	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** LINEUP RWST TO CHARGING DURING ATWS

**JPM NUMBER:** FL-10SF-3 **REV.** **3**

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 004.ATI.015

**K/A NUMBERS:** 2.1.23

**APPLICABLE METHOD OF TESTING:**

Discussion:  Simulate/walkthrough:  Perform:

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

Simulator:  Other:

Lab:

Time for Completion:  5  Minutes Time Critical:  NO

Alternate Path / Faulted:  YES

**TASK APPLICABILITY:**  SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/2/05</b>
	Instructor	Date
<b>Validated by:</b>	J. Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: FL-10SF-3

JPM Title: LINEUP RWST TO CHARGING DURING ATWS

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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:**

- The control rods failed to insert following a Unit 1 Reactor trip.
- 1FR-S.1 Response to Nuclear Power Generation / ATWS is in effect.
- Steps 1, 2 and 3 of 1FR-S.1 have been completed.
- You are the Unit 1 Lead Reactor Operator.
- Another Operator will acknowledge alarms not related to your actions.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to perform Step 4 of 1FR-S.1.

**JPM PERFORMANCE INFORMATION**

**Required Materials:**       None

**General References:**     1FR-S-1

**Task Standards:**         Line up RWST to charging IAW 1FR-S.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).

**NOTE:** 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.

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Initiate Normal Boration of the RCS at 12 to 15 GPM.
<b>Standard:</b>	Attempts to initiate Normal Boration and recognizes the need to Emergency Borate by: <ul style="list-style-type: none"><li>• Setting BA counter to high number</li><li>• CS- 46300 to Borate</li><li>• CS- 46457 to Start</li><li>• CV-31199 recognized not opening (may attempt to open)</li><li>• Report Normal Boration is NOT successful.</li></ul>

**Evaluator Cue:**       Acknowledge report Normal Boration is NOT successful.

**Performance:**         **SATISFACTORY**  **UNSATISFACTORY**

**Comments:**           \_\_\_\_\_

<b>Performance Step:</b>	Shift running Boric Acid Transfer Pump to FAST speed
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	Running pump shifted to FAST (CS-46163) and started (CS-46161)
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Open in-service BAST recirculation valve to 50%
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	In-service BAST recirculation valve (CV-31195 or CV-31197) opened to 50%
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Open emergency boration motor valve
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	Attempts to open MV-32086 using CS-46297
<b>Evaluator Note:</b>	MV-32086 will not open
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Align RWST to charging.
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	Opens MV-32060 using CS-46453
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Close VCT TNK OUTLET Valve
<b>Critical <u>N</u></b>	
<b>Standard:</b>	MV-32061, VCT TNK OUTLET CLOSED using CS-46305
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** When MV-32061 is closed, This JPM is Complete.

**Stop Time:** \_\_\_\_\_

FL-10SF-3, LINEUP RWST TO CHARGING DURING ATWS, Rev 3  
**SIMULATOR SETUP**

**INSTRUCTOR GUIDE:**

- Initialize the simulator to IC-10.
- Enter malfunction RP07 (Reactor Trip Failure).
- Enter malfunction to keep CV-31199, BA INLT TO BLENDER, closed.
- Enter malfunction to keep MV-32086, EMERGENCY BORATION VALVE, closed.
- Enter malfunction RD07H (Bank D control rod drop).
- Manually trip the turbine and ensure MD AFW pump is running.
- Place Simulator in Freeze.
- Conduct turnover
- Place Simulator in Run after Candidate assumes the Watch.
- Simulator operator will act as the RO and will drive rods IN in manual

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0		MALF	RP07				Mechanical Failure of Reactor Trip Breakers
0		OVRD DI	DI-46301C	ON			BA inlet to blender
0		OVRD DI	DI-46301O	OFF			BA inlet to blender
0		OVRD DI	DI-46297O	OFF			Emergency Boration to Charging pump suction
0		MALF	RD07H				Dropped Rod K-7

## TURNOVER SHEET


### INITIAL CONDITIONS:

- The control rods failed to insert following a Unit 1 Reactor trip.
- 1FR-S.1 Response to Nuclear Power Generation / ATWS is in effect.
- Steps 1, 2 and 3 of 1FR-S.1 have been completed.
- You are the Unit 1 Lead Reactor Operator.
- Another Operator will acknowledge alarms not related to your actions.

### INITIATING CUES (IF APPLICABLE):

- The SS directs you to perform Step 4 of 1FR-S.1.



