

Facility: NINE MILE POINT 1		Date of Examination: 11/1/2004
Examination Level (circle one): RO		Operating Test Number: NRC-01
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
A by itself at low power. B by itself from LOCA conditions. C then F is directed after pulling fuses to close ERV. D, E, H concurrent with each other from power operation. G performed by itself at power.		
a. ACTIONS FOR AND WITHDRAWAL OF CONTROL RODS WHICH DOUBLE NOTCH. Rod does not withdraw and drive water pressure will be raised as required to withdraw it. When rod withdraws, it continues to withdraw with response per F3-2-6, CONTROL ROD DRIFT, for a rod drift in outward direction. Task: 2000360401, 2010050401 N1-OP-5; H.21.0	N, A, S, L	1 REACTIVITY CONTROL
b. LINEUP AND INJECT CONTAINMENT SPRAY RAW WATER INTO CORE SPRAY LOOP 11. PRA: Supply Cont Spray raw water to core spray Task: 2269020501 N1-EOP-1, Attachment 5	D, S	2 RX WATER INVENTORY CONTROL
c. RESPOND TO STUCK OPEN ERV AT POWER. When fuses are pulled in F panel the ERV closes. Task: 2399010401 N1-OP-1; H.8.0 LER 2000-004, Manual Reactor Scram Due To Stuck Open ERV and Failed Vacuum Breaker DER-NM-2004-2268, Manual Scram Due To ERV123 Failure ToO Close During PMT (5/4/2004).	N, S	3 RX PRESSURE CONTROL
d. VENT THE PRIMARY CONTAINMENT VIA DRYWELL THROUGH RBEVS AT POWER (VENT VIA TORUS WHEN DRYWELL VENTING IS INEFFECTIVE). Unable to establish an effective vent path from the drywell the torus will be vented via the RBEVS. Drywell vent path must be closed to ensure containment function is not bypassed should a LOCA occur; directly pressurize torus air space from drywell if both venting lineups are established. PRA: Vent primary containment through RBEVS Task: 2829020101, 2009050501 N1-OP-9; H.1.3, H.1.4	M, A, S	5 CONTAINMENT INTEGRITY

Facility: NINE MILE POINT 1		Date of Examination: 11/1/2004
Examination Level (circle one): RO		Operating Test Number: NRC-01
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
e. N1-ST-M4 FOR EDG102 (DG OPERABILITY) Modify to required DG shutdown once loaded based on annunciator response to degraded/failed component. PRA: Start/Load a diesel generator. Task: 2640030201, 2640020101, 2640030101 N1-ST-M4	M, A, S	6 ELECTRICAL
f. ACTIONS IN CONTROL ROOM PRIOR TO CONTROL ROOM EVACUATION When reactor mode switch placed to shutdown the reactor does not scram – presses manual scram pushbuttons to scram the reactor. When vessel isolation switches placed to isolate MSIVs do not close – manually closes MSIVs. Task: 2009070403 N1-SOP-9.1	N, A, S <i>How do they meet?</i>	7 INSTRUMENTS
g. RESPOND TO A LOSS OF SERVICE WATER Service water pump can be started however service water pressure can be improved but cannot be “restored” requiring override actions per N1-SOP-7, Path A. PRA: Respond to a service water pump trip PRA: Respond to a loss of service water Task: 2769020401, 2000350401 N1-SOP-7	M, S	8 PLANT SERVICE SYSTEMS
h. START CONTROL ROOM VENTILATION SYSTEM Task: 2880040101 N1-OP-49; E.1.0.	D, S RO ONLY SRO DO NOT PERFORM	9 RADIOACTIVITY RELEASE

Facility: NINE MILE POINT 1		Date of Examination: 11/1/2004
Examination Level (circle one): RO		Operating Test Number: NRC-01
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
i. MANUALLY VENT SCRAM AIR HEADER PER EOP-3.1. PRA: EOP-3.1 Task: 2009230504 EOP-3.1; Section 2	D, R	1 REACTIVITY CONTROL
j. PERFORM RPV INJECTION FOR SAFE SHUTDOWN OUTSIDE CONTROL ROOM. Task: 2009070403 SOP-9.1, Attachment 4.	N <u>E</u>	2 RX WATER INVENTORY CONTROL
k. TRANSFER BATTERY BOARD 11 LOADS TO BATTERY BOARD 12 Task: 2000450501 N1-OP-47A; H.9.0	D	6 ELECTRICAL
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

2

Facility: NINE MILE POINT 1		Date of Examination: 11/1/2004
Examination Level (circle one): SRO		Operating Test Number: NRC-01
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
A by itself at low power. B by itself from LOCA conditions. C then F is directed after pulling fuses to close ERV. D, E, H concurrent with each other from power operation. G performed by itself at power.		
a. ACTIONS FOR AND WITHDRAWAL OF CONTROL RODS WHICH DOUBLE NOTCH. Rod does not withdraw and drive water pressure will be raised as required to withdraw it. When rod withdraws, it continues to withdraw with response per F3-2-6, CONTROL ROD DRIFT, for a rod drift in outward direction. Task: 2000360401, 2010050401 N1-OP-5; H.21.0	N, A, S, L	1 REACTIVITY CONTROL
b. LINEUP AND INJECT CONTAINMENT SPRAY RAW WATER INTO CORE SPRAY LOOP 11. PRA: Supply Cont Spray raw water to core spray Task: 2269020501 N1-EOP-1, Attachment 5	D, S	2 RX WATER INVENTORY CONTROL
c. RESPOND TO STUCK OPEN ERV AT POWER. When fuses are pulled in F panel the ERV closes. Task: 2399010401 N1-OP-1; H.8.0 LER 2000-004, Manual Reactor Scram Due To Stuck Open ERV and Failed Vacuum Breaker DER-NM-2004-2268, Manual Scram Due To ERV123 Failure ToO Close During PMT (5/4/2004).	N, S	3 RX PRESSURE CONTROL
d. VENT THE PRIMARY CONTAINMENT VIA DRYWELL THROUGH RBEVS AT POWER (VENT VIA TORUS WHEN DRYWELL VENTING IS INEFFECTIVE). Unable to establish an effective vent path from the drywell the torus will be vented via the RBEVS. Drywell vent path must be closed to ensure containment function is not bypassed should a LOCA occur; directly pressurize torus air space from drywell if both venting lineups are established. PRA: Vent primary containment through RBEVS Task: 2829020101, 2009050501 N1-OP-9; H.1.3, H.1.4	M, A S <i>dent</i> <i>Call</i> <i>ALX</i> <i>Path</i> <i>Pressure</i> <i>Prong</i>	5 CONTAINMENT INTEGRITY

Facility: NINE MILE POINT 1		Date of Examination: 11/1/2004
Examination Level (circle one): SRO		Operating Test Number: NRC-01
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
e. N1-ST-M4 FOR EDG102 (DG OPERABILITY) Modify to required DG shutdown once loaded based on annunciator response to degraded/failed component. PRA: Start/Load a diesel generator. Task: 2640030201, 2640020101, 2640030101 N1-ST-M4	M, A, S	6 ELECTRICAL
f. ACTIONS IN CONTROL ROOM PRIOR TO CONTROL ROOM EVACUATION When reactor mode switch placed to shutdown the reactor does not scram – presses manual scram pushbuttons to scram the reactor. When vessel isolation switches placed to isolate MSIVs do not close – manually closes MSIVs. Task: 2009070403 N1-SOP-9.1	N, A, S	7 INSTRUMENTS
g. RESPOND TO A LOSS OF SERVICE WATER Service water pump can be started however service water pressure can be improved but cannot be “restored” requiring override actions per N1-SOP-7, Path A. PRA: Respond to a service water pump trip PRA: Respond to a loss of service water Task: 2769020401, 2000350401 N1-SOP-7	M, S, A	8 PLANT SERVICE SYSTEMS

Facility: NINE MILE POINT 1		Date of Examination: 11/1/2004
Examination Level (circle one): SRO		Operating Test Number: NRC-01
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
i. MANUALLY VENT SCRAM AIR HEADER PER EOP-3.1. PRA: EOP-3.1 Task: 2009230504 EOP-3.1; Section 2	D, R	1 REACTIVITY CONTROL
j. PERFORM RPV INJECTION FOR SAFE SHUTDOWN OUTSIDE CONTROL ROOM. Task: 2009070403 SOP-9.1, Attachment 4.	N E	2 RX WATER INVENTORY CONTROL
k. TRANSFER BATTERY BOARD 11 LOADS TO BATTERY BOARD 12 Task: 2000450501 N1-OP-47A; H.9.0	D	6 ELECTRICAL
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

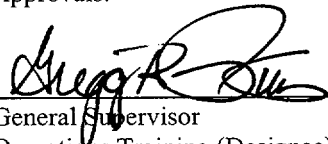
Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Withdrawal of Control Rods That Double Notch

Revision: NRC 2004

Task Number: 2000360401

Approvals:

 9/8/04
General Supervisor Date
Operations Training (Designee)

NA EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA EXAMINATION SECURITY
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform ☐ Simulate

Evaluation Location: ☐ Plant ☒ Simulator

Expected Completion Time: 10 minutes 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 Signature: _____

Date: _____

Recommended Start Location:

Simulator.

