <p>5. Place the following keylock switches to OVERRIDE:</p> <ul style="list-style-type: none"> • ISOL VLV OVERRIDE on 2CEC*PNL873 • ISOL VLV OVERRIDE on 2CEC*PNL875 | <p>☐ Places the following keylock switches to OVERRIDE:</p> <ul style="list-style-type: none"> • 2CEC*PNL873 • 2CEC*PNL875 | PASS/FAIL |
|--|--|------------------|

- | | | |
|---|---|------------------|
| <p>6. At 2CEC*PNL873, open the following valves:</p> <ul style="list-style-type: none"> • 2CMS*SOV60A(B), CONTMT ATM MON DW OUTBD ISOL SUPPLY • 2CMS*SOV62A(B), CONTMT ATM MON DW OUTBD ISOL RETURN | <p>☐ OPENS the following valves:</p> <ul style="list-style-type: none"> • 2CMS*SOV60A, CONTMT ATM MON DW OUTBD ISOL SUPPLY • 2CMS*SOV62A, CONTMT ATM MON DW OUTBD ISOL RETURN | PASS/FAIL |
|---|---|------------------|

- | | | |
|---|--|------------------|
| <p>7. At 2CEC*PNL875, open the following valves</p> <ul style="list-style-type: none"> • 2CMS*SOV61A(B), CONTMT ATM MON DW IND ISOL SUPPLY • 2CMS*SOV63A(B), CONTMT ATM MON DW INBD ISOL RETRUN | <p>☐ OPENS the following valves:</p> <ul style="list-style-type: none"> • 2CMS*SOV61A, CONTMT ATM MON DW IND ISOL SUPPLY • 2CMS*SOV63A, CONTMT ATM MON DW INBD ISOL RETRUN | PASS/FAIL |
|---|--|------------------|

- | | | |
|---|--|-----------|
| <p>8. Direct Radiation Protection to place 2CMS*CAB10A(B) in service.</p> | <p>☐ Directs Radiation Protection to place 2CMS*CAB10A in service.</p> | Sat/Unsat |
|---|--|-----------|

CUE: Inform operator that 2CMS*CAB10A is in service.

- | | | |
|--|--|-----------|
| <p>9. Verify 2CMS*CAB10A(B) is in service AND notify the SSS/ASSS.</p> | <p>☐ Verifies 2CMS*CAB10A is in service AND notifies the SSS/ASSS.</p> | Sat/Unsat |
|--|--|-----------|

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
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Cue: As SSS, acknowledge.

Evaluator's Note: Applicant returns to Section F.1.0 to sample from Path 4 (Suppression Chamber) reference.

- | | | |
|--|---|------------------|
| <p>10. Placing H2/O2 Analyzer in Service:</p> <ul style="list-style-type: none"> • This Subsection is written for both divisions with Division II components in parentheses. • Actions in this Subsection are performed at 2CEC*PNL873(875) unless otherwise specified. • Position 4 lines up the Suppression Chamber sample stream. It is only used as directed by procedure. • Performance of this Subsection may be required by the EOPs. Changes to this Subsection (including renumbering) are required to be reviewed by this EOP Coordinator. • Control Room indication for H2 and O2 will be less than 0% if the analyzer is self-calibration OR TROUBLE condition. The only location to determine if the unit is in self-cal or in TROUBLE is the indicating lights on the remote panel 2CMS*PNL73A(B) (240 EI. Aux Bay). Control Room indication will return when self-calibration is complete, 30 minutes. | <ul style="list-style-type: none"> □ Operator reviews the steps. Panel 2CEC*PNL873 will be used. | <p>Sat/Unsat</p> |
|--|---|------------------|

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
11. If required defeat LOCA isolation per Section H.2.0	☐ Refers to Section H.2.0	N/A
12. If LOCA isolation signal is present, using PA 235 Key, place the following keylock switches to OVERRIDE	Operator notes that this step was performed earlier in the JPM (step 5) and verifies switches in OVERRIDE	Sat/Unsat
<ul style="list-style-type: none"> ● ISOL VLV OVERRIDE on 2EC*PNL873(875) 		
13. At 2CEC*PNL873(875), place the Division I(II) SAMPLE PATH SELECTOR SWITCH in the RESET position	At 2CEC*PNL873, places the Division I SAMPLE PATH SELECTOR SWITCH in the RESET position.	Pass/Fail
14. Return to Section F.1.0 to place H2O2 Analyzers in service	Returns to section F.1.0	Sat/Unsat
Note:	IF a LOCA Isolation occurs while the Analyzer is in service, it will cause the analyzer to trip. Placing the H2/O2 ANALYZER PMP switch to STANDBY will reset the trip logic.	
15. Verify the 2CMS*P2A(B), H2/O2 ANALYZER PMP, in STANDBY.	Verifies the 2CMS*P2A, H2/O2 ANALYZER PMP, in STANDBY.	
16. Establish a sample flowpath by placing the SAMPLE PATH SELECTOR SWITCH to Position 1, 2 or 3 (Drywell) OR 4 (Suppression Chamber) as directed by SSS/CRS.	Establishes a sample flowpath by placing the SAMPLE PATH SELECTOR SWITCH to Position 4 (Suppression Chamber)	PASS/FAIL
17. Verify EITHER a Drywell OR Suppression Chamber sample flow path exists, as follows:	☐ Verifies a Drywell OR Suppression Chamber sample flow path exists.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
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17. (cont.) Suppression chamber sample flow path: **PASS/FAIL**

- | | |
|---|---|
| <ul style="list-style-type: none"> • 2CMS*SOV26A(B), SAMPLE FROM SUPPR CHAM INBOARD ISOL VLV, OPEN • 2CMS*SOV26C(D), SAMPLE FROM SUPPR CHAM OUTBOARD ISOL VLV, OPEN • 2CMS*SOV34A(B), SUPPR CHAM SAMPLE TRN INBOARD ISOL VLV, OPEN • 2CMS*SOV35A(B), SUPPR CHAM SAMPLE TRN OUTBOARD ISOL VLV, OPEN • 2CMS*SOV64A(B), H2/O2 ANALYZER VLV, OPEN • 2CMS*SOV65A(B), H2/O2 ANALYZER OUTLET VLV, OPEN | <ul style="list-style-type: none"> • 2CMS*SOV26A, SAMPLE FROM SUPPR CHAM INBOARD ISOL VLV, OPEN • 2CMS*SOV26C, SAMPLE FROM SUPPR CHAM OUTBOARD ISOL VLV, OPEN • 2CMS*SOV34A, SUPPR CHAM SAMPLE TRN INBOARD ISOL VLV, OPEN • 2CMS*SOV35A, SUPPR CHAM SAMPLE TRN OUTBOARD ISOL VLV, OPEN • 2CMS*SOV64A, H2/O2 ANALYZER VLV, OPEN • 2CMS*SOV65A, H2/O2 ANALYZER OUTLET VLV, OPEN |
|---|---|

