

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Transfer Normal House Service to Reserve Transformers

Revision: 0

Task Number:

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

Configuration Control Date

Performer: _____(RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: Perform _____ Simulate

Evaluation Location: _____ Plant Simulator

Expected Completion Time: 5 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)

Simulator.

Simulator Set-up:

IC-13.

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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-30, Rev 14
K/A 262001 A4.04 (3.6/3.7)

Tools and Equipment:

1. None

Task Standard:

Transfer normal house service to the Reserve Transformers.

Initial Conditions:

1. A reactor startup is in progress.
2. The main generator is synched to the grid a 225 Mwe.
3. The main generator is supplying House loads.
4. Because of high turbine vibration, the ASSS has directed that house loads be transferred to reserve and power be reduced prior to inserting a manual reactor scram.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), transfer normal house service to reserve transformers in accordance with N1-OP-30.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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-OP-30 obtained. - Section G.1.0 referenced.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
3. Confirm main generator load is stable.	Check main generator megawatts stable - meter on Panel A7 - digital indication on Panel K		
4. Insert Sync. Key in Breaker R112. Note: Located on Panel G below A-4 annunciator panel.	Positions Sync. Key in Breaker R112.	Pass/Fail	
a. Turn Sync. Key ON.	Positions Sync. Key for Breaker R112 to ON.	Pass/Fail	
b. Confirm voltages matched.	Check INCOMING and RUNNING voltages are matched (@ 120 vac). If needed, adjust TAP CHGR CONT TRANS 10 to match incoming and running voltages.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
5. Close breaker R112 and immediately open R113.	Positions c/s for R112 to CLOSE. Observes red light on <u>and</u> green light off. When R112 is closed, positions c/s for R113 to TRIP. Observes green light on <u>and</u> red light off.	Pass/Fail	
6. Leave R113 control switch in NEUTRAL.	Observes R113 c/s switch in NEUTRAL. Note: R113 c/s is spring-return to Neutral.	Sat/Usat	
7. Place Sync. Key in OFF and remove from breaker R112.	Positions Sync. Key in Breaker R112 to OFF. Removes Sync. Key from Breaker R112.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
8. Insert Sync. Key in Breaker R123. Note: Located on Panel G below A-5 annunciator panel.	Positions Sync. Key in Breaker R123.	Pass/Fail	
a. Turn Sync. Key ON.	Positions Sync. Key for Breaker R123 to ON.	Pass/Fail	
b. Confirm voltages matched.	Check INCOMING and RUNNING voltages are matched (@ 120 vac).	Sat/Unsat	
9. Close breaker R123 and immediately open R122.	Positions c/s for R123 to CLOSE. Observes red light on <u>and</u> green light off. When R123 is closed, positions c/s for R122 to TRIP. Observes green light on <u>and</u> red light off.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
10. Leave R122 control switch in NEUTRAL.	Observes R113 control switch in NEUTRAL. Note: R113 c/s is spring-return to Neutral.	Sat/Usat	
11. Place Sync. Key in OFF and remove from R123.	Positions Sync. Key in Breaker R123 to OFF. Removes Sync. Key from Breaker R123.	Sat/Unsats	
12. Report to SSS/CSO that House Service is transferred to reserve transformers. End of JPM	Report received and acknowledged by SSS/CSO.	Sat/Unsats	

TERMINATING CUE: House Service is transferred to reserve transformers.

RECORD STOP TIME _____

Initial Conditions:

A reactor startup is in progress.

The main generator is synched to the grid a 225 Mwe.

The main generator is supplying House loads.

Because of high turbine vibration, the ASSS has directed that house loads be transferred to reserve and power be reduced prior to inserting a manual reactor scram.

Initiating cue:

Transfer normal house service to reserve transformers in accordance with N1-OP-30.

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Bypass an LPRM Input (20-25A) to an APRM (APRM 13)

Revision: 0

Task Number:

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: Perform Simulate

Evaluation Location: Plant Simulator

Expected Completion Time: 5 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)

Simulator.

Simulator Set-up:

1. IC-13.
2. LPRM 20-25A failed downscale (NM292025A).
3. LPRM 20-25A Power Supply, NPWRS-RJ01C-L, on backpanel is selected to Position 1.

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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-38c, Rev 17
K/A 215005 A2.02 (3.6/3.7), A4.03 (3.2/3.3), A4.04 (3.2/3.2)

Tools and Equipment:

1. None

Task Standard:

LPRM 20-25A input to APRM 13 is bypassed per N1-OP-38c and APRM 13 is unbypassed.

Initial Conditions:

1. LPRM 20-25A failed downscale.
2. There are no other LPRMs inoperable or bypassed.
3. No APRMs are bypassed.
4. The ASSS has completed N1-OP-38C, Attachment 5, and determined that the LPRM 20-25A input to its associated APRM can be bypassed.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), bypass LPRM 20-25A input to its associated APRM per N1-OP-38C.” Note: You are NOT required to bypass the LPRM alarm function.