Simulator Set-up:

Use a startup IC prior to criticality with control rod withdrawal in progress. First control rod does not withdraw on the first attempt after adjusting drive water pressure to 200 psid. Drive water pressure will be raised 20 psid to 220 psid and then the control rod will not withdraw. . Drive water pressure will be raised 20 psid to 240 psid and then the control rod will withdraw. When the control rod is withdrawn the control rod will continue to withdraw and the actions for a control rod drift in the outward direction must be taken.

MALFUNCTIONS

RD04 rod 34-39 stuck control rod	(queued)
RD02 rod 34-39 control rod drift	(F3)

REMOTES

RD07 – Reset Control Rod Drift alarm	(F4)
--------------------------------------	------

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-OP-5; H.7.2.
2. ARP F3-2-6.
3. K/A 201003 A4.02 (3.5/3.5) Ability to manually operate and/or monitor in the control room: CRD position.
4. K/A 201003 A2.03 (3.4/3.7) Ability to (a) predict the impacts of the following on the CONTROL ROD AND DRIVE MECHANISM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Drifting rod.

Tools and Equipment:

1. None

Task Standard:

Actions for a control rod drifting out taken and the control rod inserted and disarmed.

Initial Conditions:

1. A reactor startup is in progress.
2. Control rod 34-39 is entered in the Control Rod Drive Deficiency Log as a control rod which double notches.
3. The CRDDL indicates control rod flow has been adjusted to the point where no further adjustment is available (SOV-120, Directional Control Valve is full closed)
4. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), withdraw control rod 34-39 to position 16 per N1-OP-5, Section H.7.2”

For SRO initiating cue: take appropriate action for control rod 34-39.

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-OP-5 obtained. - Section H.7.2 referenced.	Sat/Unsat	
3. Verify Control Rod Power is ON.	<i>Turns on Control Rod Power.</i>	Pass/Fail	
4. Depress Rod Select pushbutton for Control Rod on Rod Map Display at E panel	<i>Selects control rod 34-39</i>	Pass/Fail	
5. Confirm the following:			
➤ Rod Select pushbutton back-lit on Rod Map Display.	<i>Confirm Rod Select pushbutton back-lit on Rod Display.</i>	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
➤ SELECT light illuminated for Control Rod.	<i>Confirm SELECT light illuminated for Control Rod.</i>	Sat/Unsat	
6. Verify no other control rods indicate selected at Rod Display or F Panel.	<i>Verify no other control rods indicate selected at Rod Display or F Panel.</i>	Sat/Unsat	
7. Adjust drive water differential pressure to obtain 200 psid.	<i>Adjust drive water differential pressure to obtain 200 psid (±5 psid) using CONTROL ROD DRIVE WATER CONTROL VALVE.</i>	Sat/Unsat	
8. Place 4S1, CONTROL ROD MOVEMENT switch in ROD OUT NOTCH, UNTIL ROD IN light illuminates.	<i>NOTE: Control rod will not withdraw on the first attempt.</i> <i>Place 4S1, CONTROL ROD MOVEMENT switch in ROD OUT NOTCH until ROD IN light illuminates then release switch.</i>	Sat/Unsat	
	<i>Recognize control rod does not move.</i>	Pass/Fail	
9. IF control rod does not withdraw, THEN perform the following:			
➤ Raise drive water differential pressure in 20 psid increments to a maximum of 270 psid, AND attempt single notch withdraw of control rod at each increment, UNTIL rod withdrawal is achieved.	<i>Raise drive water differential pressure 20 psid to 220 psid (±5 psid)</i>	Sat/Unsat	
	<i>Place 4S1, CONTROL ROD MOVEMENT switch in ROD OUT NOTCH until ROD IN light illuminates then release switch.</i>	Sat/Unsat	
	<i>Recognize control rod does not withdraw.</i>	Pass/Fail	
	<i>Raise drive water differential pressure 20 psid to 240 psid (±5 psid)</i>	Pass/Fail	
	<i>Place 4S1, CONTROL ROD MOVEMENT switch in ROD OUT NOTCH until ROD IN light illuminates then release switch.</i>	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
	<p><i>Confirms the following:</i></p> <ul style="list-style-type: none"> ➤ ROD IN light ON approx 1 second. ➤ ROD OUT light ON approx. 2 seconds after ROD IN light extinguishes. ➤ ROD OUT SETTLE light on approx. 4 seconds after ROD OUT light OFF. <p><i>NOTE: A control rod that fails to settle and continues to drive out is indicative of a stuck collet or a failure of SOV-122, CRD Directional Control Valve.</i></p> <ul style="list-style-type: none"> ➤ Recognizes control rod continues to withdraw in the outward direction. 	<p>Sat/Unsat</p> <p>Sat/Unsat</p> <p>Sat/Unsat</p> <p>Pass/Fail</p>	<div></div> <div></div> <div></div> <div></div>
10. References ARP F3-2-6, control rod drift.	<p><i>Obtains ARP F3.</i></p> <p><i>References F3-2-6.</i></p>	Sat/Unsat	<div></div>
11. IF more than one rod is drifting, THEN manually scram the Reactor AND enter N1-SOP-1, Reactor Scram.	<p><i>Determines only one control rod drifting.</i></p> <p><u>DOES NOT</u> insert a manual reactor scram.</p>	<p>Sat/Unsat</p> <p>Pass/Fail</p>	<div></div>

Performance Steps	Standard	Grade	Comments
-------------------	----------	-------	----------

NOTE: After rod is inserted and EMERGENCY ROD IN switch is held to keep the control rod inserted, and the performer indicates that the HCU must be isolated, inform the performer JPM is complete.

12. For OUTWARD drifting control rod perform the following:

➤ Apply continuous insert signal using EMERGENCY ROD IN to maintain control rod full in.

Apply continuous insert signal using EMERGENCY ROD IN to maintain control rod full in and HOLDS switch in this position until valve out HCU.

Pass/Fail

➤ Valve out affected HCU per N1-OP-5 Section H, Hydraulic Control Unit (HCU) Isolation.

Recognizes need to valve out affected HCU prior to releasing EMERGENCY ROD IN control switch.

Pass/Fail

End of JPM

TERMINATING CUE: EMERGENCY ROD IN switch used to insert control rod and hold it inserted until HCU is valved out.

RECORD STOP TIME_____

Spill not
Initial Conditions:

5. A reactor startup is in progress.
6. Control rods 34-39 is enter in the Control Rod Drive Deficiency Log as a control rod which double notches.
7. The CRDDL indicates control rod flow has been adjusted to the point where no further adjustment is available (SOV-120, Directional Control Valve is full closed)
8. Ask the operator for any questions.

Initiating cue:

sh
“(Operator’s name), withdraw control rods 34-39 to position 16 per N1-OP-5, Section H.7.2”


Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Lineup and Inject Containment Spray Raw Water into
Core Spray Loop 11

Revision: NRC 2004

Task Number: 2269020501

Approvals:

 / 9/8/04
General Supervisor Date
Operations Training (Designee)

NA EXAMINATION SECURITY /
General Supervisor Date
Operations (Designee)

NA EXAMINATION SECURITY /
Configuration Control Date

Performer: _____ (RO/SRO)

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:

Evaluators Signature: _____

Date: _____

Recommended Start Location:

Unit 1 Control Room Simulator

Simulator Set-up (if required):

1. Initialize to IC-24 or equivalent.
2. Insert Malfunction RR29 (DBA/LOCA) (100%) **(queued)**
3. Rotate Mode Switch to Shutdown and allow conditions to stabilize.
4. Insert Remote CT-06 (15%) **(queued)**.
5. Insert Remote CT-06 (70%) **(F3)**

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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 as **Pass/Fail**. All steps are sequenced critical unless denoted by "•".
2. During Evaluated JPM:
 - Self verification shall be demonstrated.
3. During Training JPM:
 - Self verification shall be demonstrated.
 - Independent/Peer verification shall be demonstrated.

References:

1. N1-EOP-1, Attachment 5.
2. K/A 209001 A4.01, (3.8/3.6)

Tools and Equipment:

None

Task Standard: Containment Spray Raw Water is injecting through Core Spray Loop 11.

Initial Conditions:

1. The reactor was at power when a LOCA occurred.
2. RPV level cannot be maintained above -230".
3. Core Spray is injecting.
4. Two (2) hours have elapsed since the LOCA occurred.
5. Instructor to ask operator for any questions.

Initiating Cues:

“(Operator’s name), lineup and inject Containment Spray Raw Water to Core Spray Loop 11 (in accordance with N1-EOP-1, Attachment 5.”)