- Notes:**
- **Alarms for High O2 concentrations are expected for first 20 minutes until analyzer warm up period is complete.**
 - **Allow 30 minutes for system stabilization after placing the 2CMS*P2A(B), H2/O2 ANALYZER PMP to ANALYZE. It takes approximately 6 minutes to receive and accurately read the sample by the H2/O2 Analyzer, when changing sample locations.**

18. Place the 2CMS*P2A(B), H2/O2 ANALYZER PMP switch to ANALYZE. Places the 2CMS*P2A, H2/O2 ANALYZER PMP switch to ANALYZE. **PASS/FAIL**

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
19. Verify 2CMS*P2A(B), Sample Pump GREEN light goes OUT and RED light is LIT.	<input type="checkbox"/> Verifies 2CMS*P2A, Sample Pump GREEN light goes OUT and RED light is LIT.	Sat/Unsat

TERMINATING CUE: Analyzer RED light ON. Sampling from the Suppression Chamber.

RECORD STOP TIME _____

INITIAL CONDITIONS: The plant is shutdown following a LOCA.

INITIATING CUES: “(Operators name), perform a post LOCA restart of 2CMS*CAB10A per N2-OP-82, Section H.1.0, and sample the Suppression Chamber per Section F.1.0.”

NRC JPM S-3
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Transfer Feedwater Level Control to
FWS-LV-55A at Approximately 2%
Power IAW N2-OP-3

Revision: NRC 2008

Task Number:

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

NA EXAM SECURITY /_____
General Supervisor Date
Operations (Designee)

NA EXAM SECURITY /_____
Configuration Control Date

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: Perform _____ Simulate

Evaluation Location: _____ Plant Simulator

Expected Completion Time: 20 min. Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Simulator

Simulator Set-up (if required):

IC-8

Start 2nd Condensate and Condensate Booster Pump (per N2-OP-3, Section E.3.0)

(NOTE: Added as post exam comment, since setup per IC-8 is one pump running)

REMOTE FW03A FW AUX LUBE OIL PUMP A, OFF on TRG 1

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

10. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
11. During Evaluated JPM:
 - Self-verification shall be demonstrated.
12. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

N2-OP-3, Rev.15
K/A 259001 A4.05 4.0/3.9

Tools and Equipment:

None

Task Standard:

Reactor Feed Pump A running and reactor water level maintained via the 2FWS LV55A in automatic.

Initial Conditions:

A startup is in progress. Reactor power is at approximately 2%. Procedure N2-OP-3 is complete through step E.3.16.

Initiating Cues:

“(Operators name), start Reactor Feed Pump A and transfer Feedwater Level Control to 2FWS-LV55A in accordance with N2-OP-3, beginning at Step E.3.17 and ending after 2FWS-LV55A is in automatic.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
7. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary</i>	<input type="checkbox"/> Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat

RECORD START TIME _____

8. Obtain a copy of the reference procedure and review/utilize the correct section.	<input type="checkbox"/> N2-OP-3 obtained. Precautions & Limitations reviewed.	Sat/Unsat
3. START 2FWS-P1A, REACTOR FW PMP 1A, by placing the control switch to Normal-After-START (Red flagged).	<input type="checkbox"/> STARTS 2FWS-P1A, REACTOR FW PMP 1A, by placing the control switch to Normal-After-START (Red flagged).	PASS/FAIL
4. Confirm 2FWR-FV2A , REACTOR FD P1A RECIRC VLV, starts to OPEN.	<input type="checkbox"/> Verifies 2FWR-FV2A , REACTOR FD P1A RECIRC VLV, starts to OPEN.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
5. When 2FWR-FV2A is \geq 15% open, confirm 2FWS-P1A starts.	☐ Verifies 2FWR-FV2A is \geq 15% open, confirms 2FWS-P1A starts.	Sat/Unsat
6. Using 2CNM-FI68A, RX FD WTR P1A FOW meter, confirm 2FWS-P1A flow is approximately 8,000 gpm.	☐ Confirms 2FWS-P1A flow is approximately 8,000 gpm.	Sat/Unsat
7. At 2FWS-P1A, place the Auxiliary Lube Oil Pump control switch 2FWL-LCS752 (753) to AUTO AND verify 2FWL-P2A stops.	☐ Dispatches operator to 2FWS-P1A, to place the Auxiliary Lube Oil Pump control switch 2FWL-LCS752 (753) to AUTO AND verify 2FWL-P2A stops.	Sat/Unsat
Sim Operator: When requested, activate remote FW03A on TRG 1, to stop aux lube oil pump and report completion.		
8. At the operating Feedwater Pump, CLOSE 2FWS-V25A, FD WTR PUMP 1A WRMUP LN ISOLATION. Cue: As Local Operator, report valve is CLOSED.	☐ Contacts field operator to verify CLOSED 2FWS-V25A, FD WTR PUMP 1A WRMUP LN ISOLATION.	Sat/Unsat
9. At the operating feedwater pump, verify OPEN 2FWS-V103A, FEEDWATER PUMP 1A LOW FLOW LINE ISOL. Cue: As local operator confirm 2FWS-V103A is OPEN.	☐ Contacts field operator to verify OPEN 2FWS-V103A, FEEDWATER PUMP 1A LOW FLOW LINE ISOL by contacting the field operator.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
<p>10. If 2FWS-LV55A(B) is being used to augment 2CNM-LV137, perform the following:</p> <p>Examiner Note: Examinee should note from board indications that the LV 55A is not being used but LV55B is augmenting.</p> <p>a. Throttle open the 2FWS-LV55A (running feed pump)</p> <p>b. WHEN 2FWS-LV55B for the non-running feed pump is fully shut, close its associated manual blocking valve (2FWS-V103B)</p> <p>Cue: As Local Operator, report valve is CLOSED.</p>	<p><input type="checkbox"/> If 2FWS-LV55A(B) is being used to augment 2CNM-LV137, perform the following:</p> <p><input type="checkbox"/> Throttles open the 2FWS-LV55A WHILE throttling closed the “in-service” 2FWS-LV55B</p> <p><input type="checkbox"/> WHEN 2FWS-LV55B for the non-running feed pump is fully shut, dispatches operator to close its associated manual blocking valve (2FWS-V103B)</p>	<p>PASS/FAIL</p> <p>Sat/Unsat</p>
<p>11. Throttle open 2FWS-LV55A, HI PRESS LO FLOW FD WTR A CONTROL VLV, by using the OPEN detent pushbutton on 2FWS-LV55A controller.</p>	<p><input type="checkbox"/> Throttles open 2FWS-LV55A, HI PRESS LO FLOW FD WTR A CONTROL VLV, by using the OPEN detent pushbutton on 2FWS-LV55A controller.</p>	<p>PASS/FAIL</p>
<p>12. Maintain Reactor water level in the desired band AND confirm CNM-LV137 closes as 2FWS-LV55A is opened.</p>	<p><input type="checkbox"/> Maintains Reactor water level in the desired band AND confirm CNM-LV137 closes as 2FWS-LV55A is opened.</p> <p><input type="checkbox"/> Operates valves such that Level 8 (202.3 inch) and Level 3 (159.3 inch) trips do not occur.</p>	<p>Sat/Unsat</p> <p>PASS/FAIL</p>
<p>13. Place 2CNM-LV137 controller in Manual (M) AND close 2CNM-LV137 by using the CLOSE detent pushbutton.</p>	<p><input type="checkbox"/> Places 2CNM-LV137 controller in Manual (M) AND close 2CNM-LV137 by using the CLOSE detent pushbutton.</p>	<p>PASS/FAIL</p>