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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-OP-38c obtained. - Section H.3.0 referenced.	Sat/Unsat	
3. Bypass the APRM assigned to the LPRM that will be bypassed.	Determines LPRM 20-25A is assigned to APRM 13 (back panel or att. 5 of OP-38c). Positions BYPASS APRM 11-12-13-14 joystick to CH 13.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
4. Position LPRM to be bypassed to readout on APRM module drawer.	<p>At APRM 13 drawer, position INPUT selector switch, S9, to position 4.</p> <p>Observe meter indication.</p> <p>Note: APRM 12 and APRM 13 share the same drawer.</p>	Pass/Fail	
5. Position LPRM to readout on its power supply module.	<p>Position Power Supply selector switch for NPWRS-RJ01C-L to Position 4.</p> <p>Observe meter indication.</p>	Pass/Fail	
<p>6. Slide APRM drawer to open to expose red LPRM bypass knurled knobs.</p> <p>Note: Switches used to bypass the specific LPPRM signal to its APRM averaging circuit are located in the related APRM module. Withdrawing this module exposes knurled knobs, which are numbered to correspond with the LPRMs on the faceplate.</p>	<p>APRM drawer pulled out to expose red knurled knobs.</p>	<p>Sat/Unsat</p> <p>Note: The grade is not pass/fail because drawers are kept open.</p>	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
7. Rotate LPRM red knurled knob counter-clockwise to bypass LPRM.	Rotate LPRM red knurled knob (4) counter-clockwise 1/4 turn. Note: The bypass switch is a two-position switch and will only rotate 1/4 turn.	Pass/Fail	
8. Confirm LPRM reading on APRM drawer reads zero.	Observes PERCENT POWER meter at 0% with APRM 13 INPUT selector switch, S9, in position 4.	Sat/Unsat	
9. Confirm LPRM reading on power supply module remains the same.	Observe LPRM reading on power supply module did not change.	Sat/Unsat	
10. Place APRM drawer counts switch to COUNT.	Position APRM 13 drawer counts switch to COUNT.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
11. Confirm LPRM count rate on APRM module drawer reflects the number of non-bypassed LPRMs assigned to the APRM channel.	<p>Determines that there a 7 operable LPRM inputs to APRM 13.</p> <p>Determines that LPRM count rate on APRM 13 should indicate 70%.</p> <p>Observes PERCENT POWER meter for APRM 13 indicates 70%.</p>	Pass/Fail	
12. Verify APRM drawer switch is in average.	Positions APRM 13 drawer switch to AVERAGE.	Sat/Unsat	
13. Notify the Reactor Engineering (RE) department that an LPRM has been bypassed.	<p>Notify RE that LPRM 20-25A input to APRM 13 is bypassed.</p> <p>Cue: As RE, acknowledge the report that LPRM 20-25A input to APRM 13 is bypassed.</p> <p>Cue: Inform the operator that RE will perform the APRM GAIN ADJUSTMENTS per N1-REP-12.</p>	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
<p>14. Perform APRM gain adjustment per N1-OP43A Attachment, APRM GAIN ADJUSTMENT, or N1-REP-12, APRM GAIN ADJUSTMENT.</p> <p>Cue: As RE, report to the reactor operator that the APRM GAIN ADJUSTMENT per N1-REP-12 is complete.</p>	<p>Acknowledge report from RE that the the APRM GAIN ADJUSTMENT per N1-REP-12 is complete.</p>	Sat./Unsat	
<p>15. Remove selected APRM from bypass.</p>	<p>Positions BYPASS APRM 11-12-13-14 joystick to NEUTRAL position.</p> <p>Checks back panel light to verify APRM unbypassed.</p>	Sat/Unsat	
<p>16. Ensure an ESL entry is made for the bypassed LPRM.</p>	<p>Inform the SSS/ASSS that an ESL entry is required for the bypassed LPRM.</p> <p>Cue: As the SSS/ASSS, acknowledge the requirement to enter the bypassed LPRM into the ESL log.</p>	Sat/Unsat	
<p>17. Report to SSS/CSO that LPRM 20-25A input to APRM 13 is bypassed.</p>	<p>Report received and acknowledged by SSS/CSO</p>	Sat/Unsat	

End of JPM

TERMINATING CUE: LPRM 20-25A input to APRM 13 is bypassed.

RECORD STOP TIME _____

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Startup Control Room Ventilation System

Revision: 0

Task Number:

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

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: (Completion time based on the start location)

Simulator.

Simulator Set-up:

IC 13.

Place CREVS in operation (1 chiller and 1 cw pump).

Secure control room ventilation (Emer Fan 11 in OFF, Emer Fan 12 in AUTO).

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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, Rev 13
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 and is currently shutdown.
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 _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-OP-49 obtained. - Section E, Startup, referenced.	Sat/Unsat	

Note: Step E.1.0 is NOT required since the valve and electrical lineups are complete (see initial conditions)

Performance Steps	Standard	Grade	Comments
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	
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	

Performance Steps	Standard	Grade	Comments
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 Valve selector switch in position 11.	Place Cooling Coil Valve selector switch in position 11. <i>MEANS LEAVE 11 BLOCK VALVE OPEN</i>	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 lit.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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 AUTO.	121 CHILLER COMPRESSOR 122 control switch in AUTO.	Sat/Unsat	
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 lead chiller compressor red light lit.	Checks at least one lead chiller compressor red light lit.	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.	Circulating Fan 12 in RUN. CR VENT STSTEM TROUBLE alarm clears (L1-4-1).	Pass/Fail	
12. Report to SSS/CSO that Control Room Ventilation System is 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.	Report received and acknowledged by SSS/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 _____

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: RPV Depress Through the Emergency Condenser Vents (to the Torus)
(Alternate Path)

Revision: 0

Task Number:

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

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: (Completion time based on the start location)

Simulator.

Simulator Set-up:

- a. (F5) MS03A ONE MSIV FAILS CLOSED
- b. (F5) MS03B ONE MSIV FAILS CLOSED
- c. AD07B, ERV FAILS SHUT (Queued)
- d. AD07C, ERV FAILS SHUT (Queued)
- e. AD07D, ERV FAILS SHUT (Queued)
- f. AD07E, ERV FAILS SHUT (Queued)
- g. AD07F, ERV FAILS SHUT (Queued)
- h. (F5) EC01, STEAM LEAKAGE INSIDE PC (50%)
- i. (F5) FW02A FEEDWATER BOOSTER PUMP TRIP
- j. (F5) FW02B FEEDWATER BOOSTER PUMP TRIP
- k. (F5) FW02C FEEDWATER BOOSTER PUMP TRIP

- *Ensure Conditions present requiring RPV blowdown per NI-EOP-2, RPV CONTROL.*
- *Ensure ERVs do not function requiring use of alternate depressurization systems (only ERV 111 opens).*
- *Ensure RPV pressure is at least 72 psi above torus pressure.*
- *Ensure torus water level is above 8.5 feet.*
- *Ensure Main Turbine Bypass Valves are NOT available.*

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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-1, Attachment 14
K/A 207000, A1.05 (4.0/4.2), A4.05 (3.5/3.7), A4.07 (4.2/4.3)

Tools and Equipment:

1. None

Task Standard:

Emergency Depressurize the RPV through the Emergency Condenser Vents to the Torus.

Initial Conditions:

1. The reactor has scrammed
2. MSIVs are closed
3. RPV blowdown is required per N1-EOP-2, RPV Control.
4. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), Commence an RPV Blowdown, open 3 ERVs.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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	<div style="border: 1px solid black; height: 80px;"></div>
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-EOP-8, RPV BLOWDOWN, obtained. - Step 14 “Open 3 ERVs”		<div style="border: 1px solid black; height: 110px;"></div>
Note: It is not necessary to reference the EOP since this action is normally directed by the SSS.			

