Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **LOCAL OPERATION OF THE 22 TD AFWP**

JPM NUMBER: **AF-16F-1** **REV.** **5**

RELATED PRA INFORMATION: **22 TD AFW PMP**

TASK NUMBERS / TASK TITLE(S): **CRO 061 ATI 00 00 006 / LOCAL OPERATION OF TD AFW PUMP**
NLO 061 014 01 04 000 / LOCALLY START TD AFWP USING 3-WAY VALVE

K/A NUMBERS: **061 A2.04 (3.4/3.8)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [X] Perform: [ ]

EVALUATION LOCATION: In-Plant: [X] Control Room: [ ]

Simulator: [ ] Other: [ ]

Lab: [ ]

Time for Completion: **12** Minutes Time Critical: **NO**

Alternate Path: **YES**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [X]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A Safety Injection has occurred in Unit 2.
- No AFW Pumps could be started from the Control Room.
- Pre-start checks on 22 TDAFWP per 2C28.1, section 5.8.1 and 5.8.2 are complete.
- Condensate Storage Tanks are near full level (19 feet).

INITIATING CUES:

- The SS directs you to start 22 TDAFWP per 2C28.1, beginning at step 5.8.3.

- **ALL OPERATOR ACTIONS ARE TO BE SIMULATED UNLESS OTHERWISE DIRECTED.**

JPM PERFORMANCE INFORMATION

Required Materials: Consumable copy of 2C28.1, sections 5.8 through 5.10, with steps 5.8.1 and 5.8.2 signed off.

General References: 2C28.1, AUXILIARY FEEDWATER SYSTEM UNIT 2

Task Standards: Examinee determines 22 TD AFW Pump local start pushbutton does not work and starts 22 TD AFW Pump using 3-Way Valve 2AF-292-1.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: **Critical** N	**2C28.1 Step 5.8.3** **Place CS-51617, 22 TDAFWP CV-31999, LOCAL/REMOTE switch in the LOCAL position.**
Standard:	**Examinee places CS-51617 in the LOCAL position.**
Evaluator Cue:	**When examinee simulates placing CS-51617 in the LOCAL position, then inform examinee CS-51617 is in the LOCAL position.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**2C28.1 Step 5.8.4**
Critical N	
	Depress LOCAL RESET pushbutton CS-5161801, 22 TD AFW PMP RESET PB.
Standard:	**Examinee depresses CS-5161801.**
Evaluator Cue:	**When examinee simulates depressing CS-5161801, then inform examinee CS-5161801 has been depressed.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**2C28.1 Step 5.8.5**
Critical Y	
	Depress and hold LOCAL START pushbutton CS-5161802, 22 TD AFW PMP START PB for five (5) seconds.
Standard:	**Examinee determines CS-5101802 does not work and proceeds to: 2C28.1 Section 5.10, Use of 3-Way Valve 2AF-292-1**
Evaluator Cues:	• **After examinee has simulated depressing and holding CS-5161802, then inform examinee the 22 TDAFWP did NOT start and the 22 TDAFWP Aux Lube Oil Pump did NOT start.** • **If examinee informs the SS the 22 TDAFWP did not start and asks for direction, then inform the examinee to start 22 TDAFWP per 2C28.1, SECTION 5.10.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

ALTERNATE PATH STARTS HERE

Performance Step: **Critical N**	**2C28.1 Steps 5.10.1.A through 5.10.1.D**
	Verify the following: **Oil levels between sightglass marks:** • **Turbine IBRG** • **Turbine OBRG** **Oil level within ¼" of mark on governor sightglass.** **Pump oil level is between the sightglass upper mark and the top of the sightglass.** **11081, 22 TD AFW PMP SUCT STRNR OUTL PI, is approx. eight (8) psig:** • **Open 11081-ISOL** • **Record 11081** **Close 11081-ISOL**
Standard:	**Examinee determines steps A-D were previously completed in section 5.8.**
Evaluator Cue:	**If the examinee attempts to perform steps 5.10.1.A, B, C, and D, inform the examinee these steps were already accomplished in Section 5.8 and DO NOT perform them.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: **Critical N**	**2C28.1 Step 5.10.1.E**
	Condensate Storage Tank Level is greater than four (4) feet.
Standard:	**Examinee determines CST levels are greater than 4 feet.**
Evaluator Cue:	**Inform the examinee that CST levels are all 19 feet.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**2C28.1 Step 5.10.2**
Critical N	
	Place CS-51617, 22 TD AFWP CV-31999, LOCAL/REMOTE switch in the LOCAL position.
Standard:	**Examinee places CS-51617 in the LOCAL position.**
Evaluator Note:	**This step was already accomplished in section 5.8.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**2C28.1 Step 5.10.3**
Critical N	
	Depress LOCAL RESET pushbutton CS-5161801, 22 TD AFW PMP RESET PB.
Standard:	**Examinee depresses CS-5161801.**
Evaluator Note:	**This step was already accomplished in section 5.8.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical N**	**2C28.1 Step 5.10.4**
	IF the auxiliary lube oil pump is NOT running, THEN depress LOCAL START pushbutton CS-19335, 22 TD AFWP AUX LUBE OIL PUMP, to start the auxiliary lube oil pump.
Standard:	**Examinee starts the 22 TD AFWP AUX LUBE OIL PUMP using CS-19335.**
Evaluator Cues:	• **If the examinee asks for the status of 22 TD AFWP AUX LUBE OIL PUMP prior to pressing CS-19335, then inform the examinee it is NOT running.** • **When CS-19335 is depressed, inform the examinee that the 22 TD AFWP AUX LUBE OIL PUMP is running.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical Y**	**2C28.1 Step 5.10.5**
	Place 2AF-292-1 in the OPEN position. 22 TD AFW Pump should roll up to full speed within 30 seconds.
Standard:	**Examinee places 2AF-292-1 in the OPEN position.**
Evaluator Cue:	**When examinee simulates opening 2AF-292-1, inform examinee the 22 TDAFWP has started.is up to rated speed and has a discharge pressure of 1650 psig.**
Evaluator Note:	**Question examinee how to verify proper operation of TD AFW Pump.** • **Discharge pressure 1650 psig** • **AOP shuts down, etc…**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When the examinee has determined the 22 TD AFW Pump local start pushbutton did not work and has started 22 TD AFW Pump using 3-Way Valve 2AF-292-1, then this JPM is complete.**

Stop Time: _____

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☒
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

ATTACHMENT 2

JPM Number: AF-16F-1

JPM Title: LOCAL OPERATION OF THE 22 TD AFWP

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- A Safety Injection has occurred in Unit 2.
- No AFW Pumps could be started from the Control Room.
- Pre-start checks on 22 TDAFWP per 2C28.1, section 5.8.1 and 5.8.2 are complete.
- Condensate Storage Tanks are near full level (19 feet).

INITIATING CUES:

- The SS directs you to start 22 TDAFWP per 2C28.1, beginning at step 5.8.3.

- **ALL OPERATOR ACTIONS ARE TO BE SIMULATED UNLESS OTHERWISE DIRECTED.**

Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **STOP 11 TDAFWP WITH ACCUMULATOR FAILURE**

JPM NUMBER: **AF-21SF** **REV.** **1**

RELATED PRA INFORMATION: **IMPORTANT COMPONENT – 11 TD AFWP**

TASK NUMBERS / TASK TITLE(S): **CRO 061 009 01 01 000 / SHUTDOWN THE AFW SYSTEM**

K/A NUMBERS: **061 K4.01 (4.1/4.2)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: **7** Minutes Time Critical: **NO**

Alternate Path: **YES**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Unit 1 is at the Point of Adding Heat.
- The Main Generator is being prepared to synchronize to the grid.
- Main Feedwater is supplying both Steam Generators using the Main Feedwater Regulating Bypass Valves.
- 11 TDAFW Pump is running and supplying both Steam Generators.
- The crew is on step 5.6.10.A of 1C1.2-BOP, Unit 1 Balance of Plant Systems Startup, to shutdown any running AFW pumps.

INITIATING CUES:

- The Shift Supervisor directs you to STOP the 11 TDAFW Pump and align for safeguards operations per step 5.3 of 1C28.1, AUXILIARY FEEDWATER SYSTEM – UNIT 1.