	JOB PERFORMANCE MEASURE (JPM)
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**SITE:** **Prairie Island**

**JPM TITLE:** **PERFORM ATTACHMENT L, STEAM LINE ISOLATION FAILURE**

**JPM NUMBER:** **E0-31SF-2** **REV. 1**

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** **CRO 301 001 06 0101**

**K/A NUMBERS:** **013 A4.01**

**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 / Faulted:  YES

**TASK APPLICABILITY:**  SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b> Instructor	<b>3/2/05</b> Date
<b>Validated by:</b>	John Kempkes Validation Instructor	5/5/05 Date
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: E0-31SF-2

JPM Title: PERFORM ATTACHMENT L, STEAM LINE ISOLATION FAILURE

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

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Review PITC-90, JPM Briefing Checklist with examinee

*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 was operating at 100% power with AMSAC/DSS out of service.
- Unit 1 has just experienced a large break LOCA.
- Actions of 1E-0 are in progress.
- You are the Unit 2 Lead Reactor Operator.

**INITIATING CUES (IF APPLICABLE):**

- The Unit 1 SS has directed you to perform 1E-0, Attachment L, SI Alignment Verification.

**JPM PERFORMANCE INFORMATION**

**Required Materials:**       None

**General References:**     1E-0 Attachment L, SI Alignment Verification

**Task Standards:**         Identify and manually close MSIVs and Instrument Air to Containment Isolation valves per 1E-0.

**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).

**NOTE:** 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.

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Verifies : Both RHR pumps Running OR Both SI pumps Running
<b>Standard:</b>	Verifies Both SI pumps are running
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	SI NOT READY lights – NOT LIT
<b>Standard:</b>	Verifies SI NOT READY lights are not lit
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	SI ACTIVE lights – lit for plant conditions
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	Verifies SI ACTIVE Lights are LIT
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Containment Isolation lights – lit for plant conditions.
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	Verifies CI lights are lit. Closes Instrument Air to Containment Isolation valves.
<b>Evaluator Note:</b>	<b>Containment Isolation is also checked in Step 6, the critical task is satisfied if done in either step.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Category I doors - CLOSED
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	Verifies Category I doors are closed.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Check Category I Special Vent Zone Report – NO openings requiring closure
<b>Critical <u>N</u></b>	within 6 minutes
<b>Standard:</b>	Checks current report and Verifies there are no openings.
<b>Evaluator Note:</b>	<b>Openings are verified using the printout on the RO Desk</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	CLOSE MV-32115, 122 SFP HX Inlet Header MV B
<b>Critical <u>Y</u></b>	
<b>Standard:</b>	Positions CS-46064 to close position. Green light ON.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Check Cooling Water Header Pressures- Both greater than 65 psig
<b>Critical <u>N</u></b>	
<b>Standard:</b>	Verifies CL Header pressures >65psig.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Verify Plant Announcements Complete.
<b>Critical <u>N</u></b>	<ul style="list-style-type: none"><li>• Announces Unit 1 Reactor Trip &amp; Safety Injection</li><li>• Pages Shift Manager &amp; SEC to report to the Control Room</li></ul>
<b>Standard:</b>	Pages made or directed.
<b>Evaluator Cue:</b>	<b>IF asked as the SS if announcements have been made, report, The required announcements have been made.</b>  <b>Candidate may make the Announcements.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Check if MSIVs and bypasses - closed.
<b>Critical <u>Y</u></b>	<ul style="list-style-type: none"><li>• IF OPEN, then check if MSIV isolation is required.</li><li>• IF required, THEN CLOSE MSIVs and bypass valves</li></ul>
<b>Standard:</b>	Checks MSIV's and bypasses open, identifies Containment pressure > 17 psig Positions CS-46158 and CS-46159 to the CLOSE position. Green lights ON; Red lights OFF
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Containment instrument air valves (CV-31740 and CV-31741) – CLOSED
<b>Critical <u>Y</u></b>	<ul style="list-style-type: none"><li>• IF containment pressure &gt;17psig, THEN Close instrument air valves</li></ul>
<b>Standard:</b>	Positions CS-46154 and CS-46155 to the close position. Green lights ON; red lights OFF.
<b>Evaluator Note:</b>	<b>These valves should have been closed during check of CI valve status. Critical STEP is satisfied if valves closed in either step.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** When the candidate closes the MSIV's and the Instrument Air to Containment Isolation Valves, inform the candidate that, "this JPM is complete."