Alternate Path: Only 1 ERV opens. Alternate depressurization systems must be used.

Performance Steps	Standard	Grade	Comments
3. Open 3 ERVs.	Positions c/s to OPEN for ERVs until 3 ERVs are open indicated by red light on <u>and</u> green light off: - NR-108A / ERV 111 - NR-108B / ERV 112 - NR-108C / ERV 121 - NR-108D / ERV 122 - NR-108E / ERV 113 - NR-108F / ERV 123 Determines that only ERV 111 is open. Reports to SRO that only ERV 111 opened.	Pass/Fail	
Cue: As the SSS, acknowledge the report that only 1 ERV opened.			
Cue: As the SSS, direct the candidate to depressurize the RPV using the Emergency Condenser vents to the torus per N1-EOP-1, Att. 14.			
4. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-EOP-1 obtained. - Attachment 14 referenced.	Sat/Unsat	
5. Verify the Bypass MSIV Isolation jumpers at EOP ISOLATION BYPASS JUMPER SUBPANEL installed.	Determines the jumpers to bypass the MSIV Isolation are NOT installed. Note: Inside Panel N, between 1N1A and 1N1B.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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a. Installs the following jumpers:

	Obtain the following items from the EOP toolbox: <ul style="list-style-type: none"> - Key - Banana plug jumpers - Leather and rubber gloves - Safety glasses 	Sat/Unsat	
	Unlocks and removes the master lock for the EOP jumper panel cover. Removes the EOP jumper panel cover.	Pass/Fail	
<input type="checkbox"/> Jumper #15, MSIV ISOLATION BYPASS RELAY 11K19A TO RELAY 11K73.	Jumper #15 installed (banana plug).	Pass/Fail	
<input type="checkbox"/> Jumper #16, MSIV ISOLATION BYPASS RELAY 11K20A TO RELAY 11K74.	Jumper #16 installed (banana plug).	Pass/Fail	
<input type="checkbox"/> Jumper #22, MSIV ISOLATION BYPASS RELAY 12K19A TO RELAY 12K73.	Jumper #22 installed (banana plug).	Pass/Fail	
<input type="checkbox"/> Jumper #23, MSIV ISOLATION BYPASS RELAY 12K20A TO RELAY 12K74.	Jumper #23 installed (banana plug).	Pass/Fail	
	Leaves the plastic EOP jumper panel removed.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
6. Depressurize the RPV using EC Vents to Torus	Proceeds to Step 2.4, EC Vents to Torus.	Sat/Unsat	
7. Confirms Torus level is above 8.5 feet.	At K Panel verifies torus level is >8.5 feet	Sat/Unsat	
8. Verify Emergency Condenser vents to the torus are OPEN:			
a. 05-05, EC VENT TO TORUS BV 11	Position c/s to open. Observe 05-05, EC VENT TO TORUS BV 11, red light on and green light off.	Pass/Fail	
b. 05-07, EC VENT TO TORUS BV 12	Position c/s to open. Observe 5-11, EMERG COND VENT ISOLATION VALVE 112, red light on and green light off.	Pass/Fail	
c. 05-11, EMERG COND VENT ISOLATION VALVE 112	Observe 05-11, EMERG COND VENT ISOLATION VALVE 112, red light on and green light off.		
d. 05-01R, EMERG COND VENT ISOLATION VALVE 111	Observe 05-01R, EMERG COND VENT ISOLATION VALVE 111, red light on and green light off.	Sat/Unsat	
e. 05-04R, EMERG COND VENT ISOLATION VALVE 121	Observe 05-04R, EMERG COND VENT ISOLATION VALVE 121, red light on and green light off.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
f. 05-12, EMERG COND VENT ISOLATION VALVE 122	05-12, EMERG COND VENT ISOLATION VALVE 122, red light on and green light off.	Sat/Unsat	
9. Reports to the SSS/ASSS that the reactor is being depressurized using the Emergency Condenser vents to the main condenser.	<p>Reports to the SSS/ASSS that the reactor is being depressurized using the Emergency Condenser vents to the main condenser.</p> <p>Cue: Acknowledge as the SSS/ASSS that the reactor is being depressurized using the Emergency Condenser vents to the main condenser.</p>	Sat/Unsat	

End of JPM

TERMINATING CUE: The RPV is depressurized using the Emergency Condenser Vents to the Torus.

RECORD STOP TIME _____

Initial Conditions:

1. The reactor has scrammed
2. MSIVs are closed
3. RPV blowdown is required per N1-EOP-2, RPV Control.

Initiating cue:

Commence an RPV Blowdown, open 3 ERVs.”

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Switching CRD Flow Control Valves (alternate path)
Respond to MULTIPLE ROD DRIFTS

Revision: 0

Task Number: 2239010401

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

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:

N/A

Simulator Set-up:

- a. IC-24.
- b. RD014243, 42-43, Control Rod Failure – Drift In (F3)
- c. RD093839, 38-39, Control Rod Failure – Drift In (F4)
- d. CRD pump 11 and FCV 11 (A) in service.

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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, F.5.0
2. N1-ARP-F3, 2-4
K/A 201001 A2.07 (3.2/3.1), 201002 A2.02 (3.2/3.3)

Tools and Equipment:

1. None

Task Standard: Manual reactor scram is inserted when the second rod drift is received and N1-SOP-1 is entered.