NOT for SRO/Cue sheets

Performance Steps	Standard	Grade	Comments
1. Provide repeat back of initiating cue. Evaluator Acknowledge repeat back providing correction if necessary.	Proper communications used for repeat back (GAP-OPS-01/Operations Manual)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N1-EOP-1, Attachment 5 obtained.	Sat/Unsat	
3. Verify at least one Core Spray pump set injecting, if available, into the RPV through Core Spray Loop 12.	For Core Spray Loop 121 or 122, observe Red light energized and Green light extinguished; pump amps and system flow.	Sat/Unsat	
4. Close 93-14, 111 Cont Spray Raw Water Pump Disch Valve in Screenhouse.	<i>PROMPT: Role play as AO and acknowledge the order. Report that 93-14 is closed.</i> Directs AO to close Close 93-14, 111 Cont Spray Raw Water Pump Disch Valve, in Screenhouse.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
5. Throttle open 93-14, 4 - 6 turns.	<i>PROMPT: Role play as AO and acknowledge the ordert. Report that 93-14 is open 5 turns.</i> Directs AO to throttle open 93-14, 111 Cont Spray Raw Water Pump Disch Valve, in Screenhouse 4-6 turns.	Sat/Unsat	
6. Place and HOLD in STOP position, CORE SPRAY TOPPING PUMP 111.	Switch rotated CCW and held in STOP. Observe red light off, 0 amps.	Sat/Unsat	
7. Place in PULL TO LOCK CORE SPRAY PUMP 111, AND release CORE SPRAY TOPPING PUMP 111 to Neutral position.	Switch rotated CCW and pulled. Observe Red and Green lights off; 0 amps and 0 flow. Switch released to Green flag position. Observe Green light on, Red light off.	Pass/Fail Sat/Unsat	
8. Place and HOLD in STOP position, CORE SPRAY TOPPING PUMP 112.	Switch rotated CCW and held in STOP. Observe red light off, 0 amps.	Sat/Unsat	
9. Place in PULL TO LOCK CORE SPRAY PUMP 112, AND release CORE SPRAY TOPPING PUMP 112 to Neutral position.	Switch rotated CCW and pulled. Observe Red and Green lights off; 0 amps and 0 flow. Switch released to Green flag position. Observe Green light on, Red light off.	Pass/Fail Sat/Unsat	
10. Open 93-71, CONT SPRAY RAW WATER 111 INTERTIE to Core Spray Loop 11.	Switch rotated CCW. Observe Red light On, Green light off.	Pass/Fail	
11. Verify Closed 93-25, 111 Cont Spray Raw Water Disch to Tunnel.	Observe Green light On, Red light off.	Sat/Unsat	
12. Verify Open 40-10 and 40-11.	Red light on, green light off.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
13. Start CONTAINMENT SPRAY RAW WATER PUMP 111 (CSRW).	<i>PROMPT: Role play as AO as needed.</i> Switch rotated CW to red flag position. Observe Red light on, Green light off, pump amps, flow.	Pass/Fail	
14. WHILE maintaining CSRW Pump 111 motor amps less than 76 amps, throttle open 93-14 as necessary to maximize flow rate.	<i>CUE: Increase opening of 93-14 with Remote CT06 as requested. Final value 70%. (F3)</i> <i>PROMPT: Role play as AO as needed.</i> Direct AO to open slowly throttle open 93-14; observes amps <76 amps while throttling to maximize flow (observe flow).	Pass/Fail	
15. Report CSRW is injecting through Core Spray Loop 11.	<i>PROMPT: Role play as CRS and acknowledge report.</i> Informs CRS using proper communications.	Sat/Unsat	

End of JPM

Terminating Cue: Containment Spray Raw Water is injecting through Core Spray Loop 11.

RECORD STOP TIME _____

Initial Conditions:

1. The reactor was at power when a LOCA occurred.
2. RPV level cannot be maintained above -230".
3. Core Spray is injecting.
4. Two (2) hours have elapsed since the LOCA occurred.
6. Instructor to ask operator for any questions.

Initiating Cues:

“(Operator’s name), lineup and inject Containment Spray Raw Water to Core Spray Loop 11 in accordance with N1-EOP-1, Attachment 5.”

C


Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Respond to an Open ERV at power.

Revision: NRC 2004

Task Number: 2399010401

Approvals:

 9/8/04
General Supervisor Date
Operations Training (Designee)

NA EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA EXAMINATION SECURITY
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform ☐ Simulate

Evaluation Location: ☐ Plant ☒ Simulator

Expected Completion Time: 10 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:

Evaluator Signature: _____

Date: _____

Recommended Start Location:

Simulator.

Simulator Set-up:

Malf – AD05 Electromatic Relief Valve (#111) Failure – Opens Inadvertently

(F3)

Remote – AD07 Acoustic Monitor Alarm Reset

(F4)

At 70% power. Insert malfunction for Stuck Open ERV: ERV 111. When fuses in F panel are pulled the ERV will close, and the JPM will be complete.

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-SOP-1.4
2. ARP F2-4-1.
3. LER 2000-004, Manual Reactor Scram due to Stuck Open ERV and Failed Vacuum Breaker on ERV Discharge Line
4. K/A 239002 A2.03 (4.1/4.2) Ability to (a) predict the impacts of the following on the SAFETY/RELEIF VALVES; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Stuck open relief valve.

Tools and Equipment:

1. None

Task Standard:

F panel fuses pulled and ERV closed.

Initial Conditions:

1. The plant is at 70% power.
2. No equipment is out of service.
3. You are responsible for the F panel control.
4. Ask the operator for any questions.

Initiating cue:

"(Operator's name), respond to alarms on the F panel when they are received."

*why limit to just "F" panel?
AT the Controls or BOT*

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
	INSERT F3 (AD05 ERV 111 opens)		
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	<i>N1-ARP-F2 obtained. F2-4-1 directs actions for N1-SOP-1.4</i>	Sat/Unsat	
3. •IF reactor scram occurs, THEN enter N1-SOP-1, Reactor Scram, AND execute concurrently.	<i>Determines no reactor scram.</i>	Sat/Unsat	
4. •Confirm alarm on computer printout.	<i>Checks computer alarm print to confirm.</i>	Sat/Unsat	

5.	<ul style="list-style-type: none"> •Determine which ERV is open: <ul style="list-style-type: none"> - Red ERV Open lights on F-Panel - Blue ERV continuity light - Reactor Power, Level, Pressure. 	<i>Determines ERV 111 open.</i>	Pass/Fail	
6.	Dispatch Operator to Aux Control Room: <ul style="list-style-type: none"> - Check for Red Hi-Alarm light(s) lit. - Compare meter reading for alarming channel(s) to other channels - Select Channel(s) to audio monitor and listen for indications of valve leakage. 	<i>Prompt: Report that acoustic monitor indicates flow on ERV 111.</i>		
7.	Perform following actions until stuck open ERV closes:			
a.	Commence an emergency power reduction per N1-SOP-1.1.	<i>Prompt: After the performer recognizes an emergency power reduction is required, inform the performer that the ATC RO will perform the emergency power reduction. Recognizes emergency power reduction is required.</i>	Sst/Unsat	
b.	Depress ADS Timer Reset pushbuttons.	<i>Depress ADS Timer Reset pushbuttons.</i>	Sat/Unsat	
c.	Cycle ERV111 control switch.	<i>Cycle ERV111 control switch open then closed.</i>	Sat/Unsat	

8. Pull Control Power fuses located in F Panel for ERV 111; pull required fuses located between 1F1A & 1F1B
- Obtains fuse pull kit and uses PPE.*
- Pull ERV 11 fuses located between 1F1A & 1F1B:*
- F15, ELECTRO RELIEF VLV 111 CH-11, 6A POS
- F15, ELECTRO RELIEF VLV 111 CH-11, 6A POS pulled.*
- F30, ELECTRO RELIEF VLV 111 CH-11, 6A NEG
- F30, ELECTRO RELIEF VLV 111 CH-11, 6A NEG pulled.*
- Observes ERV111 closed.*
9. Reset acoustic monitor
- When directed wait 20 seconds and insert F4 (AD07 Acoustic Monitor Alarm Reset)**

Sat/Unsat

Pass/Fail

Pass/Fail

Sat/Unsat

End of JPM

TERMINATING CUE: ERV111 fuses pulled and ERV111 closed.

RECORD STOP TIME _____

Initial Conditions:

1. The plant is at 70% power.
2. No equipment is out of service.
3. You are responsible for the F panel control.
4. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), respond to alarms on the F panel when they are received.”

D

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Vent the Primary Containment via Drywell through the RBEVS
Alternate Path to Vent via the Torus (201-32 Valve fails to open)
PRA: Vent the Primary Containment through the Reactor Building Emergency Ventilation System (RBEVS) from the Control Room.

Revision: NRC 2004

Task Number: 2239010401

Approvals:


General Supervisor _____ Date 9/8/04
Operations Training (Designee)

NA-EXAMINATION SECURITY

General Supervisor _____ Date _____
Operations (Designee)

NA-EXAMINATION SECURITY

Configuration Control _____ Date _____

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform _____ Simulate

Evaluation Location: _____ Plant ☒ Simulator

Expected Completion Time: 20 minutes 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 Signature: _____

Date: _____

Recommended Start Location:

U1 Simulator

Simulator Set-up:

- a. Initialize to IC-25 or equivalent.
- b. Override, Panel L-11, Switch on Page 4, Drywell Nitrogen Vent & Purge ISOL VLV 11 (11S006-DI-036-10, INOP).
- c. Ensure Drywell pressure is less than 2.0 psig.
- d. Perform N1-ST-V1, Venting/Purging Primary Containment Through The Reactor Building Ventilation System, valve lineup for drywell venting..

Introduce a steam leak from ECs (20%) into containment long enough to raise DW pressure to 1.9 psig. Do not delete malfunction, Enter value for steam leak to 0% then que.

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-OP-9; H.1.0
2. K/A 2233001 A4.07 (4.2/4.1)

Tools and Equipment:

1. None

Task Standard:

Primary containment is being vented through the Torus using the Reactor Building Emergency Ventilation System.