**Stop Time:** \_\_\_\_\_

## SIMULATOR SETUP

**INSTRUCTOR GUIDE:**

- Setup the simulator to IC-10 per normal checklist.
- Place the simulator in RUN.
- Enter the Large Break LOCA (Relative Order 1, Trigger 1).
- Wait ~ 30 seconds, **AND THEN** trip the RCP's.
- **WHEN** the CI lights are all LIT (with exceptions), **THEN** acknowledge alarms and **place** the simulator in FREEZE.
- Provide the examinee with the turnover information.
- **WHEN** the examinee is ready to begin, **THEN** place the simulator in RUN.
- Place a Category 1 Ventilation Report with NO active openings at the RO Desk.
- Place the AMSAC/DSS Control switch to BLOCK.

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0		Malfunction	RP06				Failure of MSIV's to Isolate
0		Malfunction	ED02A				Bus 11 Fails to Transfer after Turbine Trip
0		Malfunction	ED02B				Bus 12 Fails to Transfer after Turbine Trip
0		Malfunction	CH01A	100			Containment Pressure Transmitter Fails High
0		Malfunction	CH01B	50			Containment Pressure Transmitter Fails at 50%
0		Malfunction	CH01C	100			Containment Pressure Transmitter Fails High
0		Malfunction	CH01D	50			Containment Pressure Transmitter Fails at 50%
0		Malfunction	CH01E	100			Containment Pressure Transmitter Fails High
0		Malfunction	CH01F	50			Containment Pressure Transmitter Fails at 50%
1		Malfunction	RC06A	70	1	120 Ramp	Hot Leg LOCA – A Loop




## TURNOVER SHEET

### INITIAL CONDITIONS:

- Unit 1 was operating at 100% power with AMSAC/DSS out of service.
- Unit 1 has just experienced a large break LOCA.
- Actions of 1E-0 are in progress.
- You are the Unit 2 Lead Reactor Operator.

### INITIATING CUES (IF APPLICABLE):

- The Unit 1 SS has directed you to perform 1E-0, Attachment L, SI Alignment Verification.

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** INADVERTENT TRAIN B SI ACTUATION WHILE SHUTDOWN

**JPM NUMBER:** SI-13S **REV. 0**

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 000.030.05.01

**K/A NUMBERS:** E02 EA1.3

**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 / Faulted:  NO

**TASK APPLICABILITY:**  SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/1/05</b>
	Instructor	Date
<b>Validated by:</b>	J. Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: SI-13S

JPM Title: INADVERTENT TRAIN B SI ACTUATION WHILE SHUTDOWN

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

EVALUATOR'S SIGNATURE: \_\_\_\_\_

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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 cooldown is in progress per 1C1.3.
- Conditions have just been established to place RHR in service per section 5.6.
- Train B SI has actuated.
- I&C reports the actuation was due to a shorted test lead while connecting test equipment in the ESF racks.

**INITIATING CUES (IF APPLICABLE):**

- You are directed to respond to the inadvertent SI using 1C18 AOP2, INADVERTENT SAFETY INJECTION WHILE SHUTDOWN.

**JPM PERFORMANCE INFORMATION**

**Required Materials:** Simulator

**General References:** 1C18 AOP2

**Task Standards:** RHR and SI pumps stopped.

**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).

**NOTE:** 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.

<b>Performance Step:</b> Critical <u>Y</u>	<b>Verify SI is inadvertent:</b> - RCS pressure <1800 psig prior to SI (was 302) - Containment pressure <3 psig - RCS subcooling >50°F - RCS pressure stable or increasing
<b>Standard:</b>	SI determined to be inadvertent and transition is NOT made to 1E-0, and Train A SI is NOT actuated.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Stop running SI pump.</b>
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	<b>Determines 12 SI pump is running and places 12 SI pump in PULLOUT.</b>
<b>Evaluator Note:</b>	<b>OPPS (LTOP) is not in service at this time. Extended SI pump run will drive the RCS to a water solid condition. Critical task is failed if SI pump operation continues and Pressurizer PORVs cycle to control RCS pressure at 2335 psig</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Check if RCP should be stopped.</b>
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	<b>Running RCP #1 seal D/P verified &gt;210 psid and RCP stop not required.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Check if RCS purification flow should be stopped.</b>
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	<b>Verifies purification jumper NOT in service and goes to Step 5. (Note- purification jumper is placed in service after RHR is in service per C1.3)</b>  <b>IF asked, reply "Purification jumper is not in service."</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Reset SI</b>
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	<b>Train B SI reset pushbutton depressed and "Automatic SI Reset" aqua light 47014-0504 LIT.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Stop 12 RHR Pump</b>
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	<b>Verifies RWST to 12 RHR pump MV-32085 is OPEN. Stops 12 RHR pump using CS-46185.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Check if AFW Pump(s) should be stopped.</b>
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	<b>Verifies RCS temperature &lt;350°F and goes to step 8. Note: 12 AFW pump was in service for level control prior to the SI.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Reset Containment Isolation</b>
<b>Critical <u>N</u></b>	
<b>Standard:</b>	<b>Containment Isolation reset using pushbutton PB-46084 and verified by checking annunciator 47018-0505 is NOT lit.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