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

JPM PERFORMANCE INFORMATION

Required Materials: NONE

General References: 1C28.1, Auxiliary Feedwater System – Unit 1
1C1.2-BOP Unit 1 Balance of Plant Systems Startup
C47010

Task Standards: Examinee stops 11 TDAFW and closes MV-32016 and MV-32017.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step:	**1C28.1, Step 5.3.1:**
Critical N	
	Refer to Precaution 3.12 prior to throttling total AFW flow.
Standard:	**Examinee refers to precaution 3.12.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**1C28.1, Step 5.3.2:**
Critical N	
	CLOSE MV-32238, 12 TD AFWP TO 11 STM GEN, using CS-46314.
Standard:	**Examinee verifies MV-32238 is CLOSED.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

Performance Step:	**1C28.1, Step 5.3.3:**
Critical N	
	CLOSE MV-32239, 11 TD AFWP TO 12 STM GEN, using CS-46315.
Standard:	**Examinee verifies MV-32239 is CLOSED.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C28.1, Step 5.3.4:**
Critical Y	
	Stop 11 TD AFW Pump using CS-46424.
Standard:	**Examinee stops 11 TD AFW Pump using CS-46424.**
Evaluator Cue	**Once the examinee takes CS-46424 to CLOSE, BOOTH OPERATOR, verify TRIGGER1 is inserted.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

Performance Step: **Critical N**	**1C28.1, Step 5.3.5 & 5.3.6:** **Verify locally:** **A. 11 TD AFW Pump has stopped.** **B. CV-31153, 11 TD AFW PMP RECIRC/LUBE OIL COOLING VALVE, has CLOSED.** **C. Auxiliary lube oil pump is running.**
Standard:	**Examinee directs an out-plant operator to locally verify local actions.**
Evaluator Cue:	**When the examinee directs the out-plant operator to locally verify actions, then inform examinee that the 11 TDAFWP is stopped, CV-31153 is closed, and aux lube oil pump is running.** **After examinee is informed of the outplant actions being completed, then insert (or verify) TRIGGER 1, 11 TD AFWP Accumulator Low Air Press.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical N**	**C47010-0105, 11 TD AFWP ACCUMULATOR LO AIR PRESS** **ALTERNATE PATH STARTS HERE**
Standard:	**Examinee acknowledges annunciator.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

Performance Step:	**C47010-0105, 11 TD AFWP Accumulator LO Air Press, Step 1:**
Critical N	
	Check for low air pressure on 18702, 11 TD AFW PMP STM BLK VLV AIR ACCUM.
Standard:	**Examinee ascertains air pressure is low.**
EVALUATOR CUE:	**If the examinee requests the pressure on gage 18702 from the NLO, inform the examinee that pressure is 71 psig and slowly lowering.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47010-0105, 11 TD AFWP Accumulator LO Air Press, Step 2:**
Critical N	
	If a low air pressure condition exists, then notify the shift supervisor that 11 TDAFW Pump is inoperable and enter T.S.3.7.5 Condition B.
Standard:	**Examinee makes notification to SS.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

Performance Step: **Critical Y**	**C47010-0105, 11 TD AFWP Accumulator LO Air Press, Step 3:** **IF 11 AFW pump is NOT running, THEN perform one of the following to prevent an undesired start of the pump due to CV-31998 failing OPEN:** **● CLOSE both steam supply valves to 11 TDAFW Pump; MV-32016 AND MV-32017** **OR** **● Locally CLOSE CV-31059, 11 TD AFW PMP TRIP THROTTLE CV**
Standard:	**Examinee CLOSES both MV-32016 and MV-32017**
EVALUATOR NOTE:	**If the examinee directs the NLO to locally close CV-31059, inform the examinee that the valve is STUCK and will NOT close.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When the examinee stops 11 TDAFWP and closes MV-32016 and MV-32017, then the JPM is complete.**

Stop Time: _____

Simulator Setup:

1. Reset the simulator to **IC-260.**
2. Place the simulator in RUN and go to step 5.
3. If an IC is NOT created for this scenario, then create as follows:
   a. Reset to **IC-103**.
   b. Place the simulator in RUN.
   c. Start 11 TDAFWP per 1C28.1.
   d. If running this JPM in conjunction with **EG-20S**, then:
      1) D5 Diesel Generator is NOT running.
      2) Place CS-46946, D5 DSL GEN START SPEED SEL SW, is in FAST
      3) Place D5 OUTPUT BKR (25-2) AUTO/MAN SEL SW in MANUAL.
   e. Place simulator in FREEZE.
   f. If desired, save to an available IC.
   g. Place simulator in RUN.
   h. Go to step 4.
4. Reset the simulator to IC created from step 3 and place in RUN.
5. If available, run schedule file **AF-21SF.sch** as follows:
   a. Select open file in the Schedule application.
   b. Locate schedule file.
   c. Open schedule file by double clicking it.
   d. Run the schedule file by pressing the “Stopped” button on the toolbar.
   e. Verify the schedule file is running.
6. If schedule file is NOT available, then insert malfunctions, remotes, and overrides, as specified by the Simulator Input Summary.
7. If available (and desired to be used by Lead Evaluator), open event file **AF-21SF.evt** as follows:
   a. Select open file in the EVENT application.
   b. Locate event file.
   c. Open by double clicking file.
8. If event file is NOT available, then enter event codes as specified by the Simulator Event Summary below.
9. If running this JPM in conjunction with **EG-20S**, then:
   a. Place a “**D5 DSL GEN OOS**” magnetic sign on the G Panel (U1).
   b. Mark steps 6.1.1.K of **2C20.7**, D5/D6 DIESEL GENERATORS, as complete.
10. Clear recorder memory after each reset.
11. Verify Director or Schedule File matches the input summary below.

SIMULATOR INPUT SUMMARY

@Time	Event	Action	Description
	1	Insert malfunction M47010:0105W after 5 to Cry_Wolf on event 1	11 TD AFWP Accumulator Lo Air Press

SIMULATOR EVENT SUMMARY		
Event ID	**Event CODE**	**Event DESCRIPTION**
1	HWZFWP6424(1)==1	11 TD AFWP PUMP STOPPED

Retention: Life of Plant
Retain in: Training Record
Form retained in accordance with record retention schedule identified in FP-G-RM-01.

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

AF-21SF, STOP 11 TDAFWP WITH ACCUMULATOR FAILURE, REV. 1

ATTACHMENT 2

JPM Number: AF-21SF

JPM Title: STOP 11 TDAFWP WITH ACCUMULATOR FAILURE

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 is at the Point Of Adding Heat.
- The Main Generator is being prepared to synchronize to the grid.
- Main Feedwater is supplying both Steam Generators using the Main Feedwater Regulating Bypass Valves.
- 11 TDAFW Pump is running and supplying both Steam Generators.
- The crew is on step 5.6.10.A of 1C1.2-BOP, Unit 1 Balance of Plant Systems Startup, to shutdown any running AFW pumps.

INITIATING CUES:

- The Shift Supervisor directs you to STOP the 11 TDAFW Pump and align for safeguards operations per step 5.3 of 1C28.1, AUXILIARY FEEDWATER SYSTEM – UNIT 1.

Xcel Energy

JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **STARTUP THE PORTABLE BATTERY CHARGER**

JPM NUMBER: **DC-1** **REV.** **6**

RELATED PRA INFORMATION: **LODC (<1%)**

TASK NUMBERS / TASK TITLE(S): **NLO 063 010 01 04 000 / INSTALL/REMOVE PORTABLE BATTERY CHARGER**

K/A NUMBERS: **058 AA1.03 (3.1/3.3)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [X] Perform: [ ]

EVALUATION LOCATION: In-Plant: [X] Control Room: [ ]

Simulator: [ ] Other: [ ]

Lab: [ ]

Time for Completion: **11** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [X]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Unit 2 is at 100% power.
- The 22 Battery Charger has failed and can NOT be returned to service.
- The Portable Battery Charger is installed and connected in the 22 Battery Room.
- Steps 1 – 3 of Attachment C of 2C20.9 AOP4, FAILURE OF 22 BATTERY CHARGER, are complete.

INITIATING CUES:

- The Unit 2 Shift Supervisor directs you to startup the Portable Battery Charger in 22 Battery Room per step 4.A – 4.F of Attachment C of 2C20.9 AOP4, FAILURE OF 22 BATTERY CHARGER.

- **ALL OPERATOR ACTIONS ARE TO BE SIMULATED UNLESS DIRECTED OTHERWISE.**

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6

JPM PERFORMANCE INFORMATION

Required Materials:	**Consumable copy of 2C20.9 AOP4 Attachment C with steps 1 – 3 marked as complete.**
General References:	**2C20.9 AOP4, FAILURE OF 22 BATTERY CHARGER**
Task Standards:	**Examinee starts up the Portable Battery Charger.**

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: **Critical N**	**2C20.9 AOP4, Attachment C, Step 4.A.1** **On the failed 22 Battery Charger:** **1. Verify BKR 22 BTCHGAC, 22 BATTERY CHARGER AC INPUT BREAKER is "Tripped" or "OFF."**
Standard:	**Examinee determines BKR 22 BTCHGAC is OFF.**
Evaluator Note:	**If the actual Portable Battery Charger in the plant is NOT located in the 22 Battery Room, then simulate that the Portable Battery Charger is already installed and connected in the 22 Battery Room.**
Evaluator Cue:	**When the examinee locates and observes the position of BKR 22 BTCHGAC, then indicate the breaker is in the tripped position.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6