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
14. WHEN 2FWS-LV55A is at least 5% open, adjust 2CNM-HIC137, FEEDWATER LO FLOW CONTROLLER, tape setpoint to obtain equal signals as read in the input (vertical) AND output (horizontal) signal on 2FWS-LV55A controller.	□ Adjusts 2CNM-HIC137, FEEDWATER LO FLOW CONTROLLER, tape setpoint to obtain equal signals as read in the input (vertical) AND output (horizontal) signal on 2FWS-LV55(B) controller.	PASS/FAIL
15. Verify 2CNM-HIC137 indicator is in the green band.	□ Verifies 2CNM-HIC137 indicator is in the green band.	Sat/Unsat
16. Depress Auto (A) pushbutton on 2FWS-LV55A controller.	□ Depresses Auto (A) pushbutton on 2FWS-LV55A controller.	PASS/FAIL
17. Verify that Reactor water level is being maintained at the desired setpoint.	□ Verifies that Reactor water level is being maintained at the desired setpoint.	Sat/Unsat
TERMINATING CUE:	Reactor Feed Pump A running and reactor water level maintained via the 2FWS LV55A in automatic.	

RECORD STOP TIME _____

INITIAL CONDITIONS: A startup is in progress. Reactor power is at approximately 2%. Procedure N2-OP-3 is complete through step E.3.16.

INITIATING CUES: “(Operators name), start Reactor Feed Pump A and transfer Feedwater Level Control to 2FWS-LV55A in accordance with N2-OP-3, beginning at Step E.3.17 and ending after 2FWS-LV55A is in automatic.”

NRC JPM S-4
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Inject with RCIC (Alternate path)

Revision: NRC 2008

Task Number: 2179150101

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: Perform _____ Simulate

Evaluation Location: _____ Plant Simulator

Expected Completion Time: 12 min. Time Critical Task: No Alternate Path Task: Yes

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Simulator

Simulator Set-up (if required): IC-181 (ENSURE CORRECT SETUP WITH RC16)

1. RPV pressure >300 psig
2. OVR-01 A1S065D1096 Inop RCIC Manual Initiation – OFF -Preset
3. RC11 RCIC Isolation Failure
4. RC16 RCIC Steam Leak Into RCIC Pump Room, 7%, TRG 2
5. Auto trigger for TRG 2; zarcrc606>= 0.5; Initiates RC16 when RCIC flow above 400 gpm

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a “•”.
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

1. N2-OP-35, Rev 5, Sect. F 2.0 and F 3.0
2. NUREG K/A 217000 A2.01 3.8/3.7 A4.01 3.7/3.7, A3.06 3.5/3.5

Tools and Equipment:

None

Task Standard:

RCIC injection manually aligned following failure to initiate and injecting to RPV at approximately 600 gpm. Following a failed isolation, RCIC is isolated using keylock switches for ICS*MOV121 or 128.

Initial Conditions:

1. Reactor pressure is (report digital pressure reading on P603)
2. The main turbine is tripped.
3. RPV level is lowering.
4. Instructor to ask operator for any questions.

Initiating Cues:

“(Operators name), Initiate RCIC, inject into the RPV and establish rated flow.”

<u>Performance Steps</u>	<u>Standard</u>	<u>Grade</u>
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary.</i>	Proper communications used for repeat back (GAP-OPS-01/NIP-HUP-02).	Sat/Unsat
RECORD START TIME _____		
2. Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	Reviews RCIC Hard Card	Sat/Unsat
3. Initiate RCIC. <i>601337 RCIC MANUAL INITIATION SW ARMED alarms.</i>	At P601, rotate RCIC manual initiation pushbutton collar to armed position.	Pass/Fail
4. Report system response. <i>Initiation fails to due switch contact failure.</i> Cue: If asked, Instructor should direct operator to manually start RCIC, inject into the RPV and establish rated flow. NOTE: Applicant will refer to manual initiation steps in Hard Card	Depress RCIC manual initiation pushbutton. Report to CRS that RCIC did not initiate.	Pass/Fail
5. Preset flow controller.	Place 2ICS*FC101, Flow Controller in M for Manual, and set to 20% output.	Sat/Unsat