**Terminating Cues:** When SI and CI are reset and 12 RHR and the SI pumps are stopped. This JPM s Complete.

**Stop Time:** \_\_\_\_\_



## SIMULATOR SETUP

### INSTRUCTOR GUIDE:

- Initialize simulator to IC-15.
- Allow ERCS to come up.
- Place 11 SI pump in pullout with the cover on the switch and a SS hold card.
- Insert malfunction RP04B Train B SI Actuation.
- Run simulator for 10 seconds then place in FREEZE until the turnover is completed.
- Provide the examinee with the turnover information.
- WHEN the examinee is ready to begin, THEN place the simulator in RUN.


## TURNOVER SHEET

### INITIAL CONDITIONS:

- Unit 1 cooldown is in progress per 1C1.3.
- Conditions have just been established to place RHR in service per section 5.6.
- Train B SI has actuated.
- I&C reports the actuation was due to a shorted test lead while connecting test equipment in the ESF racks.

### INITIATING CUES (IF APPLICABLE):

- You are directed to respond to the inadvertent SI using 1C18 AOP2, INADVERTENT SAFETY INJECTION WHILE SHUTDOWN.

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** RESPOND TO CONDENSER HIGH PRESSURE

**JPM NUMBER:** ARS-1 **REV.** 1

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 051.05.01

**K/A NUMBERS:** 051 AA 2.02

**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 / Faulted:  NO

**TASK APPLICABILITY:**  SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/1/05</b>
	Instructor	Date
<b>Validated by:</b>	J. Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: ARS-1

JPM Title: RESPOND TO CONDENSER HIGH PRESSURE

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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.
- You are the Unit 1 Lead.
- Condenser Vacuum is slowly lowering.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to respond using C47008-0209, CONDENSER HI PRESSURE.

**JPM PERFORMANCE INFORMATION**

**Required Materials:** None

**General References:** C47008-0209  
C26  
C1.4

**Task Standards:** Manually trip the Reactor and Turbine due to lowering vacuum prior to automatic trip.

**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).

**NOTE:** 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.

<b>Performance Step:</b> Critical <u>N</u>	Check Condenser Vacuum using available indications.
<b>Standard:</b>	Candidate checks vacuum on Control Board indicators, PI-4122001 and PI-4122002
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical <u>N</u>	Verify condenser vacuum is within allowable operating region of figure C1-20.
<b>Standard:</b>	Candidate verifies vacuum within operating region of Figure C1-20.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