Performance Step:	**2C20.9 AOP4, Attachment C, Step 4.A.2**
Critical N	**On the failed 22 Battery Charger:** **2. OPEN BKR 22 BTCHGDC, 22 BATTERY CHARGER DC OUTPUT BREAKER.**
Standard:	**Examinee opens BKR 22 BTCHGDC.**
Evaluator Cue:	**When the examinee simulates opening BKR 22 BTCHGDC, then inform examinee the breaker is open.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step:	**2C20.9 AOP4, Attachment C, Step 4.B.1**
Critical N	**Inside 22 Battery Charger DC Transfer Switch:** **1. OPEN the "22 Battery Charger Isolation Breaker."**
Standard:	**Examinee opens the 22 Battery Charger Isolation Breaker.**
Evaluator Note:	**Optional opportunity for evaluator to question examinee on PPE requirements and location.**
Evaluator Cue:	• **Provide examinee with Attachment 4, picture of Battery Charger Isolation Breaker inside DC Transfer Switch.** • **When the examinee simulates opening the 22 Battery Charger Isolation Breaker, then inform examinee the breaker is open.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical Y**	**2C20.9 AOP4, Attachment C, Step 4.B.2** **Inside 22 Battery Charger DC Transfer Switch:** **2. CLOSE the "Portable Battery Charger Isolation Breaker."**
Standard:	**Examinee closes the Portable Battery Charger Isolation Breaker.**
Evaluator Cue:	**When the examinee simulates closing the Portable Battery Charger Isolation Breaker, then inform examinee the breaker is closed.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical N**	**2C20.9 AOP4, Attachment C, Step 4.C** **Verify MCC 2AC2 cell A6, "22 Battery Charger" is "ON."**
Standard:	**Examinee determines MCC 2AC2 cell A6 is ON.**
Evaluator Cue:	**When the examinee locates and observes the position of MCC 2AC2 cell A6, then indicate the breaker is ON.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical Y**	**2C20.9 AOP4, Attachment C, Step 4.D** **Place 22 Battery Charger AC Transfer Switch to the "PORTABLE CHARGER" position.**
Standard:	**Examinee places the 22 Battery Charger AC Transfer Switch to the PORTABLE CHARGER position.**
Evaluator Cue:	**When the examinee simulates placing 22 Battery Charger AC Transfer Switch to the PORTABLE CHARGER position, then inform examinee the Transfer Switch is in the PORTABLE CHARGER position.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6

Performance Step: **Critical Y**	**2C20.9 AOP4, Attachment C, Step 4.E.1** **On the Portable Battery Charger:** **1. CLOSE BKR 11 PBTCHGAC, 11 PORTABLE BATTERY CHARGER AC INPUT BREAKER.**
Standard:	**Examinee closes BKR 11 PBTCHGAC.**
Evaluator Note:	**If the actual Portable Battery Charger in the plant is NOT located in the 22 Battery Room, then inform examinee to simulate actions at the location where the Portable Battery Charger is currently stored.**
Evaluator Cue:	**When examinee simulates closing BKR 11 PBTCHGAC, then inform the examinee the breaker is closed.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical Y**	**2C20.9 AOP4, Attachment C, Step 4.E.2** **On the Portable Battery Charger:** **2. CLOSE BKR 11 PBTCHGDC, 11 PORTABLE BATTERY CHARGER DC OUTPUT BREAKER.**
Standard:	**Examinee closes BKR 11 PBTCHGDC.**
Evaluator Cue:	**When examinee simulates closing BKR 11 PBTCHGDC, then inform the examinee the breaker is closed.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6

Performance Step:	**2C20.9 AOP4, Attachment C, Step 4.F**
Critical N	**Verify 11 P CHG/AMM, 11 PORT BATTERY CHARGER DC AMMETER is 20 – 300 amps.**
Standard:	**Examinee determines 11 P CHG/AMM is between 20 and 300 amps.**
Evaluator Cue:	**When examinee locates and observes 11 P CHG/AMM, then indicate meter is reading 100 amps.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Terminating Cues: **When examinee has started up the Portable Battery Charger, then this JPM is complete.**

Stop Time: _____

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6
ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☒
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

DC-1, STARTUP THE PORTABLE BATTERY CHARGER, REV 6
ATTACHMENT 2

JPM Number: DC-1

JPM Title: STARTUP THE PORTABLE BATTERY CHARGER

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 2 is at 100% power.
- The 22 Battery Charger has failed and can NOT be returned to service.
- The Portable Battery Charger is installed and connected in the 22 Battery Room.
- Steps 1 – 3 of Attachment C of 2C20.9 AOP4, FAILURE OF 22 BATTERY CHARGER, are complete.

INITIATING CUES:

- The Unit 2 Shift Supervisor directs you to startup the Portable Battery Charger in 22 Battery Room per step 4.A – 4.F of Attachment C of 2C20.9 AOP4, FAILURE OF 22 BATTERY CHARGER.

- **ALL OPERATOR ACTIONS ARE TO BE SIMULATED UNLESS DIRECTED OTHERWISE.**

ATTACHMENT 4

Retention: Life of Plant
Retain in: Training Record
Form retained in accordance with record retention schedule identified in FP-G-RM-01.

JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **MANUAL START OF D5 EMERGENCY DIESEL GENERATOR FROM THE CONTROL ROOM**

JPM NUMBER: **EG-20S** **REV.** **1**

RELATED PRA INFORMATION: **IMPORTANT COMPONENT – D5 DSL GEN**

TASK NUMBERS / TASK TITLE(S): **CRO 064 ATI 00 00 002 / MANUALLY START DG FROM CONTROL ROOM**

K/A NUMBERS: **064 A3.06 (3.3/3.4)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: **10** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Zach Elbert**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Steps 6.1.1.A through 6.1.1.K of 2C20.7, D5/D6 DIESEL GENERATORS, have been completed.

INITIATING CUES:

- The Shift Supervisor directs you to manually perform a SLOW START of D5 Emergency Diesel Generator per steps 6.1.1.L through 6.1.1.Q of 2C20.7, D5/D6 Diesel Generators.

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

JPM PERFORMANCE INFORMATION

Required Materials: Consumable copy of 2C20.7.

General References: 2C20.7, D5/D6 DIESEL GENERATORS

Task Standards: Examinee starts D5 in SLOW speed and raises voltage to between 4200 and 4400 V.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: 2C20.7, step 6.1.1.L: **Critical** Y	**If desired, THEN place CS-46946, D5 DSL GEN START SPEED SEL SW, in "SLOW".**
Standard:	**Examinee places CS-46946 in SLOW.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: 2C20.7, step 6.1.1.M: **Critical** N	**Place CS-46947, D5 DSL GEN GOVERNOR CONTROL, in "LOWER" for approximately 10 seconds.**
Standard:	**Examinee places CS-46947 in LOWER for approximately 10 seconds.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

Performance Step:	**2C20.7, step 6.1.1.N**
Critical Y	
	Start D5 using control switch, CS-46945, D5 DIESEL GENERATOR
Standard:	**Examinee places D5 to start.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**2C20.7, step 6.1.1.O:**
Critical N	
	Verify Bus 25 Status Panel white indicating light 4432-0201, D5 UP TO SPEED & VOLTAGE, is LIT.
Standard:	**Examinee verifies that 4432-0201 is lit.**
Evaluator Note:	**This light will illuminate after the diesel is up to speed, which takes ~90 seconds per the note on step L.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**2C20.7, step 6.1.1.P**
Critical N	
	On Main Control Room Panel B-2 verify Status Panel indicating light 44514-A2, D5 RUNNING, is LIT.
Standard:	**Examinee asks the Unit 2 personnel what the status of 44514-A2.**
Evaluator Cue:	**When the examinee inquires as to the status of 44514-A2, inform the examinee that the light it LIT.**
Evaluator Note:	**44514-A2 is not modeled in the simulator.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

Performance Step: **Critical Y**	**2C20.7, step 6.1.1.Q:**
	Maintain 4200-4400 volts on 41903, D5 DSL GEN METER GROUP, using CS-46949, D5 DSL GEN EXCITER CONTROL.
Standard:	**Examinee takes CS-46949 to "RAISE" until voltage on 4190303 is between 4200 and 4400.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When the examinee has started D5 in slow speed and raised voltage to above 4200 V, then the JPM is complete.**

Stop Time: _____

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

Simulator Setup:

1. If this JPM is being run in conjunction with **AF-21SF**, then set up the simulator per the simulator set up in **AF-21SF**.
2. If an IC is Not created for this scenario, then create one as follows:
   a. Reset the Simulator to **IC-6**.
   b. Place the simulator in RUN.
   c. Verify the following:
      1) D5 Diesel Generator is NOT running.
      2) CS-46946, D5 DSL GEN START SPEED SEL SW, is in FAST
      3) D5 OUTPUT BKR (25-2) AUTO/MAN SEL SW is in MANUAL.
   d. Place simulator in FREEZE.
   e. If desired, save to an available IC.
   f. Place the simulator in RUN.
   g. Go to Step 4.
3. Reset the simulator to the IC created form step 2 and place in RUN.
4. Place a "**D5 DSL GEN OOS**" magnetic sign on the G Panel (U1).
5. Mark steps 6.1.1.K of **2C20.7**, D5/D6 DIESEL GENERATORS, as complete.
6. Clear recorder memory after each reset.

SIMULATOR INPUT SUMMARY

NONE

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

EG-20S, NUMBER, MANUAL START OF D5 DIESEL GENERATOR FROM THE CONTROL ROOM, REV. 1

ATTACHMENT 2

JPM Number: EG-20S

JPM Title: MANUAL START OF D5 DIESEL GENERATOR FROM CONTROL ROOM.

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Steps 6.1.1.A through 6.1.1.K of 2C20.7, D5/D6 DIESEL GENERATORS, have been completed.

INITIATING CUES:

- The Shift Supervisor directs you to manually perform a SLOW START of D5 Emergency Diesel Generator per steps 6.1.1.L through 6.1.1.Q of 2C20.7, D5/D6 Diesel Generators.

FP-10S, Respond to Fire Detection Panel FP121, Rev. 0

Xcel Energy	JOB PERFORMANCE MEASURE (JPM)

SITE: **Prairie Island**

JPM TITLE: **Respond to Fire Detection Panel FP121**

JPM NUMBER: **FP-10S** **REV.** **0**

RELATED PRA INFORMATION: **None**

TASK NUMBERS / TASK TITLE(S): **CRO 000 082 05 01 000 Respond to Fire Detection Panel FP121 fire alarm in accordance with C47022-0611**

K/A NUMBERS: **2.4.27 (3.4/3.9)**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☒ Perform: ☐

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 10 Minutes Time Critical: NO

Alternate Path: NO

TASK APPLICABILITY: SRO: ☒ RO: ☒ NLO ☐

Additional site-specific signatures may be added as desired.