Performance Steps	Standard	Grade
6. Start gland seal air compressor.	Place Gland Seal System Air Compressor control switch to START then allow control switch to spring return to AUTO.	Sat/Unsat
7. Establish lube oil cooling water supply.	Open 2ICS*MOV116, Lube Oil Cooling Wtr Supply (Red light ON, Green light OFF).	Pass/Fail
8. Start RCIC turbine. <i>When MOV120 is opened, the turbine speed begins to rise.</i>	<ul style="list-style-type: none"> Open ICS*MOV120, TURBINE STEAM SUPPLY VLV. (Red light ON, Green light OFF) Verify RCIC Turbine Speed rising on E51-C002-M1. 	Pass/Fail
9. Verify open ICS*MOV143, Pmp Minimum flow to Suppression Pool.	<ul style="list-style-type: none"> Verifies open ICS*MOV143, Pmp Minimum flow to Suppression Pool. 	Sat/Unsat
10. Open pump discharge. <i>601347 RCIC INJECTION VLV NOT FULLY CLOSED and 601318 RCIC PUMP 1 DISCH FLOW LOW alarm.</i>	Open ICS*MOV126, Pmp 1 Disch to Reactor (Green light OFF, Red light ON)	Pass/Fail
11. Raise turbine speed.	Slowly raise RCIC turbine speed using the RCIC flow controller in M for Manual	Sat/Unsat
12. Verify the following. <i>As controller is adjusted, turbine speed and pump discharge pressure rise.</i>	<p>Verify the following:</p> <ul style="list-style-type: none"> RCIC turbine speed rises (E51-C002-M1) RCIC pump discharge pressure rises (E51-R601) 	Sat/Unsat
13. Raise injection flow. When RCIC pump discharge pressure exceeds Rx pressure, verify the following:	<p>Verify the following:</p> <ul style="list-style-type: none"> ICS*AOV156, Reactor Injection Outbd Test Check Vlv is open. (Green light OFF, Red light ON) ICS*AOV157, Reactor Injection Inbd Test Check Vlv is open. (Green light OFF, Red light ON) RCIC injection flow rises. (E51-R606) When system flow exceeds 220 gpm, verify ICS*MOV143 Pmp Minimum Flow to Suppression Pool closes. (Green light ON, Red light OFF) 	Sat/Unsat Sat/Unsat Sat/Unsat Sat/Unsat
<i>When RCIC flow rises above 400 gpm, malfunction RC16 actuates resulting in steam leakage in to RCIC pump room.</i>		
Simulator Operator: Confirm malfunction actuates		

Performance Steps	Standard	Grade
RC16 RCIC Steam Leak in Pump Room 7% TRG 2		
<p>851254 PROCESS AIRBORNE RADN MON ACTIVATED alarms 601332 RCIC EQUIP ROOM TEMPERATURE HIGH alarms (Recorder E31-R608 Point 9).</p>	<p>Responds to ARP 601332</p>	<p>Sat/Unsat</p>
<p><i>Trip Units N602A and N602B at back panels P632 and P642 red trip light is on.</i></p>	<ul style="list-style-type: none"> • Checks recorder E31-R608 for alarming points. 	<p>Sat/Unsat</p>
<p><i>Additional alarms that may come in are 601333 (Recorder E31-R608 Point 8) and 601341 (Trip Units E31-N602A and B.</i></p>	<ul style="list-style-type: none"> • Monitors P632 and P642 trip units. 	<p>Sat/Unsat</p>
<p>Examiner Note: Alarm Response Procedures specify that valves MOV121, MOV128, and MOV170 should have closed. Closure of valves is also appropriate per N2-SOP-83 Containment Isolation Failure/Reset.</p>	<ul style="list-style-type: none"> • Verify RCIC Room Unit Coolers HVR*UC412A and B running (P870 and 871). 	<p>Sat/Unsat</p>
<p>14. Initiates isolation.</p>	<ul style="list-style-type: none"> • May dispatch operator to investigate. 	<p>Sat/Unsat</p>
<p><i>Automatic isolation failure occurs due to malfunction RC11 active. RCIC MANUAL ISOLATION pushbutton has no affect, unless the white SEAL IN light is lit. Depressing this pushbutton under manual start conditions will not result in an isolation signal.</i></p>	<ul style="list-style-type: none"> • Should determine other systems are available for injection and that system isolation is required. <p>Examiner Note: The examinee may proceed directly to closing the MOVs.</p>	<p>Sat/Unsat</p>
<p>15. Perform isolation.</p>	<p>At P601, insert key into control switch for 2ICS*MOV121, 128 and rotate the key counter clockwise to Shut position, release and verify Green light(s) On, and Red light(s) Off.</p>	<p>Pass/Fail</p>
<p>16. Report RCIC isolation.</p>	<p>Report to SRO that RCIC isolation valve(s) are shut.</p>	<p>Sat/Unsat</p>
<p>Cue: As SRO acknowledge report, and if requested, inform performer no other tasks required at this time.</p>		
<p>17. Verify the following (NOT sequence critical):</p>	<p>At P601, manually depress turbine trip pushbutton or rotate control switch</p>	<p>Sat/Unsat</p>

Performance Steps	Standard	Grade
A. ICS*MOV150 shut.	counter clockwise to close and visually observe 2ICS&MOV150 Green light On, Red light Off.	
B. ICS*MOV126 shut.	At P601, visually observe 2ICS*MOV126 Green light On, Red light Off, or rotate control switch counter clockwise to close and visually observe shut indications. Green light On, Red light Off.	Sat/Unsat
C. ICS*MOV121 shut.	At P601, visually observe 2ICS*MOV121 Green light On, Red light Off, or rotate control switch counter clockwise to close and visually observe shut indications. Green light On, Red light Off.	Sat/Unsat
D. ICS*MOV143 shut.	At P601, visually observe 2ICS*MOV143 Green light On, Red light Off, or rotate control switch counter clockwise to close and visually observe shut indications. Green light On, Red light Off.	Sat/Unsat
E. ICS*MOV128 shut.	At P601, visually observe 2ICS*MOV128 Green light On, Red light Off, or rotate control switch counter clockwise to close and visually observe shut indications. Green light On, Red light Off.	Sat/Unsat
F. ICS*MOV170 shut.	At P601, visually observe 2ICS*MOV170 Green light On, Red light Off, or rotate control switch counter clockwise to close and visually observe shut indications. Green light On, Red light Off.	Sat/Unsat

Terminating Cue: RCIC isolated by operation of isolation valve control switches and procedural actions verified.