Initial Conditions:

1. Unit 1 is at 100% power.
2. N1-ST-V1, Venting/Purging Primary Containment through the Reactor Building Ventilation System, was completed thirty (30) minutes ago.
3. Drywell pressure is approaching 2.0 psig.
4. The SRO has determined that it is necessary to vent the containment.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), vent the Drywell through the Reactor Building Emergency Ventilation System 11 (per N1-OP-9, H.1.0.”

NOT for SRO's

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the applicable procedure and review applicable section(s).	N1-OP-9 obtained. - H.1.0, Section 1.3 referenced.	Sat/Unsat	
3. Verify 201-35 DRYWELL AND TORUS VENT AND PURGE FAN, control switch in the STOP position.	201-35 placed in “Green Flag” <u>OR</u> Observes green light On and red light OFF.	Sat/Unsat	
	<i>NOTE: With secondary containment required, closing BV202-36 requires entry into LCO 3.4.4(f).</i>		
4. •Notify SM to enter LCO 3.4.4(f).	SM informed of LCO 3.4.4(f) entry requirement.	Sat/Unsat	
5. Verify following valves are closed:			
a. 201-21, DRYWELL & TORUS VENT & PURGE FAN INLET BV	Observes green light ON. Observes red light OFF.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
b. 201-22, DRYWELL & TORUS VENT & PURGE FAN OUTLET BV	Observes green light ON. Observes red light OFF.	Sat/Unsat	
c. 201.2-33, TORUS N2 MAKEUP AND BLEED ISOL VALVE 11	Observes green light ON. Observes red light OFF.	Sat/Unsat	
d. 201.2-06, TORUS N2 MAKEUP AND BLEED ISOL VALVE 12	Observes green light ON. Observes red light OFF.	Sat/Unsat	
e. 201.2-32, DRYWELL N2 MAKEUP AND BLEED ISOL VALVE 11	Observes green light ON. Observes red light OFF.	Sat/Unsat	
f. 201.2-03, DRYWELL N2 MAKEUP AND BLEED ISOL VALVE 12	Observes green light ON. Observes red light OFF.	Sat/Unsat	
g. 201.2-136, P SYS DISCH ROUTE	Observes green light ON. Observes red light OFF.	Sat/Unsat	
h. 201-11, TORUS VENT TO CONDENSER	Observes green light ON. Observes red light OFF.	Sat/Unsat	
i. 202-47, EM VENTILATION TIE BV	Observes green light ON. Observes red light OFF.	Sat/Unsat	
j. 202-36, EM VENTILATION FROM REACTOR BLDG BV	Observes red light ON, unlocks and rotates control switch to the CLOSE position. Observes red light OFF, green light ON.	Pass/Fail	
6. Verify 201-16 Torus N2 Vent & Purge Isolation Valve 11 is closed.	Observes green light ON, red light OFF.	Sat/Unsat	
7. Verify 201-17 Torus N2 Vent & Purge Isolation Valve 12 is closed.	Observes green light ON, red light OFF.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
8. Open 201-18, EM VENTILATION FROM DRYWELL AND TORUS BV	Positions c/s to OPEN. Observes red light ON, green light OFF.	Pass/Fail	
9. Open EM Ventilation Loop Inlet BV 202-37 (System 11).	Positions c/s to OPEN. Observes red light ON, green light OFF.	Pass/Fail	
10. Open 201-32, Drywell N2 Vent & Purge Isolation Valve 11.	Positions c/s to OPEN. Recognize failure of 201-32, Drywell N2 Vent & Purge Isolation Valve 11 to open. Green light remains ON Report to CRS/SM 201-32 will not open.	Pass/Fail	
<p>ALTERNATE PATH: 201-32 will NOT open. Requires drywell venting be secured and torus venting be established.</p> <div style="border: 1px solid black; border-radius: 50%; padding: 10px; margin: 10px auto; width: 60%;"> <p>PROMPT: As CRS/SM, acknowledge that Valve 201-32 will not open. Direct operator to secure from current lineup and vent the primary containment via the Torus through RBEVS 11.</p> </div>			
11. Secure from drywell venting:			
a. Close 202-37, EM Ventilation Loop Inlet BV (System 11).	Positions c/s to AUTO. Observes green light ON, red light OFF.	Sat/Unsat	
b. Close 201-18, EM Ventilation From Drywell and Torus BV.	Positions c/s to CLOSE. Observes green light ON, red light OFF.	Sat/Unsat	
c. Open 202-36, EM Ventilation From Reactor Building.	Unlock and positions c/s to OPEN. Observes red light ON, green light OFF.	Sat/Unsat	
12. Refers to appropriate section of the procedure.	References N1-OP-9, H.1.0. Section 1.4 Torus Venting PROMPT: As CRS/SM, acknowledge ready to commence venting the Torus.	Sat/Unsat	

Because you are
directly action originally not
ACT Path.

These are
all SLO applicants
we can't we ask the
applicants if they suggest
cause of action
Ready not alternate
Path if you have
to secure should
Direct action

Performance Steps	Standard	Grade	Comments
13. Verify 201-35 DRYWELL AND TORUS VENT AND PURGE FAN, control switch is in the STOP position.	201-35 placed in "green flag" <u>OR</u> Observes green light ON and red light OFF.	Sat/Unsat	
14. Verify following valves are closed:			
a. 201-21, DRYWELL & TORUS VENT & PURGE FAN INLET BV	Observes green light ON, red light OFF.	Sat/Unsat	
b. 201-22, DRYWELL & TORUS VENT & PURGE FAN OUTLET BV	Observes green light ON, red light OFF.	Sat/Unsat	
c. 201.2-33, TORUS N2 MAKEUP AND BLEED ISOL VALVE 11	Observes green light ON, red light OFF.	Sat/Unsat	
d. 201.2-06, TORUS N2 MAKEUP AND BLEED ISOL VALVE 12	Observes green light ON, red light OFF.	Sat/Unsat	
e. 201.2-32, DRYWELL N2 MAKEUP AND BLEED ISOL VALVE 11	Observes green light ON, red light OFF.	Sat/Unsat	
f. 201.2-03, DRYWELL N2 MAKEUP AND BLEED ISOL VALVE 12	Observes green light ON, red light OFF.	Sat/Unsat	
g. 201.2-136, P SYS DISCH ROUTE	Observes green light ON, red light OFF.	Sat/Unsat	
h. 201-11, TORUS VENT TO CONDENSER	Observes green light ON, red light OFF.	Sat/Unsat	
i. 202-47, EM VENTILATION TIE BV	Observes green light ON, red light OFF.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
j. 202-36, EM VENTILATION FROM REACTOR BLDG BV	Observes red light ON. Unlocks control switch, rotates it to CLOSE. Observes red light OFF, green light ON.	Pass/Fail	
15. Verify 201-32, DW N2 Vent & Purge Isolation Valve 11 is closed.	Observes green light ON, red light OFF.	Sat/Unsat	
16. Verify 201-31 DW N2 Vent & Purge Isolation Valve 12 is closed.	Observes green light ON, red light OFF.	Sat/Unsat	
17. Open 201-18, EM VENTILATION FROM DRYWELL AND TORUS BV	Positions c/s to OPEN. Observes red light ON, green light OFF.	Pass/Fail	
18. Open 202-37, EM Ventilation Loop Inlet BV (System 11).	Positions c/s to OPEN. Observes red light ON, green light OFF.	Pass/Fail	
19. Verify closed the following vlaves: • 201-31	Observes green light ON, red light OFF	Sat/Unsat	
• 201-32	Observes green light ON, red light OFF	Sat/Unsat	
20. Open 201-16, Torus N2 Vent & Purge Isolation Valve 11.	Positions c/s to OPEN. Observes red light ON, green light OFF.	Pass/Fail	
21. Start EM VENT EXHAUST FAN 11.	Positions c/s to START. Observes red light ON, green light OFF.	Pass/Fail	
Annunciator L1, 1-6, EMERG VENT SYS EXH FLOW LOW FILTER Δp alarms.	Acknowledges Annunciator L1, 1-6, EMERG VENT SYS EXH FLOW LOW FILTER Δp.	Sat/Unsat	
	<i>Note: It is acceptable for flow to exceed 1600 cfm momentarily while positioning valve 201-17.</i>		
22. Throttle open 201-17, TORUS N2 VENT & PURGE ISOLATION	Position c/s to open or close and pulls up on c/s to hold valve at throttled position.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
VALVE 12.	Adjusts valve position to establish flow at ≤1600 cfm indicated on L panel indicator.		
23. Verify flow rate is ≤1600 cfm.	Adjusts valve position to establish flow at ≤1600 cfm indicated on L panel indicator.	Pass/Fail	
24. Inform SM/CRS the Torus is being vented through the Reactor Building Emergency Ventilation System 11.	<i>PROMPT: As SM/ CRS, acknowledge the report that the Torus is being vented through RBEVS system 11.</i> SM/CRS informed that the Torus is being vented through the Reactor Building Emergency Ventilation System 11.	Sat/Unsat	

End of JPM

TERMINATING CUE: Primary containment is being vented through the Torus using the Reactor Building
Emergency Ventilation System 11.