Initial Conditions:

1. The plant is at 100% power.
2. CRD FCV 11 (44-151), which is in service needs to be removed from service.
3. Communications are established between the Control Room and RB elev. 237'.
4. For this JPM you are accountable to respond to all alarms at the F Panel and take the required actions.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), switch CRD FCV from 11 (44-151) to 12 (44-159) per N1-OP-5, Section F.5.0.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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 F.5.0 referenced.	Sat/Unsat	

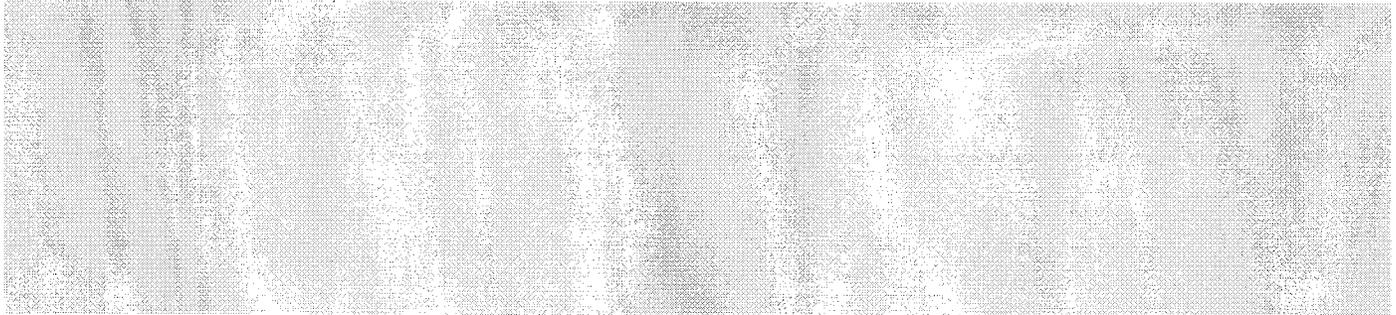
<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
3. Establish communications between the control room and RB elev. 237'.	Directs Auxiliary Operator to establish communications at the CRD flow control station.	Sat/Unsat	
4. Place CRD FLOW CONTROL M/A Station in MANUAL.	Rotates thumb wheel to BALANCE. Adjust pot as necessary to balance signal. Observe indicator is centered (controller signal is balanced). Rotates thumb wheel to MANUAL.	Sat/Unsat	
5. Open the following valves: a. Open 44-148, BV-CRD FCV 44-149 Inlet b. Open 44-152, BV-CRD FCV 44-149 Outlet	Directs the Auxiliary Operator to: perform steps 5.3.1.a and 5.3.1.b OR Open 44-148, BV-CRD FCV 44-149 Inlet Open 44-152, BV-CRD FCV 44-149 Outlet	Sat/Unsat	

Cue: As the Auxiliary Operator, repeat-back the order and receive confirmation repeat-back is correct.

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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Alternate Path: After the AO has been directed to switch the FCVs, insert the **ROD DRIFT IN** malfunction for control rod 42-43 (F3).

When the candidate positions the **EMER ROD IN** switch to insert rod 42-43 **OR** when rod 42-43 is at position 30, insert the **ROD DRIFT IN** malfunction for control rod 38-39.



<p>6. Respond to annunciator F3-2-6.</p>	<p>Silence and acknowledge alarm. Reference ARP F3-2-6.</p>	<p>Sat/Unsat</p>	<div style="border: 1px solid black; height: 50px;"></div>
<p>a. Confirm control rod 42-43 is drifting in.</p>	<p>Observe F Panel RPIS indication AND/OR Control rod position of process computer. Determines control rod 42-43 is drifting in.</p>	<p>Sat/Unsat</p>	<div style="border: 1px solid black; height: 80px;"></div>
<p>b. • If > 1 rod is drifting, then insert a manual reactor scram. Enter N1-SOP-1, Reactor Scram.</p>	<p>Determines that only one rod is drifting. Determines reactor scram is NOT required.</p>	<p>Pass/Fail</p>	<div style="border: 1px solid black; height: 70px;"></div>

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
c. Select drifting rod and insert to notch 00 using EMERGENCY ROD IN.	<p>Depress rod select matrix p.b. for control rod 42-43 and verify backlight is lit.</p> <p>Verify full core display select light (white) for control rod 42-43 is lit.</p> <p>Positions EMERGENCY ROD IN to INSERT and hold.</p> <p>Verify 42-43 is moving inward using RPIS.</p>		
d. • If > 1 rod is drifting, then insert a manual reactor scram. Enter N1-SOP-1, Reactor Scram.	<p>Determines that control rod 38-39 is also drifting (2 rods drifting).</p> <p>Determines reactor scram is required.</p> <p>Place Reactor Mode Switch to shutdown.</p>	Pass/Fail	
e. Reports the Mode switch is in shutdown, RPV water level, RPV pressure and control rod position status.	Report received and acknowledged.	Sat/Unsat	

End of JPM

TERMINATING CUE: Manual reactor scram is inserted when the second rod drift is received and N1-SOP-1 is entered.

RECORD STOP TIME _____

Initial Conditions:

- 1. The plant is at 100% power. CRD Pump 12 is out of service for maintenance.**
- 2. CRD FCV A (44-151), which is in service needs to be removed from service.**
- 3. Communications are established between the Control Room and RB elev. 237'.**
- 4. For this JPM you are accountable to respond to all alarms at the F Panel and take the required actions.**

Initiating cue:

Switch CRD FCV from 11 (44-151) to 12 (44-159) per N1-OP-5, Section F.5.0.

NIAGARA MOHAWK POWER CORPORATION
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)

Revision: 0

PRA: Vent the Primary Containment through RBEVS from the Control Room.

Task Number: 2239010401

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

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: (Completion time based on the start location)

- a. Initialize to IC-14 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.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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-1, Attachment 10, Rev 3
2. N1-EOP-4, Rev 8
K/A 295024 EA 1.19 (3.3/3.4)

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. Drywell pressure is approaching 2.0 psig.
2. Drywell temperature is approaching 200°F.
3. N1-EOP-04 has been entered.
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 using EOP-1, Attachment 10.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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 EOP-1, Attachment 10, VENTING PRIMARY CONTAINMENT thru RBEVS and review/utilize section 2.3.	N1-EOP-1 obtained. - Attachment 10 referenced - Section 2.3 referenced.	Sat/Unsat	
3. Verify drywell pressure ≤ 3.0 psig.	Checks drywell pressure ≤ 3.0 psig. Drywell pressure will be 1 – 3 psig	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
4. 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	
5. Verify the following valves are closed:			
a. 201-21, DRYWELL & TORUS VENT & PURGE FAN INLET BV	Observes green light ON. Observes red light OFF.	Sat/Unsat	
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	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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 goes OFF and green light goes ON	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
6. Open 201-18, EM VENTILATION FROM DRYWELL AND TORUS BV	Positions c/s to OPEN. Observes red light ON. Observes green light OFF.	Pass/Fail	
7. Open EM Ventilation Loop Inlet BV 202-37 (System 11).	Positions c/s to OPEN. Observes red light ON. Observes green light OFF.	Pass/Fail	
8. Verify 201-16 Torus N2 Vent & Purge Isolation Valve 11 is closed.	Positions c/s to CLOSE Observes green light ON. Observes red light OFF.	Sat/Unsat	
9. Verify 201-17 Torus N2 Vent & Purge Isolation Valve 12 is closed.	Positions c/s to CLOSE Observes green light ON. Observes red light OFF.	Sat/Unsat	
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 ASSS/SSS that Valve 201-32 will not open.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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Cue: As ASSS/SSS, acknowledge that Valve 201-32 will not open. Direct the operator to secure from current lineup and vent the primary containment via the Torus through Reactor Building Emergency Ventilation system 11.