RECORD STOP TIME _____

Work Practices Competencies

a. Communications	Per GAP-OPS-01 Per NIP-HUP-02	Sat/Unsat
b. Verification of Actions	Per NIP-PRO-01 Per NIP-HUP-02	Sat/Unsat
c. Procedural Compliance/Placekeeping	Per NIP-PRO-01 Per NIP-HUP-02	Sat/Unsat
d. Safety Compliance	Per NIP-OSH-01 Per Personnel Safety Manual	Sat/Unsat
e. Radiation Protection Compliance	Per GAP-RPP-01 Per GAP-RPP-02	Sat/Unsat

NOTE: UNSAT in any competency area requires oral remediation of unsat area and / or reevaluation of work practices using the Work Practices JPM (O2-OPS-SJE-WPJ-2-00).

Turnover Sheet

Initial Conditions:

1. Reactor pressure is (report digital pressure reading on P603)
2. The main turbine is tripped.
3. RPV level is lowering.
4. Instructor to ask operator for any questions.

Initiating Cues:

“(Operators name), Initiate RCIC, inject into the RPV and establish rated flow.”

NRC JPM S-5
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Align SBGTS Train "A" to the Drywell

Revision: NRC 2008

Task Number: 2000070501

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY
Configuration Control Date

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: Perform _____ Simulate

Evaluation Location: _____ Plant Simulator

Expected Completion Time: 25 minutes Time Critical Task: No Alternate Path Task: No

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluators Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Simulator

Simulator Set-up (if required):

IC-8

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SSS / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SSS / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification shall be demonstrated.

References:

1. N2-OP-61A, "Primary Containment Ventilation Purge & Nitrogen System", Section H.1.0
2. NUREG K/A: 295024, EA1.20 3.5 / 3.6

Tools and Equipment:

None

Task Standard:

SBGTS Train "A" running, aligned to the Drywell in accordance with applicable procedures.

Initial Conditions:

1. EOPs have been entered due to high suppression pool temperature.
2. Conditions require standby gas be placed on the drywell to reduce pressure.
3. Drywell and Suppression Chamber vent samples have been obtained and are satisfactory.
4. There is no Nitrogen makeup to the Primary Containment in progress.

Initiating Cues:

"(Operators name), Place Standby Gas Train "A" on the Drywell in accordance with N2-OP-61A, Section H.1.0."

Performance Steps	Standard	Grade
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary.</i>	Proper communications used for repeat back (GAP-OPS-O1/Operations Manual)	Sat/Unsat

RECORD START TIME _____

2. Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N2-OP-61A obtained. Precautions & limitations reviewed & section H.1.0 referenced.	Sat/Unsat
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NOTE: If necessary, instructor cue operator that time does not permit the filling out of attachment 3.

3. Open 2IAS*SOV168.	At P851, open "PRI CONTMT OUTBRD ISOL VLV TO DW", 2IAS*SOV168 by rotating control switch clockwise to the open position and observing Red Light ON, Green Light OFF.	Pass/Fail
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Performance Steps	Standard	Grade
4. Open 2IAS*SOV180.	At P851, open "PRI CONTMT INBD ISOL VLV TO DW", 2IAS*SOV180 by rotating control switch clockwise to the open position and observing Red Light ON, Green Light OFF.	Pass/Fail
5. At 2CEC*PNL870, start SBGTS "A". <i>The following alarms actuate:</i> 870102 SBGTS TRAIN A HTR CHAN 1A DIFF TEMP LO 870110 SBGTS TRAIN A AIR FLOW LOW	At P870, start SBGTS "A" by rotating the "Train A Initiation" switch clockwise to the start position and releasing. Observe Red Light ON and Green Light OFF.	Pass/Fail
6. At CEC*PNL870, verify the following: <ul style="list-style-type: none"> • GTS*MOV1A opens • GTS*AOV2A opens • GTS*AOV3A opens • GTS*FN1A starts 	At P870, verify GTS*MOV1A, GTS*AOV2A, GTS*AOV3A open and GTS*FN1A starts. Observe Red Light ON, Green Light OFF.	Sat/Unsat
7. Verify that chemistry is standing by to start the sampling required during the vent. Cue: If requested, inform Operator that Chemistry has started sampling during the vent.	Contacts Chemistry	Sat/Unsat
8. IF GTS operation is affecting RB Differential pressure, adjust controller 2GTS*PDIK5A, REACTOR BLDG INLET/OUTLET DIFF PRESS, to throttle 2GTS*PV5A, RX BLDG PRESSURE CONTROL, as necessary	Checks that RB diff pressure is stable	Sat/Unsat
9. At CEC*PNL873, verify the following valves closed: <ul style="list-style-type: none"> • CPS*AOV104 • CPS*AOV105 • CPS*AOV110 • CPS*AOV111 • GTS*SOV102 • GTS*AOV101 	At P873, verify valves closed by observing Green Light ON and Red Light OFF.	Sat/Unsat

Performance Steps	Standard	Grade
10. At CEC*PNL875, verify the following valves closed: <ul style="list-style-type: none"> • CPS*AOV106 • CPS*SOV132/AOV107 • CPS*AOV108 • CPS*SOV133/AOV109 	At P875, verify valves closed by observing Green Light ON and Red Light OFF.	Sat/Unsat
11. At CEC*PNL873, open 2GTS*SOV102.	At P873, open “CONTMT DEPRESSURIZE TO SBGTS ISOL VLV”, 2GTS*SOV102 by rotating control switch clockwise to the open position and observing Red Light ON, Green Light OFF.	Pass/Fail
12. At CEC*PNL873/875, open the following: <ul style="list-style-type: none"> • CPS*AOV108 • CPS*AOV110 	At P875, open 2CPS*AOV108 and, at P873, open 2CPS*AOV110 by rotating control switch clockwise to the open position and observing Red Light ON, Green Light OFF.	Pass/Fail
13. Monitor Drywell Pressure closely via 2CMS*P11A/B on 2CEC*PNL601 OR Computer Point CMSPA04.	Monitors Drywell Pressure	Sat/Unsat

Terminating Cue: SBGTS Train “A” running on the Drywell.