Developed by:	**Justin Hasner**	
	Developer	Date
Validated by:	**Fredrick Collins**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- You are the Unit 1 Lead Reactor Operator.

- 47022-0611, Fire Detection Panel FP121-FP126 Fire Alarm, is in ALARM.
- The Turbine Building Operator has reported a fire in the OLD ADMIN BUILDING FIRST FLOOR STAIRWELL.

INITIATING CUES (IF APPLICABLE):

- The Shift Supervisor has directed you to implement IMMEDIATE MANUAL ACTIONS of F5 Appendix L, Response to a Fire, and continue with C47022-0611.

JPM PERFORMANCE INFORMATION

Required Materials:	**Marked up copy of C47022-0611 with steps 1-4 marked complete or NA as applicable.**
General References:	**C47022, Alarm Response** **C31, Fire Protection and Detection Systems** **F5 Appendix L, Response to a Fire**
Task Standards:	**When the examinee has actuated the fire alarm, made an announcement, and bypassed the alarming detector, the JPM is complete.**

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: **Critical Y**	**F5 App L 2.3.1:** **Manually actuate the Fire Alarm for 10 seconds using CS-7046820.**
Standard:	**The examinee actuates the fire alarm using CS-7046820**
Evaluator Note:	**The critical portion of the step is considered satisfactory once the fire alarm is actuated.** **The examinee is required to repeat this process for step 2.3.3. If this action is completed successfully for either step, the critical portion of this step is considered met.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical Y**	**F5 App L 2.3.2:** **Announce over the plant paging system:** **"Attention all plant personnel. There is a fire in the Old Admin Building, First Floor Stairwell. Fire Brigade and EMTs respond. All other personnel exit the Old Admin Building and stand clear until further notice."**
Standard:	**The examinee makes the announcement using the paging system in the simulator.**
Evaluator Note:	**The critical portion of the step is considered NOT met if the examinee states the incorrect room or the incorrect building. The step may be considered met if the examinee corrects the announcement.** **The examinee is required to repeat this process for step 2.3.4. If this action is completed successfully for either step, the critical portion of this step is considered met.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical N**	**F5 App L 2.3.3:** **Manually actuate the Fire Alarm for 10 seconds using CS-7046820.**
Standard:	**The examinee actuates the fire alarm using CS-7046820**
Evaluator Note:	**The examinee is required to repeat this process from step 2.3.1. If this action is completed successfully for either step, the critical portion of step 2.3.1 is considered met.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical N**	**F5 App L 2.3.4:** **Repeat the announcement over the plant page.**
Standard:	**The examinee makes the announcement using the paging system in the simulator.**
Evaluator Note:	**This step is considered NOT met if the examinee states the incorrect room or the incorrect building. The step may be considered met if the examinee corrects the announcement.** **The examinee is required to repeat this process for step 2.3.2. If this action is completed successfully for either step, the critical portion of step 2.3.2 is considered met.**
Evaluator Cue:	**If the examinee continues on with F5 App L, inform them that the SS will be performing the remainder of the procedure and that they should continue on with the alarm response.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: **Critical N**	**C47022-0611 Step 6:** **If the alarm is caused by a malfunctioning detector, or the alarm is valid, but there is no fire, then go to subsequent actions step 1.**
Standard:	**Examinee determines this step is not applicable.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: **Critical N**	**C31 6.29.1.a & b:** **Using F5 Appendix K, Fire protection System Functional Requirements, determine the required actions with inoperable detection instrumentation.** **Verify the fire detection impairment has been entered into the Fire Protection Suite.**
Standard:	**The examinee determines these steps are NA.**
Evaluator Note:	**This section of the procedure is REFERENCE use and may be performed from memory.**
Evaluator Cue:	**If the examinee asks about steps a & b, inform examinee that the SS will evaluate steps a & b.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: **Critical Y**	**C31 6.29.1.c:** **For the affected Zone, lift the cover and place the toggle switch in the UP position.**
Standard:	**The examinee places the toggle switch for zone 90 in the UP position.**
Evaluator Note:	**This section of the procedure is REFERENCE use and may be performed from memory.** **If an incorrect zone is placed in the bypass position, and not restored, this step is considered UNSATISFACTORY.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: **Critical N**	**C31 6.29.1.d:**
	Place a yellow ~~or pink (for fire drill)~~ "Zone in B-P" tag on the toggle switch for the affected zone.
Standard:	**The examinee places the yellow tag on zone 90.**
Evaluator Note:	**This section of the procedure is REFERENCE use and may be performed from memory.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Performance Step: **Critical Y**	**C47022-0611 Step 8:**
	Reset Fire Detection Panel.
Standard:	**The examinee will hold RESET TEST POWER toggle switch and SILENCE TROUBLE toggle switch for 3 seconds.**
Evaluator Note:	**This section of the procedure is REFERENCE use and may be performed from memory.** **The Fire Detection Panel will buzz and the Control Room A Panel annunciator will sound when alarm resets.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: **When the examinee has actuated the fire alarm, made an announcement, and bypassed the alarming detector, the JPM is complete.**

Stop Time: _____

Simulator Setup:

1. Reset the simulator to **IC-259.**
2. Place the simulator in RUN and go to step 4.
3. If an IC is NOT created for this JPM, then create one as follows:
   a. Reset simulator to IC-10 and place in RUN.
   b. Input REMOTE per Simulator Input Summary below.
   c. If running this JPM in conjunction with **VC-104S**, then:
      1) Take CS-46294, 13 CHG PUMP, to PULLOUT.
      2) If also running this JPM in conjunction with **VC-29SF**, then go to step 3.c, if not then continue with next step.
      3) Place simulator in FREEZE.
      4) If desired, save to an available IC.
      5) Place simulator in RUN.
      6) Go to step 4.
   d. If also running this JPM in conjunction with **VC-29SF**, then:
      1) If available, run schedule files **ZC-1SF.sch & VC-29SF.sch** as follows:
         (a) Select open file in the Schedule application.
         (b) Locate schedule file.
         (c) Open schedule file by double clicking it.
         (d) Run the schedule file by pressing the “Stopped” button on the toolbar.
         (e) Verify the schedule file is running.
      2) If schedule file is NOT available, then insert malfunctions, remotes, and overrides, as specified by the Simulator Input Summary.
      3) If available, open event files **ZC-1SF.evt & VC-29SF.evt** as follows:
         (a) Select open file in the EVENT application.
         (b) Locate event file.
         (c) Open by double clicking file.
      4) If event file is NOT available, then enter event codes as specified by the Simulator Event Summary below.
      5) Place simulator in FREEZE.
      6) If desired, save to an available IC.
      7) Place simulator in RUN.
      8) Go to step 4.
4. Reset the simulator to IC-259 or the IC created from step 3 and place in RUN.
5. Clear recorder memory after each reset.

Verify Director or Schedule File matches the input summary below

SIMULATOR INPUT SUMMARY							
Manual Trigger	**Type**	**Code**	**Description**	**Delay**	**Ramp**	**Severity Or Value**	**Event Trigger**
	REM	CH121	FIRE DETECTION ALARMS			90	

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

ATTACHMENT 2

JPM Number: FP-10S

JPM Title: Respond to Fire Detection Panel FP121

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- You are the Unit 1 Lead Reactor Operator.

- 47022-0611, Fire Detection Panel FP121-FP126 Fire Alarm, is in ALARM.
- The Turbine Building Operator has reported a fire in the OLD ADMIN BUILDING FIRST FLOOR STAIRWELL.

INITIATING CUES (IF APPLICABLE):

- The Shift Supervisor has directed you to implement IMMEDIATE MANUAL ACTIONS of F5 Appendix L, Response to a Fire, and continue with C47022-0611.

Xcel Energy

JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **PERFORM RCP SEAL ISOLATION FOLLOWING LOSS OF ALL AC POWER**

JPM NUMBER: **RC-8** **REV.** **14**

RELATED PRA INFORMATION: **LOAC (<1%)**

TASK NUMBERS / TASK TITLE(S): **NLO 000 056 05 04 000 / RESPOND TO LOSS OF ALL AC POWER**

K/A NUMBERS: **055 EK3.02 (4.3/4.6)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [X] Perform: [ ]

EVALUATION LOCATION: In-Plant: [X] Control Room: [ ]

Simulator: [ ] Other: [ ]

Lab: [ ]

Time for Completion: **4** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [X]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	**8/12/2014**
	Developer	Date
Validated by:	**Shawn Sarrasin**	**8/15/2014**
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Travis Ouret**	**9/23/2014**
	Training Supervisor	Date

JPM Number: RC-8

JPM Title: PERFORM RCP SEAL ISOLATION FOLLOWING LOSS OF ALL AC

Examinee: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

RC-8, PERFORM RCP SEAL ISOLATION FOLLOWING LOSS OF ALL AC POWER, REV 14

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A Loss of All AC power has occurred on Unit 1.