11. Secure from drywell venting as follows:			
a. Close 202-37, EM Ventilation Loop Inlet BV (System 11).	Positions c/s to CLOSE. Observes green light ON. Observes 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. Observes 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. Observes green light OFF.	Sat/Unsat	
12. Refers to appropriate section of the procedure.	References N1-EOP-1, Attachment 10, Section 2.4 TORUS VENTING.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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 the following valves are closed:			
a. 201-21, DRYWELL & TORUS VENT & PURGE FAN INLET BV	Observes green light ON. Observes red light OFF.	Sat/Unsat	
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	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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 control switch and rotates it to CLOSE Observes red light OFF and green light ON	Sat/Unsat	
15. Open 201-18, EM VENTILATION FROM DRYWELL AND TORUS BV	Positions c/s to OPEN. Observes red light ON. Observes green light OFF.	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
16. Open 202-37, EM Ventilation Loop Inlet BV (System 11).	Positions c/s to OPEN. Observes red light ON. Observes green light OFF.	Pass/Fail	
17. Verify 201-31 DW N2 Vent & Purge Isolation Valve 12 is closed.	Positions c/s to CLOSE Observes green light ON. Observes red light OFF.	Sat/Unsat	
18. Verify 201-32, DW N2 Vent & Purge Isolation Valve 11 is closed.	Observes green light ON. Observes red light OFF.	Sat/Unsat	
19. Open 201-16, Torus N2 Vent & Purge Isolation Valve 11.	Positions c/s to OPEN. Observes red light ON Observes green light OFF	Pass/Fail	
20. Start EM VENT EXHAUST FAN 11. Annunciator L1, 1-6, EMERG VENT SYS EXH FLOW LOW FILTER □p alarms	Positions c/s to START. Observes red light ON. Observes green light OFF. Acknowledges Annunciator L1, 1-6, EMERG VENT SYS EXH FLOW LOW FILTER □p	Pass/Fail	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
21. Throttle open 201-17, TORUS N2 VENT & PURGE ISOLATION VALVE 12.	<p>Position c/s to open or close and pulls up on c/s to hold valve at throttled position.</p> <p>Adjusts valve position to establish flow at ≤1600 cfm indicated on L panel indicator.</p> <p>Note: It is acceptable for flow to exceed 1600 cfm momentarily while positioning valve 201-17.</p>	Pass/Fail	
22. Verify flow rate is ≤1600 cfm.	Adjusts valve position to establish flow at ≤1600 cfm indicated on L panel indicator.	Pass/Fail	
23. Inform SSS/ASSS that the Torus is being vented through the Reactor Building Emergency Ventilation System 11.	SSS/ASSS informed that the Torus is being vented through the Reactor Building Emergency Ventilation System 11.	Sat/Unsat	
Cue: As the SSS/ ASSS, acknowledge the report that the Torus is being vented through the RBEVS 11.			

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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End of JPM

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

RECORD STOP TIME_____

Initial Conditions:

- 1. Drywell pressure is approaching 2.0 psig.**
- 2. Drywell temperature is approaching 200°F.**
- 3. N1-EOP-04 has been entered.**
- 4. The SRO has determined that it is necessary to vent the containment.**

Initiating cue:

Vent the Drywell through the Reactor Building Emergency Ventilation System 11.”

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Recirc Pump Startup During Power Operations

Revision: 0

Task Number: 2239010401

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: Perform Simulate

Evaluation Location: Plant Simulator

Expected Completion Time: 30 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:

N/A

Simulator Set-up:

- a. Initialize to power operation IC with four recirc pumps in operation. Recirc pump #13 is secured.
- b. Reactor power at 85% power.
- c. Ensure recirc flow is $< 50 \times 10^6$ lbm/hr.
- d. Recirc pump 13:
 - ensure that the suction valve and the discharge bypass valve are open, and the discharge valve is closed (N1-OP-1, H.14.0)
 - ensure the pump controller is in manual at 40%.
- e. Recirc loop 13 loop temperature is within 17°F of an operating loop temperature.

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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-1, H.14.0
2. N1-OP-1, H.5.0
K/A 202001 A4.01 (3.7/3.7)

Tools and Equipment:

1. None

Task Standard: Recirc Pump 13 is in operation with its discharge valve open and its flow controller in automatic.

Initial Conditions:

1. The plant is at 85% power with four recirc pumps in operation.
2. The mechanical stops have NOT been adjusted for four (4) loop operation.
3. Recirc loop #13 flow instrument is valved in.
4. Recirc pump #13 is secured.
5. Reactor engineer has reported that the projected power increase from a recirc pump start will NOT violate thermal limits or preconditioning limits.
6. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), start recirc pump 13 per N1-OP-1, Section H.5.0.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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-1 obtained. - Section H.5.0 referenced.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
3. Verify recirc pump is unisolated. Checks the following valves are OPEN:			
a. REACTOR R PUMP 13 SUCTION VALVE	Observes green light OFF. Observes red light ON.	Sat/Unsat	
b. REACTOR R PUMP 13 DISCHARGE BYPASS VALVE	Observes green light OFF. Observes red light ON.	Sat/Unsat	
4. Verify loop flow instrument is valved in. Cue: As the ASSS, the recirc loop 13 flow instrument is valved in.	Confirms through shift management that the flow instrument is valved in.	Sat/Unsat	
5. If the mechanical stops were adjusted for 4 loop operation, then place the operating loops on the local M/A controller. Cue: As the ASSS, the Mechanical stops are adjusted for 5 loop operation.	Confirms through shift management that the mechanical stops are adjusted for 5 loop operation.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
6. Confirm idle loop temperature is within 17°F of an operating loop temperature.	<p>Using computer points: Compare recirc pump 13 suction temp (A435) to another pump suction temp (A427, A431, A439, or A443). Confirm within 17°F of each other.</p>	Sat/Unsat	
	<p>Compare recirc pump 13 discharge temp (A436) to another pump discharge temp (A428, A432, A440, or A444). Confirm within 17°F of each other.</p>	Sat/Unsat	
7. Verify the following are RESET for recirc pump 13:			
a. LOCKOUT RELAY Cue: If asked, as the AO report the LOCKOUT RELAY for recirc pump 13 in the Aux. Control Room is reset.	Direct an operator to the Auxiliary Control Room to check the LOCKOUT RELAY is RESET.	Sat/Unsat	
b. PUMP MOTOR VIBRATION RESET	Check computer for no alarms. Depress reset pushbutton (not required)	Sat/Unsat	
c. SCOOP TUBE AIR FAILURE LOCK RESET	Check scoop tube lock failure light clear. Depress reset pushbutton (not required)	Sat/Unsat	
8. Verify recirc pump M/A station AUTO/BAL/MAN switch to MAN.	Verify AUTO/BAL/MAN switch positioned to MAN.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
9. Set RECIRC PUMP 13 SPEED CONTROL to match running pumps.	Position RECIRC PUMP 13 SPEED CONTROL to match running pumps. 50% speed (maximum) is NOT exceeded	Pass/Fail	
10. Verify scoop tube position at 40%.	Verify scoop tube position indicator at 40%.	Sat/Unsat	
11. Verify REACTOR R PUMP 13 DISCHARGE VALVE is closed.	Observes green light ON. Observes red light OFF.	Sat/Unsat	
12. Verify the following valves are OPEN:			
a. REACTOR R PUMP 13 SUCTION VALVE	Observes green light OFF. Observes red light ON.	Sat/Unsat	
b. REACTOR R PUMP 13 DISCHARGE BYPASS VALVE	Observes green light OFF. Observes red light ON.	Sat/Unsat	
13. Announce component start.	Announces Recirc Pump 13 start.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
14. Place REACTOR RP MOTOR 13 MG SET switch to START and observe the following:	Positions REACTOR RP MOTOR 13 MG SET c/s to START. Verify GREEN light off and RED light on.	Pass/Fail	
a. MG MOTOR starts. b. MG Generator accelerates to proper speed. c. Generator Field breaker closes. d. Generator slows to 20% speed. Cue: If REACT RECIRC PUMP - MOTOR 13 (F2, 1-3) alarms, inform the candidate that the CSO will check the ARP and computer. Continue with the pump start. Cue: Inform the candidate that HIGH VIBRATION alarmed as expected and is clear. Continue with the pump start.	Monitors for normal start indications - observe: - AMPS rise then lower. - MG Generator accelerates to 50-60 hertz. - Generator field breaker closes (MG Generator speed lowers) - Scoop tube positions to about 20% - Generator slows to 20% speed (10 – 12 hertz).	Pass/Fail	
15. Open REACTOR R PUMP 13 DISCHARGE VALVE.	Hold in OPEN position REACTOR R PUMP 13 DISCHARGE VALVE control switch until RED light on (GREEN light off).	Pass/Fail	
16. If desired, maintain Total Recirc Flow constant by reducing other RRP speeds. Cue: As the ASSS, inform the candidate that it is NOT necessary to adjust the speed of the other RRPs.	Confirms through shift management if the other recirc pump speeds should be adjusted.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
17. Verify RRP 13 is within the following limits: <ul style="list-style-type: none"> - Generator MW <0.790 - Generator amps <240 - RRP flow <16.8x106 lbm/hr 	Confirms RRP 13: <ul style="list-style-type: none"> - Generator MW <0.790 - Generator amps <240 - RRP flow <16.8x106 lbm/hr 	Sat/Unsat	
18. Adjust pump speed to match other pumps.	Adjust RRP 13 flow controller until speed is matched with other RRP's.		
19. When speed matches other pumps and deviation meter is at zero, place RECIRC PUMP 13 SPEED CONTROL in AUTO or BALANCE, if desired. Cue: As the ASSS, inform the candidate to place RRP 13 in AUTO on the master RRP controller.	Rotate RECIRC PUMP 13 SPEED CONTROL to AUTO.	Sat/Unsat	
20. Verify P/F map on E panel updated to 5 loop operation.	Selects 5 loop P/F map at the E panel.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
21. Verify reset 50 SR PUMP MOTOR STALLED ROTOR target (Aux CR). Cue: As the Aux Operator, report that 50 SR PUMP MOTOR STALLED ROTOR target is reset.	Direct an Aux Operator to verify reset 50 SR PUMP MOTOR STALLED ROTOR target (Aux CR).	Sat/Unsat	
22. Report to SSS/CSO that Recirc Pump 13 has been started.	Report received and acknowledged.	Sat/Unsat	

End of JPM

TERMINATING CUE: Recirc Pump 13 is in operation with its discharge valve open and its flow controller in automatic.

RECORD STOP TIME _____

Initial Conditions:

The plant is at 85% power with four recirc pumps in operation.

The mechanical stops have NOT been adjusted for four (4) loop operation.

Recirc loop #13 flow instrument is valved in.

Recirc pump #13 is secured.

Reactor engineer has reported that the projected power increase from a recirc pump start will NOT violate thermal limits or preconditioning limits.

Initiating cue:

Start recirc pump 13 per N1-OP-1, Section H.5.0.

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

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

Revision: 0

Task Number: 2009230504

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: _____ Perform X Simulate

Evaluation Location: X 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 SSS / 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 SSS / CSO permission.