RECORD STOP TIME _____

Work Practices Competencies

a. Communications	Per GAP-OPS-01	Sat/Unsat
b. Verification of Actions	Per Ops Manual.	Sat/Unsat
c. Procedural Compliance/Placekeeping	Per Ops Manual. Per NIP-PRO-01. Per N2-ODP-OPS-0001 (Unit 2).	Sat/Unsat
d. Safety Compliance	Per NIP-OSH-01.	Sat/Unsat
e. Radiation Protection Compliance	Per GAP-RPP-01. Per GAP-RPP-02. Per NDD-ALA.	Sat/Unsat

NOTE: UNSAT in any competency area requires oral remediation of unsat area and / or reevaluation of work practices using the Work Practices JPM (O2-OPS-SJE-WPJ-2-00).

Turnover Sheet

Initial Conditions:

1. EOPs have been entered due to high suppression pool temperature.
2. Conditions require standby gas be placed on the drywell to reduce pressure.
3. Drywell and Suppression Chamber vent samples have been obtained and are satisfactory.
4. There is no Nitrogen makeup to the Primary Containment in progress.

Initiating Cues:

“(Operators name), place Standby Gas Train “A” on the Drywell in accordance with N2-OP-61A, Section H.1.0.”

NRC JPM S-6
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Manual Start and Load of Div III EDG
(Overspeed trip failure)

Revision: NRC 2008

Task Number: 2649030101

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: Perform _____ Simulate

Evaluation Location: _____ Plant Simulator

Expected Completion Time: 20 Time Critical Task: NO Alternate Path Task: YES

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Unit 2 Simulator

Simulator Set-up (if required):

1. IC-183 (for NRC Exam)
2. DG05B for EDG to Overspeed TRG 3 (auto activates when output breaker opens).
3. DG06B for EDG Overspeed Trip Fail PRESET

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SSS / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SSS / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - Additional verification shall be demonstrated.

References:

1. N2-OP-100B, Section F.2.0
2. NUREG 1123, 264000, A4.04, 3.7/3.7

Tools and Equipment:

None Required

Task Standard: Div III EDG started, paralleled with off site, loaded to 1000 KW and 1100 KVAR.

Initial Conditions:

1. Division III EDG is in Standby.
2. Attachment 2 from N2-OP-100B is complete.
3. Attachment 3 from N2-OP-100B has initial data recorded, and an operator is on station to record running data.
4. Division III EDG is to be started and loaded as an exercise.
5. N2-OP-100B is complete through step F.2.2

Initiating Cues:

Perform a manual start and load of the Division III EDG from Panel P-852 IAW N2-OP-100B. Load the generator to 700 KW.

Performance Steps	Standard	Grade
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary.</i>	Proper communications used for repeat back (GAP-OPS-O1/Operations Manual)	Sat/Unsat
RECORD START TIME _____		
2. Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N2-OP-100B obtained. Precautions & limitations reviewed & section F.2.0 referenced.	Sat/Unsat
3. Rotate SPEED DROOP Knob to 40 CUE: Acknowledge as field operator that speed droop is at 40.	Contacts field operator to Rotate SPEED DROOP Knob to 40	Sat/Unsat
4. Start HPCS Diesel Generator by placing Division III 2EGS*EG2 control switch to START. Observe the following indications at 2CEC*PNL852: <ul style="list-style-type: none"> • RPM rises to 900 RPM • VOLTS rises to 4160 AC VOLTS. • FREQUENCY is 60 Hz. • SWP*MOV94A AND SWP*MOV94B, SERVICE WTR OUTLET open. • 2SWP*FI535, SERVICE WTR FLOW indicates >600 gpm. 	Division III EDG control switch positioned to START and observe the following indications at 2CEC*PNL852: <ul style="list-style-type: none"> • RPM rises to 900 RPM • VOLTS rises to 4160 AC VOLTS. • FREQUENCY is 60 Hz. • SWP*MOV94A AND SWP*MOV94B, SERVICE WTR OUTLET open. • 2SWP*FI535, SERVICE WTR FLOW indicates >600 gpm. 	Pass/Fail

Performance Steps	Standard	Grade
5. Verify governor control.	Verifies governor control by positioning governor control switch to LOWER and observing frequency lowering; positions governor control switch to RAISE and raises frequency to 60 Hz.	Sat/Unsat
6. Verify Voltage control.	Verifies voltage control by positioning the voltage regulator control switch to LOWER and observes DG voltage lowering; positions voltage regulator control switch to RAISE and raises voltage to 4160 AC Volts.	Sat/Unsat
7. Run DG for 5 minutes unloaded at rated voltage and frequency.	Starts a five minute clock.	Sat/Unsat
Cue: Five minutes has elapsed.		
8. Place SYNCHRONIZE TO BUS 102 sync key switch to ON.	Sync Key placed in 'ON'.	Sat/Unsat
CUE: If asked loading is required for this test.		
9. Adjust VOLTAGE REGULATOR control switch UNTIL INCOMING VOLTS AND RUNNING VOLTS are matched.	Incoming volts and Running volts match.	Sat/Unsat
10. Using GOVERNOR control switch, adjust SYNCHROSCOPE indication to establish slow clockwise rotation.	Using GOVERNOR control switch, adjust SYNCHROSCOPE indication to establish slow clockwise rotation (slow in fast direction), as indicated by: <ul style="list-style-type: none"> • Meter movement between ½ to 1 inch per second. 12 to 24 seconds for 360 degree meter sweep. 	Sat/Unsat
11. IF 102-1, EMERG DIESEL GEN2 OUTPUT BREAKER is in PULL TO LOCK, THEN coincident with the sync scope indicating 5 minutes before 12 o'clock, place control switch in AUTO AFTER TRIP (green flagged)	Recognizes Output breaker is NOT in PULL TO LOCK and step is not required	Sat/Unsat
12. WHEN SYNCHROSCOPE reaches 5 minutes before 12 o'clock, close 102-1 EMERG DIESEL GEN2 OUTPUT BREAKER, AND verify generator picks up approximately 200 KW load.	EDG output breaker closed at 5 minutes until 12 o'clock, approximately 200 KW load on the generator.	Pass/Fail