ARS-1, Respond to Condenser High Pressure, Rev. 1

<b>Performance Step:</b> <b>Critical <u>N</u></b>	<b>Attempt to identify the cause by checking for proper operation the following:</b> <ul style="list-style-type: none"><li>○ <b>Verify greater than 3 psig steam pressure on PI-4121902, 1 TURB GLD STM SEAL SPLY.</b></li><li>○ <b>Verify Condenser Vacuum Breakers Closed.</b><ul style="list-style-type: none"><li>○ <b>MV-32052, 1B CDSR VAC BKR</b></li><li>○ <b>MV-32349, 1A CDSR VAC BKR</b></li></ul></li><li>○ <b>Verify air ejectors are functioning properly</b></li><li>○ <b>Check for proper Circ Water flow.</b><ul style="list-style-type: none"><li>○ <b>Both pumps are running</b></li></ul></li></ul>
<b>Standard:</b>	<b>Candidate verifies proper equipment operation</b>
<b>Evaluator Cue:</b>	<b>If asked to verify equipment locally state, The equipment is operating normally.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	<b>Place standby air ejector in service to B condenser per C26, Air Removal System.</b>
<b>Standard:</b>	<b>Candidate Opens the following:</b> <ul style="list-style-type: none"><li>○ <b>MV-32328, STBY AIR EJCTR STM SPLY, using CS-46402</b></li><li>○ <b>MV-32358, STBY SECONDARY AIR EJCTR SUCT, using CS-46400</b></li><li>○ <b>MV-32347, STBY PRIMARY AIR EJCTR SUCT FROM B CDSR, using CS-46399 OR MV-32346, STBY PRIMARY AIR EJECTOR SUCT FROM A CDSR, using CS-46398</b></li></ul>
<b>Evaluator Note:</b>	<b>When condenser vacuum begins to decrease, the leak severity will be raised to 100%.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Manually trip the Reactor and Turbine due to high condenser pressure.</b>
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	<b>Identify any turbine limit is exceeded and initiate a manual Reactor and Turbine trip <u>prior</u> to automatic turbine trip.</b> <ul style="list-style-type: none"><li>○ <b>Condenser Differential pressure &gt;2.5" hg (expected first)</b></li><li>○ <b>Condenser Pressure not within allowable limit (8" backpressure)</b></li></ul>
<b>Evaluator Note:</b>	<b>The Candidate should trip the Reactor when any one of the listed conditions exist. This may occur at any time during the JPM.</b>  <b>The evaluator may allow the candidate to complete steps 1 and 2 of 1E-0, immediate actions if desired.</b>
<b>Evaluator Cue:</b>	<b>If notified a reactor/turbine trip is required, direct a manual reactor trip.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

**Terminating Cues:**      **When the Reactor and Turbine are tripped, This JPM is Complete.**

**Stop Time:** \_\_\_\_\_



## SIMULATOR SETUP

**Instructor Guide:**

- o Reset Simulator to IC-10
- o Insert Relative Order 0 actions.
- o Place the Simulator in FREEZE.
- o Conduct turnover with the Candidate. After the Candidate assumes the watch, place the Simulator in RUN.
- o After the Standby Air Ejector is placed in service, ENTER Relative Order 1, to increase air inleakage. This will ensure condenser d/p increases >2.5 in/hg therefore requiring a manual Reactor and Turbine Trip.

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0		MALF	FW03A	20			Loss of 1A Condenser Vacuum
1		MALF	FW03A	100			Loss of 1A Condenser Vacuum


## TURNOVER SHEET

**INITIAL CONDITIONS:**

- Unit 1 is at 100% power.
- You are the Unit 1 Lead.
- Condenser Vacuum is slowly lowering.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to respond using C47008-0209, CONDENSER HI PRESSURE.

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
---	--------------------------------------

**SITE:** **Prairie Island**

**JPM TITLE:** LOWER PRT LEVEL

**JPM NUMBER:** RC-22SF-1 **REV.** **0**

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 002.ATI.005

**K/A NUMBERS:** 007 A1.01

**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 / Faulted:  YES

**TASK APPLICABILITY:** **SRO, RO**

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/1/05</b>
	Instructor	Date
<b>Validated by:</b>	John Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>		
	Training Supervisor	Date

JPM Number: RC-22SF-1

JPM Title: LOWER PRT LEVEL

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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%.
- PZR RELIEF TNK HI TEMP/LVL/PRESS OR LO LVL (47012-0406) alarm is in.
- You are the Unit 1 Lead.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to lower PRT level to 72% per 1C4, starting at step 5.1.1.

**JPM PERFORMANCE INFORMATION**

**Required Materials:**        None

**General References:**        1C4

**Task Standards:**            Lower PRT level using 12 RCDT pump

**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).

**NOTE:** 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.

<b>Performance Step:</b> Critical <u>N</u>	Ensure PRT pressure is approximately 6 psig.
<b>Standard:</b>	Candidate verifies PRT pressure is approximately 6 psig.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical <u>Y</u>	Open CV-31323, PRZR RELIEF TNK DRN, using CS-46268 to reduce the level in the PRT.
<b>Standard:</b>	Candidate opens CV-31323 using CS-46268
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical <u>N</u>	Verify 11 RCDT pump starts when CV-31323 indicates fully open.
<b>Standard:</b>	Candidate verifies 11 RCDT pump starts.
<b>Evaluator Note:</b>	The pump discharge valve is closed, candidate may notice the pump is not operating properly.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical <u>N</u>	Verify PRT level decreases at approximately 1%/min
<b>Standard:</b>	Candidate verifies PRT level is NOT decreasing using control board or ERCS indication.
<b>Evaluator Note:</b>	The PRT level will not decrease due to the pump discharge valve closed.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical <u>N</u>	Check RCDT pump discharge throttle valve position
<b>Standard:</b>	Candidate contacts personnel to verify valve position.
<b>Evaluator Cue:</b>	A containment entry has been made and 11 and 12 RCDT discharge throttle valves are verified throttled 2 turns open.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	<b>Place CS-46353, 11 RCDT PUMP, in PULLOUT.</b>
<b>Standard:</b>	<b>CS-46353, 11 RCDT PUMP, placed PULLOUT.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	<b>Start 12 RCDT PUMP using CS-46354.</b>
<b>Standard:</b>	<b>Candidate places CS-46354 to Start</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	<b>When PRT level decreases to ABOUT 72%, then CLOSE CV-31323, PRZR RELIEF TNK DRN, using CS-46268</b>
<b>Standard:</b>	<b>Candidate CLOSES CV-31323 using CS-46268.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