INITIATING CUES:

- The Unit 1 SS directs you to perform Steps 8.b and 8.c of 1ECA-0.0, LOSS OF ALL SAFEGUARDS AC POWER.
- **ALL OPERATOR ACTIONS ARE TO BE SIMULATED UNLESS DIRECTED OTHERWISE.**

JPM PERFORMANCE INFORMATION

Required Materials: Copy of 1ECA-0.0, page 8, step 8.

General References: 1ECA-0.0, LOSS OF ALL SAFEGUARDS AC POWER.

Task Standards: Examinee closes the RCP seal injection throttle valves and RCP CC return isolation valves.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: **Critical Y**	**1ECA-0.0, step 8.b**
	RCP seal injection throttle valves: • **VC-14-1** • **VC-14-2**
Standard:	**Examinee closes RCP seal injection throttle valves VC-14-1 and VC-14-2.**
Evaluator Note:	**VC-14-1 and VC-14-2 are located in the Auxiliary Building, second floor valve gallery, as you enter the SG Blowdown Flash Tank area.**
Evaluator Cue:	**When examinee simulates closing the valves, then inform examinee the valves are closed.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

RC-8, PERFORM RCP SEAL ISOLATION FOLLOWING LOSS OF ALL AC POWER, REV 14

Performance Step: **Critical Y**	**1ECA-0.0, step 8.c**
	RCP CC return isolation valves: • **CC-16-3** • **CC-16-2**
Standard:	**Examinee closes RCP CC return isolation valves CC-16-3 and CC-16-2.**
Evaluator Note:	**Valves are located in the Auxiliary Building, first floor, in the overhead (near SI room door closure device, west of elevator). Reach rod operators are below the valves, about waist high.**
Evaluator Cue:	**When examinee simulates closing the valves, then inform examinee the valves are closed.**
Performance:	**SATISFACTORY** ☐ **UNSATISFACTORY** ☐
Comments:	_____

Terminating Cues: **When examinee has closed the RCP seal injection throttle valves and RCP CC return isolation valves, then this JPM is complete.**

Stop Time: _____

TURNOVER SHEET

INITIAL CONDITIONS:

- A Loss of All AC power has occurred on Unit 1.

INITIATING CUES:

- The Unit 1 SS directs you to perform Steps 8.b and 8.c of 1ECA-0.0, LOSS OF ALL SAFEGUARDS AC POWER.
- **ALL OPERATOR ACTIONS ARE TO BE SIMULATED UNLESS DIRECTED OTHERWISE.**

RC-8, PERFORM RCP SEAL ISOLATION FOLLOWING LOSS OF ALL AC POWER, REV 14
ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☐	☐	☒
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written. The individual(s) performing the validation sign and date this form.

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

_____ _____
Validation Personnel /Date Validation Personnel/Date

Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **12 RCP THERMAL BARRIER HEAT EXCHANGER LEAK**

JPM NUMBER: **RC-24SF** **REV.** **1**

RELATED PRA INFORMATION: **ISLOCA (4.4%)**

TASK NUMBERS / TASK TITLE(S): **CRO 008 ATI 00 00 011 / RESPONSE TO LEAKAGE INTO THE CC SYSTEM**

K/A NUMBERS: **003 A4.08 (3.2/2.9)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: **14** Minutes Time Critical: **NO**

Alternate Path: **YES**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

JPM BRIEFING/TURNOVER

You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed.

EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.

If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- Two 40 gpm letdown orifices are in service.

INITIATING CUE:

- The SS directs you to remove CV-31325 letdown orifice from service per Section 6.11 of 1C12.1, LETDOWN, CHARGING & SEAL WATER INJECTION – UNIT 1.

RC-24SF, 12 RCP THERMAL BARRIER HEAT EXCHANGER LEAK, REV 1

JPM PERFORMANCE INFORMATION

Required Materials: NONE

General References: 1C12.1, LETDOWN, CHARGING & SEAL WATER INJECTION-UNIT 1
1C14 AOP2, LEAKAGE INTO THE COMPONENT COOLING SYSTEM
C47015-0109, 12 RCP THERMAL BARRIER CC WATER HI FLOW
C7, REACTOR CONTROL SYSTEM

Task Standards: Examinee removes one letdown orifice from service and isolates Component Cooling to 12 RCP Thermal Barrier Heat Exchanger.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step:	**1C12.1, step 6.11.1**
Critical N	**IF desired, THEN place 1HC-135A, LTDN PRESS CONT CV-31203, to MANUAL.**
Standard:	**Examinee places 1HC-135A in MANUAL or leaves 1HC-135A in AUTO.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**1C12.1, step 6.11.2**
Critical N	**Maintain letdown pressure less than 445 psig to prevent lifting the low pressure letdown relief valve.**
Standard:	**Examinee maintains letdown pressure less than 445 psig.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**1C12.1, step 6.11.3**
Critical Y	**CLOSE the desired letdown orifice isolation valve:** • **CV-31325, LTDN ORIFICE ISOL 40 GPM, using CS-46170** **OR** • **~~CV-31326, LTDN ORIFICE ISOL 40 GPM, using CS-46171~~** **OR** • **~~CV-31327, LTDN ORIFICE ISOL 80 GPM, using CS-46174~~**
Standard:	**Examinee closes CV-31325 using CS-46170.**
Evaluator Note:	**If examinee closes CV-31326 instead of CV-31327, then the task will still be met and it will NOT constitute a JPM failure.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C12.1, step 6.11.4**
Critical N	**Transfer the inservice charging pump from AUTOMATIC to MANUAL speed control per C7, Reactor Control System.**
Standard:	**Examinee transfers 11 Charging Pump to manual.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C12.1, step 6.11.5**
Critical N	**Lower charging pump speed while adjusting 1HC-142, CHG LINE FLOW CONT, to maintain seal injection flow at 8 gpm, until charging flow is about 30 gpm.**
Standard:	**Examinee reduces charging flow to approximately 30 gpm.**
Evaluator Note:	**When examinee has established approximately 30 gpm charging flow OR at evaluator discretion, enter Trigger 1, 12 RCP Thermal Barrier Failure.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C12.1, step 6.11.6**
Critical N	**Transfer one of the inservice charging pumps from MANUAL to AUTOMATIC speed control per C7, Reactor Control System.**
Standard:	**Examinee transfers 11 or 12 Charging Pump to automatic.**
Evaluator Note:	**If examinee transitions to 1C14 AOP2 or C47015-0109, then this step is NOT applicable.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47015-0109, 12 RCP THERMAL BARRIER CC WATER HI FLOW**
Critical N	**ALTERNATE PATH STARTS HERE**
Standard:	**Examinee acknowledges annunciator.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C14 AOP2, Step 2.4.1.A OR C47015-0109, Step 1**
Critical Y	**Verify CV-31246, 12 RC PUMP THERMAL BARRIER CLNT OUTL, using CS-46026, is CLOSED.**
Standard:	**Examinee closes CV-31246 using CS-46026.**
Evaluator Note:	**If the examinee places CS-46026 in the closed position, then AUTO Trigger 2 will be entered to allow CV-31246 to close.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When examinee has removed one letdown orifice from service and isolated Component Cooling to 12 RCP Thermal Barrier Heat Exchanger, then this JPM is complete.**

Stop Time: _____

Simulator Setup:

1. If an IC is already created for this JPM, then go to step 3.
2. If an IC is NOT created for this scenario, then create as follows:
   a. Reset the simulator to IC-10.
   b. Place the simulator in RUN.
   c. Place a second 40 GPM letdown orifice in service per 1C12.1.
   d. Place simulator in FREEZE.
   e. If desired, save to an available IC.
   f. Place simulator in RUN.
   g. Go to step 4.
3. Reset the simulator to **IC-245** or the IC created from step 2 and place in RUN.
4. If available, run schedule file **RC-24SF.sch** as follows:
   a. Select open file in the Schedule application.
   b. Locate schedule file.
   c. Open schedule file by double clicking it.
   d. Run the schedule file by pressing the “Stopped” button on the toolbar.
   e. Verify the schedule file is running.
5. If schedule file is NOT available, then insert malfunctions, remotes, and overrides, as specified by the Simulator Input Summary below.
6. If available, run event file **RC-24SF.evt** as follows:
   a. Select open file in the EVENT application.
   b. Locate event file.
   c. Open by double clicking file.
7. If event file is NOT available, then enter event codes as specified by the Simulator Event Summary below.
8. Verify CONG1 ERCS terminal is set to Group QP CCDATA.
9. When examinee has closed one letdown orifice valve and established approximately 30 gpm charging flow, or at the discretion of the evaluator, enter **Trigger 1, 12 RCP Thermal Barrier Failure**.
10. When examinee places CS-46026 in the closed position, verify **AUTO Trigger 2** is entered.

SIMULATOR INPUT SUMMARY

@Time	Event	Action	Description
00:00:00		Insert override DI-46026O to True	CV-31246 FAILS TO CLOSE ON HIGH FLOW
	1	Insert malfunction VC21B after 5 to 10.00000 on event 1	REACTOR COOLANT PUMP #12 THERMAL BARRIER TUBE FAILURE
	2	Insert override DI-46026O to False on event 2	CV-31246 FAILURE REMOVED

SIMULATOR EVENT SUMMARY		
Event ID	**Code**	**Description**
2	HWZCCC026(1) == 1	CV-31246 MANUALLY CLOSED

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

ATTACHMENT 2

JPM Number: RC-24SF

JPM Title: 12 RCP THERMAL BARRIER HEAT EXCHANGER LEAK

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- Two 40 gpm letdown orifices are in service.