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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, Rev 08
2. N1-EOP-3.1, Rev 02
3. K/A 295015 AA1.01 (3.8/3.9)

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.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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-EOP-3.1 obtained. - Section 2 referenced.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
<p>3. Close valve IA-207 (113-3091), Scram Air Header Supply Valve.</p> <p>Note: Located in the RB NW Stairwell just off the stairway landing between Elev. 237' and 261'.</p>	<p>IA-207 (113-3091), Scram Air Header Supply Valve, unlocked using a VA1 key, then rotate handwheel fully clockwise to close the valve (valve handwheel goes in as the valve closes).</p>	<p>Pass/Fail</p>	
<p>4. Remove the vent pipe cap from 113-230, Scram Air Header Emergency Vent Valve.</p> <p>Note: Located RB elev. 237' at the NW corner of the HCU bank at pillar (N-5), next to the SDV. Pipe wrench is hanging on a wire behind the cap and valve.</p>	<p>Using the EOP pipe wrench attached at the valve, remove the vent pipe cap by rotating the wrench counter-clockwise until the cap is off.</p>	<p>Pass/Fail</p>	
<p>5. Unlock and open 113-230, Scram Air Header Emergency Vent Valve.</p> <p>Cue: Inform the candidate that air is evacuating from the pipe.</p>	<p>113-230, Scram Air Header Emergency Vent Valve, unlocked using a VA1 key, then rotate the valve handle counter-clockwise to align the handle parallel with the process pipe.</p>	<p>Pass/Fail</p>	
<p>6. Inform the CSO that the scram air header is venting.</p> <p>Cue: As the CSO, acknowledge that the scram air header is venting.</p>	<p>CSO informed that the scram air header is venting.</p>	<p>Sat/Unsat</p>	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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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.

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Local Diesel Fire Pump Start with Loss of Normal Power (Alternate Path).

Revision: 0

Task Number:

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

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: 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: (Completion time based on the start location)

Plant Control Room or other designated area.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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, Rev 04
2. N1-SOP-9, Rev
3. N1-OP-21A, Rev 05
K/A 295031 EA 1.08

Tools and Equipment:

1. None

Task Standard:

Diesel Fire Pump running and available for injection per N1-SOP-21A.

Initial Conditions:

1. The SSS has determined that it is necessary to lineup the Fire System and inject water to into the RPV.
2. Due to a loss of PB 101 the Electric Fire Pump is NOT available.
3. The Diesel Fire Pump can NOT be started from the Control Room.
4. DC power is available.

Initiating cue:

Proceed to the Diesel Fire Pump and start it locally using N1-OP-21A, Section H.

Initial Conditions:

1. The SSS has determined that it is necessary to lineup the Fire System and inject water to into the RPV.
2. Due to a loss of PB 101 the Electric Fire Pump is NOT available.
3. The Diesel Fire Pump can NOT be started from the Control Room.
4. DC power is available.
5. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), Proceed to the Diesel Fire Pump and start it locally using N1-OP-21A, Section H.

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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-21A, Section H. obtained.	Sat/Unsat	
3. Proceeds to the Diesel Fire Pump Room in the Screen and Pump House.	Locates Diesel Fire Pump in the Screen and Pump House, 261 foot level.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
3. Verifies Diesel Fire Pump lubricant level is at full mark.	Removes (simulate) dip-stick located next to oil filters on the side of the engine and verifies oil present on the FULL mark. Cue: Oil is present on the dipstick up to the FULL mark	Sat/Unsat	
4. Verifies Diesel Fire Pump Gearcase lubricant level is at full mark.	Proceeds to the backside of the pump and using a wrench (may be obtained from tool box directly outside the pump room using a VA1 key) removes (simulate) the plug from the gear housing and looks into the reservoir to observe oil level. Verifies oil level even with mark on side of pump. Cue: Oil is observed about one inch below the plug opening.	Sat/Unsat	
5. Verifies the following: <input type="checkbox"/> Engine Coolant Level <input type="checkbox"/> Day Tank Level >175 gallons <input type="checkbox"/> Air Tank Pressures 11 and 12 >80 psig.	Verifies engine coolant level by removing (simulate) radiator type cap from the top of the engine coolant tank on the upper end of the engine. Looks inside and verifies coolant level visible a few inches below the cap. Cue: observes coolant two inches below the cap.	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
	<p>Proceeds over along the back wall to the Day Tank and observes level indicator on top of tank. Verifies > 175 gallons.</p> <p>Proceeds along back wall to the two air tanks located behind the diesel and observes guages on the top of each tank indicate >80 psig.</p>		
<p>6. Open lower cabinet door on the diesel fire pump control cabinet opposite the diesel. Place Diesel Fire Pump control switch to TEST on the control.</p>	<p>Opens (or simulates) control cabinet lower door and (simulate) rotates selector switch to TEST position.</p>	<p>Sat/Unsat</p>	
<p>7. Confirm that the diesel starts.</p>	<p>Diesel should turn over, fire then accelerate to an engine speed of 1710-1890 rpm.</p> <p>Cue: Nothing Happens, the diesel does not turn over, it does NOT start.</p>	<p>Sat/Unsat</p>	
<p>8. May notify Control Room that the diesel did NOT start and request direction to use secondary method.</p>	<p>Cue: If requested direct the operator to perform all necessary procedural steps to start the diesel.</p>		

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
9. Place Diesel Fire Pump control switch to MAN-1 on the control panel in diesel control cabinet in the screen house.	Opens local control panel and places control switch to MAN 1 position.	Pass/Fail	
10. Depress and hold Start Pushbutton for approximately 5 seconds OR until the Diesel Fire Pump Starts	Depress and holds Start Pushbutton for at least 5 seconds OR longer and determines the Diesel Fire Pump turns over and starts. Cue: Diesel turns over and starts.	Pass/Fail	
11. Confirm diesel parameters: <input type="checkbox"/> Engine speed 1710-1890 rpm <input type="checkbox"/> Engine temperature 150-200 F <input type="checkbox"/> Pump discharge pressure 140-144 psig <input type="checkbox"/> Dp across strainer < 3 psid	Confirms diesel parameters: Observes engine tachometer on the side of the diesel and verifies RPM at 1710-1890 rpm. Cue: Using a pen or pointer indicate 1800 rpm. Observes temperature indicators on the side of the diesel (just below the tach) and verifies engine temperature 150-200 F Cue: Using a pen or pointer indicate 175 F	Sat/Unsat	

Performance Steps	Standard	Grade	Comments
	<p>Observe fire pump discharge pressure on gauge next to control panel and verify pump discharge pressure 140-144 psig.</p> <p>Cue: Using a pen or pointer indicate 142 psig.</p> <p>Observe the two pressure gauges on the strainer next to the fire pump and determine the dp across strainer < 3 psid</p> <p>Cue: Using a pen or pointer indicate 144 psig on the upstream gauge and 142 psig on the downstream gauge.</p> <p>Candidate determines dp is 2 psid</p>		
<p>12. Notifies Control Room that the diesel has started and confirms Annunciator 2-2, 1-2, DIESEL FIRE PUMP 1 RUNNING, alarming.</p>	<p>Notifies Control Room that diesel has started and confirms Annunciator 2-2, 1-2, DIESEL FIRE PUMP 1 RUNNING, alarming.</p> <p>Cue: Annunciator 2-2, 1-2, DIESEL FIRE PUMP 1 RUNNING is alarming.</p>	<p>Sat/Unsat</p>	

End of JPM

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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TERMINATING CUE: Diesel Fire Pump running and available for injection per N1-SOP-21A.