Performance Steps	Standard	Grade
13. Place SYNCHRONIZE TO BUS 102 sync key switch to OFF.	SYNCHRONIZE TO BUS 102 sync key switch placed in 'OFF'.	Sat/Unsat
14. Gradually raise load in 500 KW increments to desired load, using GOVERNOR control switch.	Raises load to 700 KW.	Pass/Fail
CUE: After load is raised to 700 KW, tell the applicant that the EDG can now be removed from service. Procedure Section G.2.0 should be referenced for removing EDG from service.		
15. Place SYNCHRONIZE TO BUS 102 sync key switch to ON.	Places SYNCHRONIZE TO BUS 102 sync key switch to ON.	Sat/Unsat
16. Lower Generator load to 200 KW, using GOVERNOR control switch.	Lowers Generator load to 200 KW, using GOVERNOR control switch.	Sat/Unsat
17. Lower VAR load to 0 KVAR, using VOLTAGE REGULATOR control switch.	Lowers VAR load to 0 KVAR, using VOLTAGE REGULATOR control switch.	Sat/Unsat
18. Open 102-1, EMERG DIESEL GEN2 OUTPUT BREAKER.	Opens 102-1, EMERG DIESEL GEN2 OUTPUT BREAKER.	
19. EDG overspeeds when output breaker opens.	Recognizes EDG overspeed and trips EDG with control switch OR via the Emergency Trip PB	Pass/Fail

SIMULATOR OPERATOR NOTE:
WHEN the output breaker is opened malfunction DG05B activates to overspeed the engine. With DG06B already active, engine fails to trip.

Terminating Cue: Div III EDG stopped

RECORD STOP TIME _____

Work Practices Competencies

f. Communications	Per Ops Manual.	Sat/Unsat
g. Verification of Actions	Per Ops Manual. Per N2-ODP-OPS-0001 (Unit 2).	Sat/Unsat
h. Procedural Compliance/Placekeeping	Per Ops Manual. Per NIP-PRO-01. Per N2-ODP-OPS-0001 (Unit 2).	Sat/Unsat
i. Safety Compliance	Per NIP-OSH-01. Per N2-ODP-OPS-0106 (Unit 2).	Sat/Unsat
j. Radiation Protection Compliance	Per GAP-RPP-01. Per GAP-RPP-02. Per NDD-ALA.	Sat/Unsat

NOTE: UNSAT in any competency area requires oral remediation of unsat area and / or reevaluation of work practices using the Work Practices JPM (O2-OPS-SJE-WPJ-2-00).

Turnover Sheet

Initial Conditions:

1. Division III EDG is in Standby.
2. Attachment 2 from N2-OP-100B is complete.
3. Attachment 3 from N2-OP-100B has initial data recorded, and an operator is on station to record running data.
4. Division III EDG is to be started and loaded as an exercise.
5. N2-OP-100B is complete through step F.2.2

Initiating Cues:

Perform a manual start and load of the Division III EDG from Panel P-852 IAW N2-OP-100B.
Load the generator to 700 KW.

NRC JPM S-7
Constellation Energy Group
NINE MILE POINT UNIT 2
OPERATOR JOB PERFORMANCE MEASURE

Title: Resetting a Reactor Scram
Task Number:

Revision: NRC 2008

Approvals:

_____/_____
General Supervisor Date
Operations Training (Designee)

_____/_____
NA EXAM SECURITY Date
General Supervisor Date
Operations (Designee)

_____/_____
NA EXAM SECURITY Date
Configuration Control

Performer: _____(RO/SRO/AO)

Trainer/Evaluator: _____

Evaluation Method: _____Perform _____Simulate

Evaluation Location: _____Plant _____Simulator

Expected Completion Time: 10 min. Time Critical Task: NO Alternate Path Task: NO

Start Time: _____ Stop Time: _____ Completion Time: _____

JPM Overall Rating: Pass Fail

NOTE: A JPM overall rating of fail shall be given if any critical step is graded as fail. Any grade of unsat or individual competency area unsat requires a comment.

Comments:

Evaluator's Signature: _____

Date: _____

Recommended Start Location: (Completion time based on the start location)

Simulator

Simulator Set-up (if required):

IC-189 Post Scram Loss of Feedwater with Level Recovered and scram ready to reset.
Malfunctions FW03A and FW03B
Following scram, Mode switch placed in SHUTDOWN
RPV level recovered using CSH and RCIC
ARI initiated on Level 2

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CRO general permission to open equipment cabinets and inspection covers. If opening the equipment cabinet or inspection cover will affect Tech. Spec. Operability, operational status, or the effects are unknown, obtain specific SM / CRO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CRO, and Auxiliary Operators. Prior to providing direction to perform this task, I will provide you with the initial conditions and answer any questions. During task performance, I will identify the steps to be simulated, or discuss and provide cues as necessary.

With the exception of accessing panels, NO plant equipment will be physically manipulated. Repositioning of devices will be simulated by discussion and acknowledged by my cues.

Read Before Each Evaluated JPM Performance:

This evaluated JPM is a measure of your ability to perform this task independently. The Control Room Supervisor has determined that a verifier is not available and that additional / concurrent verification will not be provided; therefore, it should not be requested.

Read Before Each Training JPM Performance:

During this Training JPM, applicable methods of verification are expected to be used. Therefore, either another individual or I will act as the independent/peer verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified in grading areas as **Pass/Fail**. All steps are sequenced critical unless denoted by a "•".
2. During Evaluated JPM:
 - Self-verification shall be demonstrated.
3. During Training JPM:
 - Self-verification shall be demonstrated.
 - No other verification is required to be demonstrated.

References:

N2-SOP-101C
N2-OP-36B H.3.0
K/A 212000 A4.14 3.8/3.8

Tools and Equipment:

Four keys for SDV hi level bypass

Task Standard:

RPS and ARI logics are reset with SDV Vents and Drains open.