INITIATING CUE:

- The SS directs you to remove CV-31325 letdown orifice from service per Section 6.11 of 1C12.1, LETDOWN, CHARGING & SEAL WATER INJECTION – UNIT 1.

Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **SECURE R11/12 IN CONTROL ROOM**

JPM NUMBER: **RM-5S** **REV.** **1**

RELATED PRA INFORMATION: **NONE**

TASK NUMBERS / TASK TITLE(S): **CRO 073 ATI 00 00 008 / REMOVE REDUNDANT RAD MONITORS FROM SERVICE**

K/A NUMBERS: **073 A4.02 (3.7/3.7)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: **8** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Unit 1 and Unit 2 are at 100% power.
- R-11 and R-12 need to be removed from service for preventative maintenance.
- Steps 6.4.1 through 6.4.8.B of C11, Radiation Monitoring System, are complete.
- The outplant operator has been briefed and is standing by.

INITIATING CUES:

- The Shift Supervisor directs you to remove 1R11/12 from service per section 6.4.8.C & 6.4.8.D of C11, Radiation Monitoring System.

JPM PERFORMANCE INFORMATION

Required Materials: Steps 6.4.1 through 6.4.8.B of C11 marked complete.
Key 167 for the Control Room RAM 606.

General References: C11, RADIATION MONITORING SYSTEM

Task Standards: Examinee changes R11/R12 pump status to OFF.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: C11 step 6.4.8.C.1:	
Critical N	
	Place the Control Room RAM606 key switch in the "KEYPAD" position.
Standard:	**Examinee places the RAM606 key switch in the "KEYPAD" position.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step: C11 step 6.4.8.C.2:	
Critical N	
	Depress the up arrow to select Channel 1R-11 ~~[2R-11]~~ on the RAM606 display.
Standard:	**Examinee selects 1R-11 on the RAM606 display.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.3:**
Critical N	
	Check the Pump Status "ON" indicated on the lower line of the single channel rate display.
Standard:	**Examinee identifies that the pump status is "on."**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.4:**
Critical N	
	Depress the up arrow twice to return to the dual rate display.
Standard:	**Examinee returns to the dual rate display.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.5:**
Critical Y	
	Depress MODE once. The Pump Status Display will be shown.
Standard:	**Examinee navigates to Pump Status Display.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.6:**
Critical Y	
	Depress SET to enter the pump status change subroutine.
Standard:	**Examinee enters the pumps statue change subroutine.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.7:**
Critical Y	
	Depress the Up arrow to select pump status to OFF.
Standard:	**Examinee selects pump status to OFF.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.8:**
Critical Y	
	Depress SET to accept the pump status change.
Standard:	**Examinee accepts pump status change.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.9:**
Critical N	
	Depress MODE once to return to the dual rate display.
Standard:	**Examinee returns to the dual rate display.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.10:**
Critical N	
	Depress the up arrow to select Channel 1R-11 ~~[2R-11]~~ on the RAM606 display.
Standard:	**Examinee selects 1R-11 on the RAM606 display.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.C.11:**
Critical N	
	Verify the Pump Status OFF in the lower line display.
Standard:	**Examinee identifies that the pump status is "off."**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C11 step 6.4.8.D:**
Critical N	
	Place the Control Room RAM606 key switch in the "OFF" position.
Standard:	**Examinee places the RAM606 key in "OFF."**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When the examinee has changed R11/R12 pump status to OFF, then this JPM is complete.**

Stop Time: _____

Simulator Setup:

1. Reset the simulator to IC-10.
2. Place the simulator in RUN.
3. If R11/12 is NOT in service, then perform steps 6.6.5.G, 6.6.5.H, 6.6.5.R, and 6.6.5.S of C11.
4. Verify EVENT BUFFER is clear by cycling power to R11/12. The best practice is to run through the JPM prior to administering to the first examinee.
5. Markup C11, radiation Monitoring System, steps 6.4.1 through 6.4.8.B complete.

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

ATTACHMENT 2

JPM Number: RM-5S

JPM Title: SECURE R11/12 IN CONTROL ROOM

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 and Unit 2 are at 100% power.
- R-11 and R-12 need to be removed from service for preventative maintenance.
- Steps 6.4.1 through 6.4.8.B of C11, Radiation Monitoring System, are complete.

INITIATING CUES:

- The Shift Supervisor directs you to remove 1R11/12 from service per section 6.4.8.C & 6.4.8.D of C11, Radiation Monitoring System.

Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: **PRAIRIE ISLAND**

JPM TITLE: **MALFUNCTION OF AUTOMATIC MAKEUP DURING BORATION**

JPM NUMBER: **VC-29SF** **REV.** **1**

RELATED PRA INFORMATION: **NONE**

TASK NUMBERS / TASK TITLE(S): **CR 000 023 05 01 000, INADVERTANT REACTIVITY CHANGES**

K/A NUMBERS: **004 A4.12 (3.8/3.3)**

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: **10** Minutes Time Critical: **NO**

Alternate Path: **YES**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:		
	Training Supervisor	Date

VC-29SF, MALFUNCTION OF AUTOMATIC MAKEUP DURING BORATION, REV.1

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Unit 1 is at 100% Power.

INITIATING CUES:

- The Unit 1 Shift Supervisor directs you to perform a 10 gallon BORATION to the RCS using 1C12.5, Unit 1 Boron Concentration Control, section 5.9.

VC-29SF, MALFUNCTION OF AUTOMATIC MAKEUP DURING BORATION, REV.1

JPM PERFORMANCE INFORMATION

Required Materials: NONE

General References: 1C12.5, Unit 1 Boron Concentration Control
C12.5 AOP 2, Malfunction of Automatic Make-up

Task Standards: Examinee takes makeup mode selector switch to borate and secures the boration.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step:	**1C12.5 Section 5.9**
Critical N	
	1. IF not yet reviewed this shift, THEN perform a review of the precautions in section 5.7.
Standard:	**Examinee reviews precautions in section 5.7.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C12.5 Section 5.9**
Critical N	
	2. Verify the Boric Acid Integrator is reset.
Standard:	**Examinee determines the Boric Acid Integrator is reset.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C12.5 Section 5.9**
Critical N	
	3. Set 1YIC-110, BA TO BLENDER BATCH INTEGRATOR, to the quantity desired.
Standard:	**Examinee sets 1YIC-110 to 10.0**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C12.5 Section 5.9**
Critical Y	
	4. Place CS-46300, MAKE-UP MODE SELECTOR, to "BORATE"
Standard:	**Examinee places CS-46300 to borate.**
Evaluator Note:	**When the make-up mode selector switch is taken to borate, a boration will begin immediately.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

ALTERNATE PATH STARTS HERE

Performance Step: **Critical Y**	**C12.5 AOP 2, Section 2.4.1** **IF T_{avg}, control rods, or source range are changing in an unexpected direction or rate, THEN stop makeup flow using one or more of the following methods:** **A. Place CS-46300, MAKE-UP MODE SELECTOR TO OFF.** **B. 1HC110, BA TO BLENDER FLOW CONT CV-31199, to MANUAL and CLOSE** **C. STOP the ~~reactor makeup pumps~~ and boric acid transfer pumps** **o CS-46161, 11 BORIC ACID TRANSFER PUMP** **D. CLOSE CV-31200, BA BLENDER TO VC TNK OUTLT** **E. CLOSE CV-31199, BA INLT TO BLENDER**
Standard:	**Examinee secures the boration.**
Evaluator Note	**There are multiple ways to stop the boration. Only the effective methods are listed above are from C12.5 AOP2, in addition to appropriate valve isolations.**
Evaluator Cue:	**If examinee informs the evaluator about the automatic boration malfunction, as examinee as the Shift Supervisor what action they recommend taking to remedy the situation.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When the examinee takes makeup mode selector switch to borate and secures the boration, then this JPM is complete**

Stop Time: _____

Simulator Setup:

1. Reset the simulator to **IC-259**.
2. Place the simulator in RUN and go to step 4.
3. If an IC is NOT created for this scenario, then create as follows:
   a. Reset to **IC-10**.
   b. Place the simulator in RUN.
4. If available, run schedule file **VC-29SF.sch** as follows:
   a. Select open file in the Schedule application.
   b. Locate schedule file.
   c. Open schedule file by double clicking it.
   d. Run the schedule file by pressing the “Stopped” button on the toolbar.
   e. Verify the schedule file is running.
5. If schedule file is NOT available, then insert malfunctions, remotes, and overrides, as specified by the Simulator Input Summary.
6. If available, open event file **VC-29SF.evt** as follows:
   a. Select open file in the EVENT application.
   b. Locate event file.
   c. Open by double clicking file.
7. If event file is NOT available, then enter event codes as specified by the Simulator Event Summary below.
8. If running this JPM in conjunction with **VC-104S** & **ZC-1SF**, then refer to ZC-1SF for set up instructions. If not, then continue with next step.
9. Place simulator in FREEZE.
10. If desired, save to an available IC.
11. Place simulator in RUN.
12. Clear recorder memory after each reset.
13. Verify Boric Acid and RMU Counters are RESET after each reset.
14. Verify Director or Schedule File matches the input summary below.