RECORD STOP TIME_____

NIAGARA MOHAWK POWER CORPORATION
OPERATOR JOB PERFORMANCE MEASURE

Title: Lineup Raw Water to Core Spray per NI-EOP-1, Attachment 5
PRA: Supply Containment Spray Raw Water to Core Spray

Revision: 0

Task Number: 2009170504

Approvals:

General Supervisor Date
Operations Training (Designee)

General Supervisor Date
Operations (Designee)

Configuration Control Date

Performer: _____ (RO/SRO)

Trainer/Evaluator: _____

Evaluation Method: _____ Perform X Simulate

Evaluation Location: X 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: (Completion time based on the start location)

At the Scram Discharge Volume, Pillar N-5, 237' level of the Reactor Building.

Simulator Set-up:

N/A

Directions to the Instructor/Evaluator:

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

Directions to Operators:

Read Before Every JPM Performance:

For the performance of this JPM, I will function as the SSS, 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-1, Attachment 5, Rev 03
2. K/A 209001 A4.01 (3.8//3.6), A4.02 (3.5/3.4), A4.03 (3.7,3.6), A4.11 (3.7, 3.6), A4.12 (3.6, 3.5)

Tools and Equipment:

1. None

Task Standard:

Perform the in plant actions to lineup the Containment Spray Raw Water to Core Spray and inject into the RPV per N1-EOP-1, Attachment 5.

Initial Conditions:

1. A LOCA has occurred. RPV level is +35 inches and lowering.
2. Because of the unavailability of Core Spray, the SSS has determined that Containment Spray Raw Water will be aligned to Core Spray in accordance with N1-EOP-1, Attachment 5.
3. Ask the operator for any questions.

Initiating cue:

“(Operator’s name), perform the in plant actions to lineup Containment Spray Raw Water to Core Spray Loop 11 and inject water into the RPV.”

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
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	<div style="border: 1px solid black; height: 100px;"></div>
RECORD START TIME _____			
2. •Obtain a copy of the reference procedure and review/utilize the correct section.	N1-EOP-1 obtained. - Attachment 5 referenced	Sat/Unsat	<div style="border: 1px solid black; height: 100px;"></div>
Cue: As the control room operator,	Repeat-back the order correctly.	Sat/Unsat	<div style="border: 1px solid black; height: 20px;"></div>

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
direct the operator to close 93-14, 111 Containment Spray Raw Water Pump Discharge Valve in the screenhouse then open the valve 4 to 6 turns.	Receives confirmation from the control room operator that the repeat-back is correct before proceeding.		
3. Close 93-14, 111 Cont Spray Raw Water Pump Disch Valve in the screenhouse.	Unlock 93-14, 111 Cont Spray Raw Water Pump Disch Valve using a VA1 key. Rotate 93-14 handwheel clockwise observing stem goes in, until valve is closed.	Pass/Fail	
4. Opens 93-14 four to six turns.	Rotates 93-14 valve handwheel counter-clockwise counting the turns or number of thread flats on the valve until the valve is open four to six turns.	Pass/Fail	
5. Reports to the control room operator that valve 93-14, 111 Cont Spray Raw Water Pump Disch Valve, is open four to six turns.	Calls the control room and reports to the control room operator that valve 93-14, 111 Cont Spray Raw Water Pump Disch Valve, is open five turns.	Pass/Fail	
Cue: As the control room operator, acknowledge the report that valve 93-14, 111 Cont Spray Raw Water Pump Disch Valve, is open four to six turns.			
Cue: Direct the operator to standby at	Repeat-back the order correctly.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
valve 93-14 while several control room actions are performed.	Receives confirmation from the control room operator that the repeat-back is correct before proceeding.		
Cue: Inform the operator that the control room actions of Attachment 5 of EOP-1 (steps 2.3.4 to 2.3.10) are performed and Containment Spray Raw Water Pump 111 is running.	Repeat-back the order correctly. Receives confirmation from the control room operator that the repeat-back is correct before proceeding.	Sat/Unsat	
6. While maintaining CSRW Pump 111 motor amps less than 76 amps, throttle 93-14 as necessary to maximize flow rate. Cue: Direct the operator to slowly open 93-14 one turn.	Repeat-back the order correctly. Receives confirmation from the control room operator that the repeat-back is correct before proceeding.	Sat/Unsat	
	Slowly rotate 93-14 handwheel counter-clockwise until open one turn.	Pass/Fail	
Cue: Inform the operator that CSRW Pump 111 flow rate is at maximum	Repeat-back the order correctly.	Sat/Unsat	

<i>Performance Steps</i>	<i>Standard</i>	<i>Grade</i>	<i>Comments</i>
and to return to the control room.	Receives confirmation from the control room operator that the repeat-back is correct before proceeding.		

End of JPM

TERMINATING CUE: In plant actions to align Containment Spray Raw Water to Core Spray are performed as directed by the Control Room Operator.

RECORD STOP TIME _____

Initial Conditions:

1. **A LOCA has occurred. RPV level is +35 inches and lowering.**
2. **Because of the unavailability of Core Spray, the SSS has determined that Containment Spray Raw Water will be aligned to Core Spray in accordance with N1-EOP-1, Attachment 5.**

Initiating cue:

Perform the in plant actions to lineup Containment Spray Raw Water to Core Spray Loop 11 and inject water into the RPV as directed by the Control Room Operator.