RECORD STOP TIME_____

Initial Conditions:

1. Unit 1 is at 100% power.
2. N1-ST-V1, Venting/Purging Primary Containment through the Reactor Building Ventilation System, was completed thirty (30) minutes ago.
3. Drywell pressure is approaching 2.0 psig.
4. The SRO has determined that it is necessary to vent the containment.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), vent the Drywell through the Reactor Building Emergency Ventilation System 11 per N1-OP-9, H.1.0.”

E

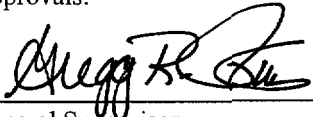
Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Perform N1-ST-M4A for EDG 102 (DG Operability)

Revision: NRC 2004

Task Number: 2640030201, 2649080401

Approvals:

 9/8/04

General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA-EXAMINATION SECURITY
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform ☐ Simulate

Evaluation Location: ☐ Plant ☒ Simulator

Expected Completion Time: 15 minutes 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 Signature: _____

Date: _____

Recommended Start Location:

SIMULATOR

Simulator Set-up:

1. IC 25.
2. Annunciator - **A4-20 Crywolf**
3. Remote Functions (DG) and select DG01. DROOP, for EDG102.
4. Sign-off steps from N1-ST-M4 up to and including step 8.1.14.
5. Two (2) stopwatches available.

(F3)

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-ST-M4A.
2. N1-ARP-A4, 3-4, DSL GEN FIELD GRD OVER VOLTS LOSS EXCIT.
3. K/A 264000 A3.04 (3.1/3.1), A4.04 (3.7/3.7)

Tools and Equipment:

1. None

Task Standard: EDG 102 shutdown.

Initial Conditions:

1. The plant is at power.
2. The monthly operability test (N1-ST-M4) for EDG 102 is due this shift.
3. N1-TTP-DGE-R01, Diesel Generator Load Testing, is not being performed concurrent with this test.
4. The previous shift completed the prerequisites and local verification up to and including Step 8.1.14.
5. Ask the operator for any questions.

Initiating cue:

"(Operator's name), perform the one-hour rated load test for EDG 102 per N1-ST-M4, section 8.1."

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-ST-M4 obtained. Precautions and limitations reviewed. Section 8.1 referenced. <i>PROMPT: Inform performer you will time the time to reach voltage; the candidate will time the time to reach frequency.</i>	Sat/Unsat	
3. Place DIESEL GEN 102 control switch to start and:	Rotate DIESEL GEN 102 c/s CW to START then release c/s.	Pass/Fail	
a. Start stopwatch when control switch is placed to start.	Depress stopwatch start pushbutton when DIESEL GEN 102 c/s is placed to START.	Sat/Unsat	
b. Stop stopwatch when EDG 103 frequency is 60 hz.	Depress stopwatch stop pushbutton when DIESEL GEN 102 frequency (CYCLES) is 59-61 hz.	Sat/Unsat	
c. Record time to reach frequency of 59-61 cycles.	Enters time in seconds from stopwatch.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
	<p>PROMPT: Inform performer the time to reach voltage is 6.4 seconds.</p>		
d. Record time to reach voltage of 3800-4200 volts.	Enters time in seconds from stopwatch.	Sat/Unsat	
4. Adjust speed to 60 Hz using DIESEL GOV control switch.	Adjust (lower) DIESEL GOV c/s. Speed at 60 ± (0.5) Hz.	Pass/Fail	
5. Place Sync key in R1022 SYN and synchronize EDG 102 to 4.16 KV PB102.	Place Sync key in R1022 SYN. Rotated CW to ON. Observe synchroscope rotating slow in the FAST direction. - Adjust DIESEL GOV as needed.	Pass/Fail	
	Match incoming and running voltages. - Adjust VOLT ADJ RHEO GEN 102 as needed.	Sat/Unsat	
6. Ensure EDG 102 output breaker R-1022 is closed.	At approximately 5 minutes before 12 o'clock, rotate R1022, Diesel Generator 102 Output Breaker c/s CW to close. Observe R1022 red light on, green light off.	Pass/Fail	
7. Raise reactive load to 300-800 KVARs using VOLT ADJ RHEO GEN 102 control switch.	Adjust VOLT ADJ RHEO GEN 102 c/s until reactive load is 300-800 KVARs.	Pass/Fail	
8. Raise load to at least 2650 KW using DIESEL GOV control switch.	Adjust DIESEL GOV c/s until load is 2650 to 2850 KW.	Pass/Fail	
9. •Confirm A4-2-3, DSL GEN 102 START, alarming.	Confirm A4-2-3, DSL GEN 102 START, in alarm.	Sat/Unsat	

PROMPT: If asked, inform performer W036.

Performance Steps	Standard	Grade	Comments
	DSL GEN 102 STARTED, indicates YES on the process computer.		
10. •Confirm computer point W036, DSL GEN 102 STARTED, YES.	Confirm W036, DSL GEN 102 STARTED, indicates YES.	Sat/Unsat	
11. •Remove Sync key from R1022 SYN.	Sync key in R1022 SYN rotated to OFF. Remove Sync key from R1022 SYN.	Sat/Unsat	
12. •Verify Diesel Generator Raw Water Cooling Pump started	PROMPT: If asked inform performer that Diesel Generator Raw Water Cooling Pump started.		

ALTERNATE PATH: After EDG 102 load is 2650 kw, override A4-3-4, DSL GEN 102 FIELD GRD OVER VOLTS LOSS EXCIT to alarm.

Insert Malfunction F-3 – Annunciator A4-20 - Crywolf

13. Respond to a field ground on EDG102 as follows:

Note: The ARP only requires EDG 102 be shutdown

PROMPT: As the CRS/SM, acknowledge the report and direct the candidate to take the required actions to shutdown Diesel Generator 102 in accordance with the procedure beginning at step 8.1.23.

Hard Candidate determine Alt Path

- | | | | |
|--------------------------------------|-----------------------------|-----------|--|
| a. •Notify the SM. | SM notified. | Sat/Unsat | |
| | | | |
| b. •Shutdown EDG 102 as follows: | | | |
| 1) Proceed to N1-ST-M4 step 8.1.23.. | Go to N1-ST-M4 step 8.1.23. | Sat/Unsat | |

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
2) Adjust DIESEL GOV control switch to reduce EDG 102 load to less than 500 KW.	Adjust (lower) DIESEL GOV c/s. EDG 102 load less than 500 KW.	Pass/Fail	
3) Adjust VOLT ADJ RHEO GEN 102 switch to lower reactive load to below 500 KVARs.	Adjust (lower) VOLT ADJ RHEO GEN 102 c/s. Reactive load below 500 KVARs.	Pass/Fail	
4) Trip R1022, Diesel Generator 102 Output Breaker.	Place R1022, Diesel Generator 102 Output Breaker, to trip. Observe green light on, red light off.	Pass/Fail	
	<i>PROMPT: When directed as AO to set speed droop to 0, acknowledge the request.</i>		
	<i>PROMPT: As AO, inform performer speed droop is at zero and has been independently verified at zero.</i>		
5) Set speed droop at zero.	Directs an auxiliary operator to set the speed droop to zero.	Sat/Unsat	
6) Adjust speed to 60 Hz using DIESEL GOV control switch.	Adjust DIESEL GOV c/s. Speed at 60 Hz \pm 0.5 Hz. Governor yellow High Stop Light above DIESEL GOV c/s is lit. <i>(NOTE: Governor yellow High Stop Light lit verification is only identified in N1-ST-M4).</i>	Pass/Fail	
7) Adjust voltage to 4200 volts using VOLT ADJ RHEO GEN 102.	Adjust VOLT ADJ RHEO GEN 102. Voltage at 4200 \pm 100 volts.	Pass/Fail	
8) Place DIESEL GEN 102 control switch to STOP.	Place DIESEL GEN 102 c/s to STOP.	Pass/Fail	

PROMPT: If notified of the time EDG 102 is

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
9) Record time EDG 102 is stopped.	<p><i>stopped, as the CRS/SM, acknowledge the notification.</i></p> <p>Record time EDG 102 is stopped.</p>	Sat/Unsat	

Cue: Inform the candidate that THIS TASK IS COMPLETE.

TERMINATING CUE: EDG 102 shutdown.

RECORD STOP TIME _____

Initial Conditions:

1. The plant is at power.
2. The monthly operability test (N1-ST-M4) for EDG 102 is due this shift.
3. N1-TTP-DGE-R01, Diesel Generator Load Testing, is not being performed concurrent with this test.
4. The previous shift completed the prerequisites and local verification up to and including Step 8.1.14.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), perform the one-hour rated load test for EDG 102 per N1-ST-M4, section 8.1.”

F

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Control Room Actions Prior to Control Room Evacuation per N1-SOP-9.1

Revision: NRC 2004

Task Number: 2640030201; 2640020101; 2640030101

Approvals:

 9/8/04
General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA-EXAMINATION SECURITY
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform ☐ Simulate

Evaluation Location: ☐ Plant ☒ Simulator

Expected Completion Time: 10 minutes

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 Signature: _____

Date: _____

Recommended Start Location:

Simulator.

Simulator Set-up: The JPM will be directed with the plant at 100% power. Need to ensure that when the vessel isolation is actuated the MSIVs do not close and must be manually closed. SM will direct a control room evacuation and direct the performer to perform the control rooms actions prior to leaving the control room per N1-SOP-9.1.