Initial Conditions:

- A Reactor scram occurred due to loss of feedwater
- Level is recovered following automatic start of RCIC and HPCS
- N2-SOP-101C, Reactor Scram procedure is being executed
- Another operator is assigned level and pressure control

Initiating Cues:

“(Operators name), Reset the scram.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
1. Provide repeat back of initiating cue. <i>Evaluator Acknowledge repeat back providing correction if necessary</i>	<input type="checkbox"/> Proper communications used for repeat back (GAP-OPS-O1)	Sat/Unsat
RECORD START TIME _____		
2. Obtain a copy of the reference procedure and review/utilize the correct section.	<input type="checkbox"/> N2-OP-SOP-101C obtained and reviewed.	Sat/Unsat
3. IF the reactor scram can be promptly reset (and remain reset) THEN reset the scram	<input type="checkbox"/> Determines all scram signals are clear except Scram Discharge High Level trips and the scram can be reset.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
4. Reset the scram as follows:		
5. Notify radwaste to operate all pumps for 2DER-TK2A.	<input type="checkbox"/> Contacts Radwaste to operate all pumps for 2DER-TK2A	Sat/Unsat
Cue: As Radwaste, report all pumps for 2DER-TK2A are operating		
6. Place all four SDV high level bypass switches to BYPASS.	<input type="checkbox"/> Using four keys, places four DISH VOLUME HI WTR LEVEL BYPASS switches to BYPASS	
<i>603117 RPS A SDV HIGH LEVEL BYPASS alarms</i>	<input type="checkbox"/> CHANNEL A1 to BYPASS <input type="checkbox"/> CHANNEL A2 to BYPASS	PASS/FAIL PASS/FAIL
<i>603417 RPS B SDV HIGH LEVEL BYPASS alarms</i>	<input type="checkbox"/> CHANNEL B1 to BYPASS <input type="checkbox"/> CHANNEL B2 to BYPASS	PASS/FAIL PASS/FAIL
7. IF initiated, reset ARI per N2-OP-36B, H.3.0.	<input type="checkbox"/> Determines ARI reset is required, based on ARI INIT and ARI READY TO RESET amber lights lit.	Sat/Unsat
OBTAINS N2-OP36B Per N2-OP-36B H.3.0		
8. To reset the ARI initiation signal, perform the following:		
<ul style="list-style-type: none"> Confirm the RRCS Division I ARI READY TO RESET amber light is energized. 	<input type="checkbox"/> Observe Division I ARI READY TO RESET amber light is energized.	Sat/Unsat

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
<ul style="list-style-type: none"> Confirm the RRCS Division II ARI READY TO RESET amber light is energized. 	<ul style="list-style-type: none"> Observe Division II ARI READY TO RESET amber light is energized. 	Sat/Unsat
<ul style="list-style-type: none"> Momentarily depress ALL four ARI RESET black pushbuttons. 	<ul style="list-style-type: none"> Depress all four ARI RESET pushbuttons 	PASS/FAIL
	<ul style="list-style-type: none"> Observe amber ARI RESET and READY TO RESET lights extinguish 	Sat/Unsat

NOTE: If RRCS READY TO RESET amber light is lit, candidate may also reset RRCS. N2-SOP-101C does not require RRCS reset as part of the scram reset procedure.

9. To reset the RRCS initiation signal, perform the following:

<ul style="list-style-type: none"> Confirm the RRCS Division I READY TO RESET amber light is energized. 	<ul style="list-style-type: none"> Observe Division I READY TO RESET amber light is energized. 	Sat/Unsat/ NA
<ul style="list-style-type: none"> Confirm the RRCS Division II READY TO RESET amber light is energized. 	<ul style="list-style-type: none"> Observe Division II READY TO RESET amber light is energized. 	Sat/Unsat/ NA
<ul style="list-style-type: none"> Momentarily depress ALL four RRCS RESET black pushbuttons. 	<ul style="list-style-type: none"> Depress RRCS RESET pushbuttons 	Sat/Unsat/ NA
	<ul style="list-style-type: none"> Observe amber ARI RESET and READY TO RESET lights extinguish 	Sat/Unsat
	<ul style="list-style-type: none"> 	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>
10. Using scram reset switches, reset the scram; verify all 8 pilot solenoid lights are lit.	Momentarily places switches to RESET and observes pilot solenoid lights are lit.	
<i>603110 RPS A AUTO TRIP clears and four RPS A scram solenoid lights illuminate.</i>	<input type="checkbox"/> REACTOR SCRAM RESET LOGIC A	PASS/FAIL
	<input type="checkbox"/> REACTOR SCRAM RESET LOGIC C	PASS/FAIL
<i>603410 RPS B AUTO TRIP clears and four RPS B scram solenoid lights illuminate.</i>	<input type="checkbox"/> REACTOR SCRAM RESET LOGIC B	PASS/FAIL
	<input type="checkbox"/> REACTOR SCRAM RESET LOGIC D	PASS/FAIL
11. Reseat rods if necessary by applying insert signal.	<input type="checkbox"/> Determines reseat is not necessary	Sat/Unsat /NA
Cue: If asked inform candidate reseating rods is not necessary.		
12. Verify SDV vent and drain valves open.	<input type="checkbox"/> Observe SCRAM DISCH VOLUME VENT VLVS RDS*AOV124/132 red light on and green light extinguishes.	Sat/Unsat
<i>The following alarms clear as the vents and drains open.</i>	<input type="checkbox"/> Observe SCRAM DISCH VOLUME DRAIN VLVS RDS*AOV123/130 red light on and green light extinguishes.	
<i>603433 SDV DRAIN AOV123 CLOSED</i>		
<i>603434 SDV DRAIN AOV130 CLOSED</i>		
<i>603435 SDV VENT AOV1234 CLOSED</i>		
<i>603433 SDV VENT AOV132 CLOSED</i>		
13. Report reactor scram is reset.	<input type="checkbox"/> Report scram reset is complete	

TERMINATING CUE:

RPS and ARI logics are reset with SDV Vents and Drains open.

RECORD STOP TIME _____

TURNOVER SHEET

- INITIAL CONDITIONS:
1. A Reactor scram occurred due to loss of feedwater
 2. Level is recovered following automatic start of RCIC and HPCS
 3. N2-SOP-101C, Reactor Scram procedure is being executed
 4. Another operator is assigned level and pressure control

INITIATING CUES: “(Operators name), Reset the scram.”