SIMULATOR INPUT SUMMARY

Insert	Pause	@Time	Event	Action	Description
			1	Insert override DI-46457NAST to False on event 1	NRML AF STRT
			1	Insert override DI-46457SP to False on event 1	STOP
			1	Insert override DI-46457ST to True on event 1	START
			1	Insert override DI-41111RS to False on event 1	RESET

SIMULATOR EVENT SUMMARY		
Event ID	**Event CODE**	**Event DESCRIPTION**
1	ZVCR457(1)==1	BORIC ACID MU CONTROL TO START

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

VC-29SF, MALFUNCTION OF AUTOMATIC MAKEUP DURING BORATION, REV.1

ATTACHMENT 2

JPM Number: VC-29SF

JPM Title: Malfunction of Automatic Makeup During Boration

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 is at 100% Power.

INITIATING CUES:

- The Unit 1 Shift Supervisor directs you to perform a 10 gallon BORATION to the RCS using 1C12.5, Unit 1 Boron Concentration Control, section 5.9.

Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: PRAIRIE ISLAND

JPM TITLE: RETURN 13 CHARGING PUMP TO STANDBY

JPM NUMBER: VC-104S **REV.** 1

RELATED PRA INFORMATION: NONE

TASK NUMBERS / TASK TITLE(S): CRO 004 ATI 00 00 003 / SWAPPING CHARGING PUMPS WITH 2 PUMPS IN SERVICE

K/A NUMBERS: 011 A4.01 (3.5 / 3.2)

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: **8** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Justin Hasner**	
	Developer	Date
Validated by:	**Zach Elbert**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

VC-104S, RETURN 13 CHARGING PUMP TO STANDBY, REV. 1

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- 11 and 12 Charging Pumps are RUNNING.
- The crew is preparing to swap charging pumps.
- 13 Charging Pump is in PULLOUT.
- Outplant Operators have completed the desurger pressure check for 13 Charging Pump.

INITIATING CUES:

- The Shift Supervisor directs you to return 13 Charging Pump to STANDBY per 1C12.1, Letdown, Charging, and Seal Water Injection – Unit 1, starting with step 6.14.4.V.

VC-104S, RETURN 13 CHARGING PUMP TO STANDBY, REV. 1

JPM PERFORMANCE INFORMATION

Required Materials: **NONE**

General References: **1C12.1, Letdown, Charging, and Seal Water Injection – Unit 1**

Task Standards: **The examinee places the 13 Charging Pump in standby status (Neutral position with green light lit and white light not lit).**

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: **Critical Y**	**1C12.1 Letdown, Charging, and Seal Water Injection – Unit 1, Step 6.14.4.V:** **Return CS-46294, 13 CHG PUMP, to "NEUTRAL".**
Standard:	**The examinee returns CS-46294 to the neutral position.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

VC-104S, RETURN 13 CHARGING PUMP TO STANDBY, REV. 1

Performance Step: **Critical Y**	**1C12.1 Letdown, Charging, and Seal Water Injection – Unit 1, Step 6.14.4.W.1:** **Perform the following to energize the VFD and place charging pump in a standby status:** **Energize VFD by momentarily placing CS-46294, 13 CHG PUMP, to "START".**
Standard:	**The examinee places CS-46294 in "START" and releases it.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical N**	**1C12.1 Letdown, Charging, and Seal Water Injection – Unit 1, Step 6.14.4.W.2:** **Perform the following to energize the VFD and place charging pump in a standby status:** **Verify control switch green and white lights are LIT.**
Standard:	**The examinee verifies green and white lights on the 13 charging pump are LIT.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical Y**	**1C12.1 Letdown, Charging, and Seal Water Injection – Unit 1, Step 6.14.4.W.3:** **Perform the following to energize the VFD and place charging pump in a standby status:** **Momentarily place CS-46294, 13 CHG PUMP, to "STOP".**
Standard:	**The examinee places CS-46294 in "STOP" and releases it.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

VC-104S, RETURN 13 CHARGING PUMP TO STANDBY, REV. 1

Terminating Cues: **When examinee has placed the 13 Charging Pump in standby status (Neutral position with green light lit and white light not lit), then this JPM is complete.**

Stop Time: _____

Simulator Setup:

1. If this JPM is being run in conjunction with **ZC-1SF & VC-29SF**, then set up the simulator per the simulator set up in **ZC-1SF,** then continue with step 5.
2. If an IC is already created for this JPM, then go to step 4.
3. If an IC is NOT created for this JPM, then create as follows:
   a. Reset to **IC-10**.
   b. Place the simulator in RUN.
   c. Take **CS-46294**, 13 CHG PUMP to **PULLOUT**.
   d. Place simulator in FREEZE.
   e. If desired, save to an available IC.
   f. Place simulator in RUN.
   g. Go to step 5.
4. Reset the simulator to the IC created from step 3 and place in RUN.
5. Mark steps R-U complete on **page 55 of 1C12.1**.
6. Clear recorder memory after each reset.

SIMULATOR INPUT SUMMARY

NONE

VC-104S, RETURN 13 CHARGING PUMP TO STANDBY, REV. 1

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

VC-104S, RETURN 13 CHARGING PUMP TO STANDBY, REV. 1

ATTACHMENT 2

JPM Number: VC-104S

JPM Title: RETURN 13 CHARGING PUMP TO STANDBY

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- 11 and 12 Charging Pumps are RUNNING.
- The crew is preparing to swap charging pumps.
- 13 Charging Pump is in PULLOUT.
- Outplant Operators have completed the desurger pressure check for 13 Charging Pump.

INITIATING CUES:

- The Shift Supervisor directs you to return 13 Charging Pump to STANDBY per 1C12.1, Letdown, Charging, and Seal Water Injection – Unit 1, starting with step 6.14.4.V.

Xcel Energy | JOB PERFORMANCE MEASURE (JPM)

SITE: PRAIRIE ISLAND

JPM TITLE: CFCU HIGH TEMP WHILE ALTERNATING FAN COIL UNITS

JPM NUMBER: ZC-1SF **REV.** 1

RELATED PRA INFORMATION: NONE

TASK NUMBERS / TASK TITLE(S): CRO 022 ATI 00 00 007 / CHANGE FAN COIL UNIT FAN SPEED

K/A NUMBERS: 022 A4.01 (3.6/3.6)

APPLICABLE METHOD OF TESTING:

Discussion: [ ] Simulate/walkthrough: [ ] Perform: [X]

EVALUATION LOCATION: In-Plant: [ ] Control Room: [ ]

Simulator: [X] Other: [ ]

Lab: [ ]

Time for Completion: 7 Minutes Time Critical: NO

Alternate Path: YES

TASK APPLICABILITY: SRO: [X] RO: [X] NLO [ ]

Additional site-specific signatures may be added as desired.

Developed by:	**Fredrick Collins**	
	Developer	Date
Validated by:	**Justin Hasner**	
	Validator (See JPM Validation Checklist, Attachment 1)	Date
Approved by:	**Shawn Sarrasin**	
	Training Supervisor	Date

JPM BRIEFING/TURNOVER
You may use any approved reference materials normally available including logs. Make all written reports, oral reports, and log entries as if the evolution is actually being performed. *EOP Immediate Actions are required to be performed from memory. After completing immediate action steps without using the procedure, you may then use any approved reference materials.* *If this JPM is performed on the simulator, the JPM administrator should only give cues that are not indicated on the simulator. If simulator indication is sufficient to indicate the completion of a step, the JPM administrator should not have to give a cue to the trainee to continue the evolution.*

I will explain the initial conditions, which step(s) to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- 11 FCU is in FAST to the SUPPORT COOLING.
- 12 FCU is in SLOW to the DOME.
- 13 FCU is in FAST to the GAP.
- 14 FCU is in SLOW to the DOME.

INITIATING CUES:

- The SS directs you to alternate FCUs per Section 6.6.4.A of 1C19.2, Containment System Ventilation Unit 1, as follows:
    - 11 FCU in SLOW to the DOME.
    - 12 FCU in FAST to the SUP CLG.
    - 13 FCU in SLOW to the DOME.
    - 14 FCU in FAST to the GAP.

JPM PERFORMANCE INFORMATION

Required Materials: NONE

General References: 1C19.2, CONTAINMENT SYSTEM VENTILATION UNIT 1
C47019-0405, 12 CONTAINMENT FAN COIL UNIT MOTOR STATOR HI TEMP

Task Standards: Examinee alternates FCUs, stops 12 FCU due to high temperature, and re-aligns 11 FCU to SUPPORT in fast speed.

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

IMPORTANT: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM, per FP-T-SAT-73, Licensed Operator Requalification Program Examinations.