OVERRIDES

Panel 13 IE SWITCHES

1. 13S008-DI-05-05 Vessel Isolation 11 – SET – Queued (page 21 of 27)
2. 13S009-DI-055-06 Vessel Isolation 12 – SET – Queued (page 21 of 27)
3. 13S070-DI-067-04 Reactor Mode Switch – Pos 1 – Queued (page 26 of 27) ***THIS MUST BE DELETED IMMEDIATELY AFTER THE RODS ARE INSERTED FROM MANUAL P.B.***

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-SOP-9.1.
K/A 295016 2.1.23 (3.9./4.0) Ability to perform specific system and integrated plant procedures during different modes of plant operation.

Tools and Equipment:

1. None

Task Standard:

Control room actions taken including compensatory actions to manually close the MSIVs when the vessel isolation actuation fails.

Initial Conditions:

1. The plant is at 100% power.
2. No equipment is out of service.
3. The SM has determined that a control room evacuation is required but time permits performance of the required actions prior to leaving the control room.
4. Ask the operator for any questions.

Initiating cue:

"(Operator's name), perform the required actions prior to leaving the control room."

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	NI-SOP-9.1 FLOWCHART obtained. - Override for "If time permits, then..." referenced.	Sat/Unsat	
	NOTE: Ensure that an announcement is not actually made, but simulated so that others may not hear the announcement.		
3. •Sound the station evacuation alarm, Place in "Merge" and announce a control room evacuation.	Sounds station alarm. Place in Merge Announces control room evacuation.	Sat/Unsat Sat/Unsat	

- | | | | |
|----|---|---|--|
| 4. | Place reactor mode switch to shutdown and verify:
Depress Manual Scram Pushbuttons | Place reactor mode switch to shutdown.
Recognize NO rod movement
Press Manual Scram Pushbuttons
AFTER RODS INSERTED MUST -
DELETE OVERRIDE 13S070-DI-067-04
Reactor Mode Switch – Pos 1 | Pass/Fail |
| a. | All control rods inserted. | Verify all rods in. | Sat/Unsat |
| b. | House service loads transfer. | Verify house loads transferred. | Sat/Unsat |
| c. | Turbine/generator trip. | Verify turbine/generator trip. | Sat/Unsat |
| d. | HPCI initiated. | Verify HPCI initiated. | Sat/Unsat |
| e. | FW Pump 13 clutch disengaged. | FW Pump 13 clutch disengaged. | Sat/Unsat |
| 5. | Place VESSEL ISOLATION switches to isolate and verify MSIVS closed. | Recognize failure of MSIVs to close.

Close MSIVs using control switches.. | Pass/Fail

Pass/Fail |
| 6. | Evacuate control room through East-West corridor, south side of the control room. | Evacuate control room through East-West corridor, south side of the control room. | Sat/Unsat |

End of JPM

TERMINATING CUE: N1-SOP-9.1 actions taken and control room evacuated.

RECORD STOP TIME _____

Initial Conditions:

1. The plant is at 100% power.
2. No equipment is out of service.
3. The SM has determined that a control room evacuation is required but time permits performance of the required actions prior to leaving the control room.
4. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), perform the required actions prior to leaving the control room.”

G


Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: Respond to a Low SW Header Pressure / Loss of SW (PRA)

Revision: NRC 2004

Task Number: 2000350401

Approvals:

 9/8/04
General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY /
General Supervisor Date
Operations (Designee)

NA-EXAMINATION SECURITY /
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform ☐ Simulate

Evaluation Location: ☐ Plant ☒ Simulator

Expected Completion Time: 10 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:

Evaluators Signature: _____

Date: _____

Recommended Start Location:

Unit 1 Control Room Simulator

Simulator Set-up (if required):

1. Initialize the simulator to IC25.
2. Reduce power to 80%.
3. Insert malfunction: CW02A.
4. Insert overrides Panel H-7 meter page 5 of 7
07M029-AO-032-Service Water Header Pressure- override value "30" assign trigger (F4)
5. Take simulator out of freeze and silence the alarms.

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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 **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. K/A 295018, AA.01 (3.3/3.4) AA2.05 (2.9/2.9) AK.02 (3.4/3.6)
2. N1-ARP-H1; 1-2, 4-2
3. N1-SOP-18.1

Tools and Equipment:

None

Task Standard:

Completion of SOP-18.1, actions for loss of service water.

Initial Conditions:

1. Unit 1 is at 80% power.
2. Annunciator H1-1-2 and H1-4-2 are in alarm (just received).
3. Instructor to ask operator for any questions.

Initiating Cues:

"(Operator's name), Operator, perform the appropriate actions in response to these alarms."

*why can't bring in alarms
take watch & direct
to take action
as appropriate
you have watch panels*

Performance Steps	Standard	Grade	Comments
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	
2. Obtain a copy of the reference procedure and review/utilize the correct section of the procedure.	N1-ARP-H1, 1-2 and 4-2 referenced.	Sat/Unsat	
3. Performs following in response to alarms:			
4. •Confirm alarm on computer printout.	<i>Checks for alarm on computer printout.</i>	Sat/Unat	
	INSERT F4 07M029-AO-032-Service Water Header Pressure override value "30"WHEN performer starts SW pump 12		
5. Start SW Pump 12 and monitor system pressure.	<i>Rotates SW Pump 12 c/s to start. Observes red light ON, green light OFF.</i>	Pass/Fail	
	<i>Observes low system flow and discharge pressure.</i>	Pass/Fail	
ALTERNATE PATH: SOP-18.1 entry/actions based on inability to restore SW header pressure.			
6. Enters N1-SOP-18.1, SW Failure based on low system pressure.	<i>Enters N1-SOP-18.1.</i>	Pass/Fail	

7. Obtain a copy of the reference procedure and review/utilize the correct Path.	<p>PROMPT: After SOP-18.1 flow chart obtained and loss of service water override recognized, as the CRS/SM direct the performer to implement the override actions.</p> <p>Obtains SOP-18.1, reads reviews entry steps, Loss of Service Water.</p>	Pass/Fail	
8. Activate the emergency plan if required.	<p>PROMPT: As the CRS/SM, acknowledge that emergency plan entry may be required.</p> <p>Informs SM that emergency plan entry may be required.</p>	Sat/Unsat	
9. Place ESW in service.	<p>For both ESW Pump 11 and 12 at H Panel: Rotate c/s CW to start.</p>	Pass/Fail	
	<p>Observe red light On, green light OFF.</p>	Sat/Unsat	
10. Scram the reactor.	<p>Rotate Reactor Mode Switch to Shutdown.</p> <p>Observe all scram group and master scram lights extinguished. Observe control rods inserting to "00".</p>	Pass/Fail	
	<p>PROMPT: CSO will execute SOP-1 actions</p>	Sat/Unsat	
11. Initiate Emergency Condensers.	<p>For both 39-05 and 39-06 at K Panel: Rotate switch clockwise to OPEN.</p>	Pass/Fail	
	<p>Observe red light ON, green light OFF. (there is a 20-25 second TD prior to Red light on)</p>	Sat/Unsat	

12. Close MSIVs.

For each MSIV (111, 121, 112, 122) at the F Panel:

Rotate c/s CCW to CLOSE.

Pass/Fail

Observe red light ON, green light OFF.

Sat/Unsat

13. Trip all recirc pumps.

For each RRP (11, 12, 13, 14, 15) at the F Panel:

Rotate c/s CCW until green flag appears in window on F Panel.

Pass/Fail

Observe red light extinguished and green light energized.

Sat/Unsat

PROMPT: As Control Room E inform performer that you will monitor components cooled by RBCLC and TBCLC.

End of JPM. Inform performer this JPM is complete.

Terminating Cue: Completion of SOP-18.1, Path A override actions for loss of service water.

RECORD STOP TIME _____

Initial Conditions:

1. Unit 1 is at 80% power.
2. Annunciator H1-1-2 and H1-4-2 are in alarm (just received).
3. Instructor to ask operator for any questions.

Initiating Cues:

"(Operator's name), Operator, perform the appropriate actions in response to these alarms."

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

4

Title: Startup Control Room Ventilation System

Revision: NRC 2004

Task Number: 2880040101

Approvals:

 9/8/04
General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA-EXAMINATION SECURITY
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: ☒ Perform ☐ Simulate

Evaluation Location: ☐ Plant ☒ Simulator

Expected Completion Time: 10 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:

Evaluator Signature: _____

Date: _____

Recommended Start Location:

Simulator.

Simulator Set-up: IC 25

Emer Fan 11	off
Emer Fan 12	off
Chill Water Circ 11	Stop
Chill Water Circ 12	Stop
Chiller 11	Stop
Chiller 12	Stop
111 Chiller Comp 112	Off
121 Chiller Comp 122	Off
Control Room Circ Fan 11	Off
Control Room Circ Fan 12	Off

Directions to the Instructor/Evaluator:

None

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-OP-49; E.1.0.
2. K/A 290003 A3.01 (3.3/3.5), A4.01 (3.2/3.2)

Tools and Equipment:

1. None

Task Standard:

Startup the Control Room Ventilation System per N1-OP-49."

Initial Conditions:

1. The control room ventilation system is being restarted following testing.
2. N1-OP-49, Attachment 1 valve lineup is complete.
3. N1-OP-49, Attachment 2 electrical lineup is complete.
4. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), startup the Control Room Ventilation System with Control Room Circulating Fan 12, Cooling Coil 11, Chilled Water Circulating Pump 11, and Chiller 11 operating in accordance with N1-OP-49.”

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
	<i>Note: E.1.0 is NOT required; the valve and electrical lineups are complete per the initial conditions.</i>		
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-OP-49 obtained. - Section E.1.0 referenced.	Sat/Unsat	
3. If EM VENT SYS CHANNEL 11 or 12 alarm lights are lit, then depress RESET.	RESET is depressed. Alarm lights are off.	Sat/Unsat	
4. Verify the following are open : <input type="checkbox"/> 210-08, INLET BV 12 <input type="checkbox"/> 210-39, INLET BV 11	Checks 210-08, INLET BV 12 is open. RED light on, GREEN light off. Checks 210-39, INLET BV 11 is open. RED light on, GREEN light off.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
5. Verify the following are closed: <input type="checkbox"/> 210-40, 11 CR Emergency Fan Inlet BV <input type="checkbox"/> 210-41, 12 CR Emergency Fan Inlet BV	Checks 210-40, 11 CR Emergency Fan Inlet BV closed. Checks 210-41, 12 CR Emergency Fan Inlet BV closed.	Sat/Unsat	
6. Place Control Room Emergency Fan 11 control switch in AUTO.	Control Room Emergency Fan 11 control switch in AUTO.	Pass/Fail	
7. Place Control Room Emergency Fan 12 control switch in OFF.	Control Room Emergency Fan 12 control switch in OFF.	Pass/Fail	
8. Place Cooling Coil Block Valve selector switch in position 11.	Place Cooling Coil Block Valve selector switch in position 11.	Sat/Unsat	
9. Depress START pushbutton for CHILLED WATER CIRCULATING PUMP 11 and confirm red indicator light lit.	START pushbutton for CHILLED WATER CIRCULATING PUMP 11 is depressed. Checks red indicator light ON.	Sat/Unsat	
10. Starting 111 CHILLER COMPRESSOR 112:			
a. Place 111 CHILLER COMPRESSOR 112 control switch in RUN	111 CHILLER COMPRESSOR 112 control switch in RUN	Pass/Fail	
b. Place 121 CHILLER COMPRESSOR 122 control switch in RUN.	121 CHILLER COMPRESSOR 122 control switch in RUN.	Pass/Fail	
c. Depress CHILLER 11 START pushbutton.	CHILLER 11 START pushbutton depressed.	Pass/Fail	
d. Depress CHILLER 12 START pushbutton.	CHILLER 12 START pushbutton depressed	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
e. Confirm at least one chiller compressor red light lit.	Checks at least one chiller compressor red light ON.	Sat/Unsat	
11. Starting CR Circulating Fan:			
a. If Control Room Emergency Fan 11 was placed in AUTO, then place Circulating Fan 12 in RUN.	<p>Circulating Fan 12 in RUN.</p> <p>CR VENT SYSTEM TROUBLE alarm clears (L1-4-1).</p> <p><i>PROMPT: As the SM/CRS/CSO, acknowledge the report.</i></p>	Pass/Fail	
12. Report to SM/CRS/CSO that Control Room Ventilation System is operating per N1-OP-49.	Report received and acknowledged by SM/CSO.	Sat/Unsat	

End of JPM

TERMINATING CUE: The Control Room Ventilation System operating with Control Room Circulating Fan 12, Cooling Coil 11, Chilled Water Circulating Pump 11, and Chiller 11 operating in accordance with N1-OP-49.

RECORD STOP TIME _____

Initial Conditions:

1. The control room ventilation system is being restarted following testing.
2. N1-OP-49, Attachment 1 valve lineup is complete.
3. N1-OP-49, Attachment 2 electrical lineup is complete.
4. Ask the operator for any questions.

Initiating cue:

"(Operator's name), startup the Control Room Ventilation System with Control Room Circulating Fan 12, Cooling Coil 11, Chilled Water Circulating Pump 11, operating in accordance with N1-OP-49."

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

1

Title: Manually Vent the Scram Air Header
PRA: Execute N1-EOP-3.1, Alternate Control Rod Insertion

Revision: NRC 2004

Task Number: 2009230504

Approvals:

 9/8/04

General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY

General Supervisor Date
Operations (Designee)

NA-EXAMINATION SECURITY

Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: _____ Perform _____ ☒ Simulate

Evaluation Location: ☒ Plant _____ Simulator

Expected Completion Time: 8 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:

Evaluator Signature: _____

Date: _____

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

Reactor Building 261' elevation by the Turbine Building air lock.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO 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 / CSO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-EOP-3
2. N1-EOP-3.1
3. K/A 295037 EA1.05 (3.9/4.0)

Tools and Equipment:

1. EOP pipe wrench (attached at Valve 113-230, SCRAM AIR HEADER EMERGENCY VENT VALVE, RB EL. 237' (located at northwest corner of HCU bank).

Task Standard:

Scram air header is venting.

Initial Conditions:

1. You are an operator assigned to perform Reactor Building duties.
2. All control rods failed to insert following a reactor scram.
3. N1-EOP-3, Failure to Scram, and N1-EOP-3.1, Alternate Control Rod Insertion, have been entered.
4. ARI has been initiated but the scram air header pressure is NOT lowering.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), manually vent the scram air header per N1-EOP-3.1.”

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-EOP-3.1 obtained. - Section 2 referenced.	Sat/Unsat	
3. . Close IA-207 (113-3091), Scram Air Header Supply Valve. Note: Located in RB NW Stairwell just off stairway landing between Elev. 237’ and 261’.	IA-207 (113-3091), Scram Air Header Supply Valve, unlocked using a VA1 key. Rotates handwheel fully clockwise to close the valve (valve handwheel goes in as the valve closes).	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
4. Remove pipe cap from 113-230, Scram Air Header Emergency Vent Valve. Note: Located RB elev. 237' at NW corner of HCU bank at pillar (N-5), next to SDV. Pipe wrench hangs on a wire behind valve.	Using EOP pipe wrench attached to valve, remove pipe cap by rotating the wrench counter-clockwise until the cap is off.	Pass/Fail	
5. Unlock and open 113-230, Scram Air Header Emergency Vent Valve. Cue: When 113-230 is unlocked and opened, Inform performer air is evacuating from the pipe.	113-230, Scram Air Header Emergency Vent Valve, unlocked using a VA1 key. Rotates valve handle counter-clockwise to align handle parallel with the process pipe.	Pass/Fail	
6. Inform CSO the scram air header is venting. Cue: As CSO, acknowledge the scram air header is venting.	CSO informed that the scram air header is venting.	Sat/Unsat	

End of JPM

TERMINATING CUE: Scram air header is venting.

RECORD STOP TIME _____

Initial Conditions:

1. You are an operator assigned to perform Reactor Building duties.
2. All control rods failed to insert following a reactor scram.
3. N1-EOP-3, Failure to Scram, and N1-EOP-3.1, Alternate Control Rod Insertion, have been entered.
4. ARI has been initiated but the scram air header pressure is NOT lowering.

Initiating cue:

Manually vent the scram air header per N1-EOP-3.1.

Constellation Energy Group
OPERATOR JOB PERFORMANCE MEASURE

Title: RPV Injection for Shutdown Outside the Control Room per N1-SOP-9.1

Revision: NRC 2004

Task Number: 2009070403

Approvals:

 9/8/04
General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY
General Supervisor Date
Operations (Designee)

NA-EXAMINATION SECURITY
Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: _____ Perform _____ ☒ Simulate

Evaluation Location: ☒ Plant _____ Simulator

Expected Completion Time: 8 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:

Evaluator Signature: _____

Date: _____

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

Turbine Building 261' elevation by the Condensate Demin Panel.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO 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 / CSO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-SOP-9.1, Attachment 4.
2. N1-OP-21A, section H.1.0
3. K/A 295016 AA1.06 (4.0/4.1)

Tools and Equipment:

1. EOP wrench.
2. EOP spool piece.

Task Standard:

Fire water being injected into the reactor vessel.

Initial Conditions:

1. You are the NAOC.
2. The control room has been evacuated per N1-SOP-9.1.
3. Firewater injection to the RPV has been requested by the CRS.
4. The electric fire pump and the diesel fire pump are off (not running).
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), align reactor pressure vessel injection using the electric fire pump per N1-SOP-9.1, Attachment 4, N1-OP-21A, section H.1.0 and inject to the RPV when directed by the CRS.”