Performance Step: **Critical Y**	**1C19.2, step 6.6.4.A.1:** **Containment Fan Coil Fans and Discharge Dampers** **1. Shift the desired fan coil units to SLOW by placing the control switch in "OFF" for 15 seconds, then placing the control switch in "SLOW:"** • **CS-46018, 11 CNTMT FAN COIL UNIT** • ~~**CS-46020, 12 CNTMT FAN COIL UNIT**~~ • **CS-46019, 13 CNTMT FAN COIL UNIT** • ~~**CS-46021, 14 CNTMT FAN COIL UNIT**~~
Standard:	**Examinee shifts 11 and 13 FCUs to slow speed using CS-46018 and CS-46019.**
Performance:	**SATISFACTORY** _____ **UNSATISFACTORY** _____
Comments:	_____

Performance Step:	**1C19.2, step 6.6.4.A.2:**
Critical Y	
	Align fan coil unit discharge dampers as desired, observing Precaution 4.7:
	• **CS-46440, 11 FCU DISCH TO CNTMT DOME/SUPPORT DMPRS** • **CS-46441, 12 FCU DISCH TO CNTMT DOME/SUPPORT DMPRS** • **CS-46442, 13 FCU DISCH TO CNTMT DOME/GAP DAMPERS** • **CS-46443, 14 FCU DISCH TO CNTMT DOME/GAP DAMPERS**
Standard:	**Examinee aligns FCU Discharge dampers as follows:** • **11 CFCU to DOME using CS-46440** • **12 CFCU to SUPPORT using CS-46441** • **13 CFCU to DOME using CS-46442** • **14 CFCU to GAP using CS-46443**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**1C19.2, step 6.6.4.A.3:**
Critical N	
	Verify associated white fan coil unit damper improper lights remain NOT LIT:
	• **ML-44002-0101, 11 CNTMT FCU DISCH DMPRS IMPROPER** • **ML-44002-0102, 12 CNTMT FCU DISCH DMPRS IMPROPER** • **ML-44002-0201, 13 CNTMT FCU DISCH DMPRS IMPROPER** • **ML-44002-0202, 14 CNTMT FCU DISCH DMPRS IMPROPER**
Standard:	**Examinee determines the IMPROPER lights are NOT lit.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical Y**	**1C19.2, step 6.6.4.A.4:**
	Shift the desired fan coil units to FAST by placing the control switch in "OFF" for at least one (1) second, then placing the control switch in "FAST:" • ~~**CS-46018, 11 CNTMT FAN COIL UNIT**~~ • **CS-46020, 12 CNTMT FAN COIL UNIT** • ~~**CS-46019, 13 CNTMT FAN COIL UNIT**~~ • **CS-46021, 14 CNTMT FAN COIL UNIT**
Standard:	• **Examinee shifts 12 and 14 FCUs to fast speed using CS-46020 and CS-46021.**
Evaluator Note:	**When examinee places CS-46020 & CS-46021, 12 & 14 CFCUs, in FAST, then verify AUTO Trigger 1, 12 CFCU High temp, is entered.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step: **Critical N**	**C47019-0405, 12 CONTAINMENT FAN COIL UNIT MOTOR STATOR HI TEMP** **ALTERNATE PATH STARTS HERE**
Standard:	**Examinee acknowledges annunciator.**
Evaluator Note:	**12 CFCU high stator temperature annunciator alarms 5 seconds after BOTH 12 & 14 CFCUs are in fast speed.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47019-0405, step 1:**
Critical N	
	Verify one of 12 FCU discharge dampers is OPEN. IF necessary, THEN open appropriate damper using CS-46441, 12 FCU DISCH TO DOME/SUPPORT CD-34074/34075 CS.
Standard:	**Examinee determines one of 12 FCU discharge dampers are already open.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47019-0405, step 2:**
Critical N	
	Verify cooling water alignment to 12 FCU: • **MV-32379, 12 FCU CLG WTR INLT ISOL MV, OPEN.** • **MV-32135, 12 FCU CLG WTR OUTL ISOL MV A, OPEN.** • **MV-32136, 12 FCU CLG WTR OUTL ISOL MV B, OPEN.**
Standard:	**Examinee determines cooling water is aligned to 12 FCU.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47019-0405, step 3.A:**
Critical Y	
	IF Steps 1 & 2 did not cause stator temperature to decrease to below alarm setpoint, THEN perform the following: **1) Stop 12 FCU (FCU is not considered inoperable at this time).**
Standard:	**Examinee stops 12 CFCU using CS-46020.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47019-0405, step 3.B:**
Critical Y	**2) Verify CD-34073, 11 FCU NORM DISCH TO RX VESSEL SUPPORT, OPEN.**
Standard:	**Examinee aligns 11 FCU to SUPPORT using CS-46440.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Performance Step:	**C47019-0405, step 3.C:**
Critical Y	**3) Verify 11 CFCU running in fast.**
Standard:	**Examinee shifts 11 FCU to fast speed using CS-46018.**
Performance:	**SATISFACTORY _____ UNSATISFACTORY _____**
Comments:	_____

Terminating Cues: **When the examinee has alternated FCUs, stopped 12 FCU due to high temperature, and has re-aligned 11 FCU to SUPPORT in fast speed, then this JPM is complete.**

Stop Time: _____

Simulator Setup:

1. Reset the simulator to **IC-259.**
2. Place the simulator in RUN and go to step 4.
3. If an IC is NOT created for this JPM, then create one as follows:
   a. Reset simulator to IC-10 and place in RUN.
   b. If running this JPM in conjunction with **VC-104S**, then:
      1) Take CS-46294, 13 CHG PUMP, to PULLOUT.
      2) If also running this JPM in conjunction with **VC-29SF**, then go to step 3.c, if not then continue with next step.
      3) Place simulator in FREEZE.
      4) If desired, save to an available IC.
      5) Place simulator in RUN.
      6) Go to step 4.
   c. If also running this JPM in conjunction with **VC-29SF**, then:
      1) If available, run schedule files **ZC-1SF.sch & VC-29SF.sch** as follows:
         (a) Select open file in the Schedule application.
         (b) Locate schedule file.
         (c) Open schedule file by double clicking it.
         (d) Run the schedule file by pressing the “Stopped” button on the toolbar.
         (e) Verify the schedule file is running.
      2) If schedule file is NOT available, then insert malfunctions, remotes, and overrides, as specified by the Simulator Input Summary.
      3) If available, open event files **ZC-1SF.evt & VC-29SF.evt** as follows:
         (a) Select open file in the EVENT application.
         (b) Locate event file.
         (c) Open by double clicking file.
      4) If event file is NOT available, then enter event codes as specified by the Simulator Event Summary below.
      5) Place simulator in FREEZE.
      6) If desired, save to an available IC.
      7) Place simulator in RUN.
      8) Go to step 4.
4. Reset the simulator to IC-259 or the IC created from step 3 and place in RUN.
5. Clear recorder memory after each reset.
6. Verify Director or Schedule File matches the input summary below.

SIMULATOR INPUT SUMMARY

VC-29SF:

Insert	Pause	@Time	Event	Action	Description
			1	Insert override DI-46457NAST to False on event 1	NRML AF STRT
			1	Insert override DI-46457SP to False on event 1	STOP
			1	Insert override DI-46457ST to True on event 1	START
			1	Insert override DI-41111RS to False on event 1	RESET

ZC-1SF:

@Time	Event	Action	Description
	2	Insert malfunction CP-1T1030A from 90.00000 to 150.00000 in 15 on event 2	12 CNTMT FCU MTR STR T
	2	Insert malfunction M47019:0405W after 5 to Cry_Wolf on event 2	Annunciator malfunction

SIMULATOR EVENT SUMMARY		
Event ID	**Event CODE**	**Event DESCRIPTION**
1	ZVCR457(1)==1	BORIC ACID MU CONTROL TO START
2	HWZCHFFCF(2)==1 & HWZCHFFCF(4)==1	12 & 14 CFCUs IN FAST

ATTACHMENT 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED UPON INITIAL VALIDATION AND PRIOR TO USE.

REVIEW STATEMENTS	YES	NO	N/A
1. Are all items on the cover page filled in correctly?	☒	☐	
2. Has the JPM been reviewed and validated by SMEs?	☒	☐	☐
3. Can the required conditions for the JPM be appropriately established in the simulator if required?	☒	☐	☐
4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures?	☒	☐	
5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step?	☒	☐	
6. If the task is NOT time critical, has the completion time been established based on validation data or incumbent experience?	☒	☐	☐
7. If the task is time critical, is the time critical portion based upon actual task performance requirements?	☐	☐	☒
8. Is the Licensee level appropriate for the task being evaluated if required? Not applicable to Non-Licensed Operators	☒	☐	☐
9. Is the K/A appropriate to the task and to the licensee level if required? Not applicable to Non-Licensed Operators	☒	☐	☐
10. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately?	☒	☐	
11. Have all special tools and equipment needed to perform the task been identified?	☒	☐	
12. Are all references identified, current, and accurate?	☒	☐	
13. Have all required cues (as anticipated) been identified for the evaluator to assist task completion?	☒	☐	

All applicable questions must be answered "YES" or the JPM is not valid for use. If all applicable questions are answered "YES" then the JPM is considered valid and can be performed as written.

ATTACHMENT 2

JPM Number: ZC-1SF

JPM Title: CFCU HIGH TEMP WHILE ALTERNATING FAN COIL UNITS, REV. 1

Examinee & ID: _____ **Evaluator:** _____

Job Title: _____ **Date:** _____

Start Time _____ **Finish Time** _____

PERFORMANCE RESULTS: **SAT:** ☐ **UNSAT:** ☐

COMMENTS/FEEDBACK: (Make written comments for any steps graded unsatisfactory).

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

ATTACHMENT 3

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- 11 FCU is in FAST to the SUPPORT COOLING.
- 12 FCU is in SLOW to the DOME.
- 13 FCU is in FAST to the GAP.
- 14 FCU is in SLOW to the DOME.

INITIATING CUES:

- The SS directs you to alternate FCUs per Section 6.6.4.A of 1C19.2, Containment System Ventilation Unit 1, as follows:
    - 11 FCU in SLOW to the DOME.
    - 12 FCU in FAST to the SUP CLG.
    - 13 FCU in SLOW to the DOME.
    - 14 FCU in FAST to the GAP.