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-SOP-9.1 obtained. - Attachment 4 referenced.	Sat/Unsat	
3. Verify locked closed 29-07, BV - FIREWATER TO FEED WATER AFTER SPOOL PIECE (TB El. 261').	PROMPT: If valve checked in clockwise (closed) direction indicate valve does not move. If valve checked in the counter-clockwise direction (open) indicate valve moves until stopped by locking device. Without removing the locking device, check 29-07, BV - FIREWATER TO FEED WATER AFTER SPOOL PIECE rotation in clockwise direction to ensure closed.	Sat/Unsat	
4. Verify locked closed 100-33, BV - FIREWATER TO FEED WATER SPOOL PIECE INLET (TB El. 261').	Without removing the locking device, check 100-33, BV - FIREWATER TO FEED WATER SPOOL PIECE INLET rotation in clockwise direction to ensure closed.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
	<p><i>NOTE: EOP Box #1 has tools in it used to remove the drain line/spool piece. Simulate opening the EOP Box#1 once it is located.</i></p> <p><i>PROMPT: When union broken, indicate union is broken.</i></p>		
5. Remove drain line from Feed System blank flange (29-07).	Use appropriate wrench to break union and remove drain line from Feed System blank flange (29-07).	Sat/Unsat	
6. Remove blank flanges from Feedwater (29-07) and Fire System (100-33) lines.	<p><i>PROMPT: When lifting levers operated, indicate seal detensioned.</i></p> <p>Operates lifting levers upward to detension seal and removes Feedwater (29-07) blank flange.</p> <p>Operates lifting levers upward to detension seal and removes Fire System (100-33) blank flange.</p>	Sat/Unsat	
7. Install spoolpiece to intertie Feedwater (29-07) and Fire System (100-33) lines.	<p><i>PROMPT: After spool piece aligned and levers are pushed down to tension spoolpiece seals, indicate spool piece installed.</i></p> <p>Position spoolpiece to intertie Feedwater (29-07) and Fire System (100-33) lines and rotate tensioning levers downward to lock the spool piece in place.</p>	Pass/Fail	

Performance Steps	Standard	Grade	Comments
	<i>PROMPT: After lock unlocked and restraint removed, indicated unlocked and removed.</i>		
8. Unlock 29-07, BV - FIREWATER TO FEED WATER AFTER SPOOL PIECE (TB El. 261').	Unlock 29-07, BV - FIREWATER TO FEED WATER AFTER SPOOL PIECE using a VA1 key and remove restraint.	Sat/Unsat	
9. Unlock 100-33, BV - FIREWATER TO FEED WATER SPOOL PIECE INLET (TB El. 261').	Unlock 100-33, BV - FIREWATER TO FEED WATER SPOOL PIECE INLET using a VA-1 key and remove restraint.	Sat/Unsat	
10. Start the Electric Fire Pump as follows:	In the screenhouse: Per N1-OP-21A, section H.1.0		
a. Verify lubricant levels at STANDSTILL LEVEL in top and bottom Bulls Eyes.	<i>PROMPT: Indicated top and bottom bulls eyes at standstill level once located and being checked by performer.</i> Verify lubricant levels at STANDSTILL LEVEL in top and bottom Bulls Eyes.	Sat/Unsat	
b. Verify Electric Fire Pump Oil Reservoir, full.	<i>PROMPT: Indicate oil reservoir full once located and being checked by performer.</i> Verify Electric Fire Pump Oil Reservoir, full.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
	<p><i>PROMPT: Indicate electric fire pump running once started locally including the following indications once located and being checked by the performer:</i></p> <p><i>-Motor Amps =46 amps</i></p> <p><i>-Pump discharge pressure 142 psig</i></p> <p><i>-dp across strainer at 0.5 psid</i></p>		
c. Place Electric Fire Pump local control switch to START.	Place Electric Fire Pump control switch to START on local control panel.	Pass/Fail	
d. Confirm following parameters in normal operating range: Motor Amps ≤46.1 amps Pump dischg press 140-144 psig dp across strainer < 3 psid	Confirm the following parameters in normal operating range: Motor Amps ≤46.1 amps Pump discharge pressure 140 - 144 psig dp across strainer less than 3 psid	Sat/Unsat	
e. Confirm Annunciator. 2-2 2-2 Electric Fire Pump #1 Started, alarming on Main Fire Panel 2	<p><i>PROMPT: As CSO when requested to verify Annunciator MFP2-2 2-2 in alarm –</i></p> <p><i>CUE: Respond Annunciator MFP2-2 2-2 is alarming</i></p> <p><i>CUE: As the CRS, direct the NAOC to commence injection to the reactor vessel.</i></p>	Sat/Unsat	
11. WHEN directed, open the following valves to begin injection into RPV:			
	<i>PROMPT: If valve moved in clockwise (closed) direction indicate valve does not move. If valve checked in the counter-clockwise direction (open) indicate valve moves until open.</i>		
a. 29-07, BV - FIREWATER TO FEED WATER AFTER SPOOL PIECE.	Rotates 29-07, BV - FIREWATER TO FEED WATER AFTER SPOOL PIECE handwheel in CCW direction until open.	Pass/Fail	
b. 100-33, BV - FIREWATER TO FEED WATER SPOOL PIECE INLET.	Rotates 100-33, BV - FIREWATER TO FEED WATER SPOOL PIECE INLET handwheel in CCW direction until open.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
12. Verify no leakage at spoolpiece connections.	<i>PROMPT: Indicate no leakage.</i> Observes no leakage at both connections / sealing surfaces.	Sat/Unsat	
13. Inform CRS injection to the reactor vessel using firewater is in progress.	<i>Cue: As CRS, acknowledge report that firewater injection is in progress.</i> CSO informed that firewater injection is in progress.	Sat/Unsat	

End of JPM

TERMINATING CUE: Reactor vessel injection using firewater is in progress.

RECORD STOP TIME _____

Initial Conditions:

1. You are the NAOOC.
2. The control room has been evacuated per N1-SOP-9.1.
3. Firewater injection to the RPV has been requested by the CRS.
4. The electric fire pump and the diesel fire pump are off (not running).
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), align reactor pressure vessel injection using the electric fire pump per N1-SOP-9.1, Attachment 4, and inject to the RPV when directed by the CRS.”

木

Revision: NRC 2004

Task Number: 2000450401 (2630100104)

Approvals:

Gregg R. Smith 9/8/04
General Supervisor Date
Operations Training (Designee)

NA-EXAMINATION SECURITY

General Supervisor
Operations (Designee)

Date _____

NA-EXAMINATION SECURITY

Configuration Control	Date
-----------------------	------

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: Perform X Simulate

Evaluation Location: X Plant Simulator

Expected Completion Time: 20 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:

Evaluator Signature: _____

Date: _____

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

Admin Building or Control Room

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

Prior to performance of this JPM, obtain SM / CSO 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 / CSO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SM, CSO, 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.

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 additional / concurrent verifier.

Notes to Instructor / Evaluator:

1. Critical steps are identified 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. N1-OP-47A, Section H.9.0
2. K/A 295004 AA1.01 (3.3/3.4)

Tools and Equipment:

1. None.

Task Standard:

DC supply switches transferred from Battery Board 11 to Battery Board 12.

Initial Conditions:

1. The Reactor is operating at power.
2. A loss of Battery Board #11 has been experienced.
3. Instructor to ask operator for any questions.

Initiating cue:

“(Operator’s name), transfer DC supply switches from Battery Board 11 to Battery Board 12 per OP-47A.”

Performance Steps	Standard	Grade	Comments
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)	Sat/Unsat	
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-OP-47A obtained. Section H.9.0, step 9.1 referenced.	Sat/Unsat	
3. At #11 DC Valve Board, take BB11 switch to OFF.	<i>PROMPT: When BB11 switch CCW rotated to OFF, indicate in off.</i> Rotate BB11 switch CCW to OFF.	Pass/Fail	
4. At #11 DC Valve Board, take BB12 switch to ON.	<i>PROMPT: When BB12 switch rotated CW to ON, indicate in on.</i> Rotate BB12 switch CW to ON.	Pass/Fail	
5. At #11 Power Board, transfer DC control power to #12 Battery Board.	<i>PROMPT: When #11 Power Board knife switch moved to Battery Board 12 position, indicate in Battery Board 12 position.</i> At #11 Power Board, pull knife switch down to Battery Board 12 position.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
6. At #101 Power Board, transfer DC control power to #12 Battery Board.	<p><i>PROMPT: When #101 Power Board knife switch moved to Battery Board 12 position, indicate in Battery Board 12 position..</i></p> <p>At #101 Power Board, pull knife switch down to Battery Board 12 position.</p>	Pass/Fail	
7. At #102 Power Board, transfer DC control power to #12 Battery Board.	<p><i>PROMPT: When #102 Power Board knife switch moved to Battery Board 12 position, indicated in Battery Board 12 position.</i></p> <p>At #102 Power Board, pull knife switch down to Battery Board 12 position.</p>	Pass/Fail	
8. At #16 Power Board, transfer DC control power to #12 Battery Board.	<p><i>PROMPT: When #16 Power Board knife switch moved to Battery Board 12 position, indicate in Battery Board 12 position.</i></p> <p>At #16 Power Board, pull knife switch down to Battery Board 12 position.</p>	Pass/Fail	
9. Control Room informed of task completion.	<p><i>CUE: Another operator will complete Steps 9.2 to 9.8.</i></p> <p>Control room informed that DC supply switches are aligned to Battery Board 12.</p>	Sat/Unsat	

End of JPM

TERMINATING CUE: DC supply switches transferred from Battery Board 11 to Battery Board 12.

RECORD STOP TIME_____

Initial Conditions:

1. The Reactor is operating at power.
2. A loss of Battery Board #11 has been experienced.
3. Instructor to ask operator for any questions.

Initiating cue:

"(Operator's name), transfer DC supply switches from Battery Board 11 to Battery Board 12 per OP-47A."