**Terminating Cues:**      **When CV-31323, PRZR RELIEF TNK DRN is CLOSED, This JPM is Complete.**

**Stop Time:** \_\_\_\_\_



## SIMULATOR SETUP

**Instructor Guide:**

- o Reset simulator to IC-10.
- o Fill the PRT using 1C4 step 5.3.5 until level is 77%.
- o Verify C47012-0406, PRT HI Level alarm is in.
- o Insert relative order 0 action.
- o When 11 RCDT pump is placed in PULLOUT, ENTER Relative Order 1.

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0	SIMWD01	Remote	WD111	0			11/12 RCDT Pump Discharge Throttle Valves.
1	SIMWD01	Remote	WD111	50			11/12 RCDT Pump Discharge Throttle Valves.


## TURNOVER SHEET

### INITIAL CONDITIONS:

- Unit 1 is at 100%.
- PZR RELIEF TNK HI TEMP/LVL/PRESS OR LO LVL (47012-0406) alarm is in.
- You are the Unit 1 Lead.

### INITIATING CUES (IF APPLICABLE):

- The SS directs you to lower PRT level to 72% per 1C4, starting at step 5.1.1.

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** TRANSFER POWER TO OFFSITE POWER FROM D6 DIESEL GENERATOR

**JPM NUMBER:** EA-5S **REV. 10**

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 065.ATI.008

**K/A NUMBERS:** 2.1.23

**APPLICABLE METHOD OF TESTING:**

Discussion:  Simulate/walkthrough:  Perform:

**EVALUATION LOCATION:** In-Plant:  Control Room:   
 Simulator:  Other:   
 Lab:

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/3/05</b>
	Instructor	Date
<b>Validated by:</b>	John Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>		
	Training Supervisor	Date

JPM Number: EA-5S

JPM Title: TRANSFER POWER TO OFFSITE POWER FROM D6 DIESEL GENERATOR

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

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*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:**

- Breaker 26-2 (2RY source to bus 26) was removed for maintenance when the plant experienced a loss of power to bus 26 from CT12.
- D6 diesel generator auto started and loaded onto safeguard bus 26.
- Power has been restored to CT12.
- You are the Unit 2 Lead.

**INITIATING CUES (IF APPLICABLE):**

- The Unit 2 SS directs you to transfer Bus 26 to CT12 and remove D6 from the bus per 2C20.7 starting at step 5.7.5.B.
- The breaker disagreement light on BKR-26-13 is NOT due to a lockout. Reset is allowed.

**JPM PERFORMANCE INFORMATION**

**Required Materials:** Consumable Copy of 2C20.7, Section 5.7.5

**General References:** 2C20.7, Section 5.7.5

**Task Standards:** CT12 is supplying Bus 26, D6 diesel generator removed from Bus 26.

**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).

**NOTE:** 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.

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Direct placement of the following control switches to the "ON" position per step 5.7.5.B.1: <ul style="list-style-type: none"><li>• CS-60008</li><li>• CS-60009</li><li>• CS-60010</li><li>• CS-60011</li><li>• CS-60205</li><li>• CS-60207</li></ul>
<b>Standard:</b>	Calls the turbine building operator and tells him/her to place the switches listed in the ON position per the step.
<b>Evaluator Note:</b>	<b>The first four switches turn ON the Radiator fans. The last two switches turn ON the fuel oil backup pumps.</b>
<b>Evaluator Cue:</b>	<b>Step 5.7.5.B.1 is complete.</b>
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Reset Emergency Start Relay by momentarily placing CS-46958, D6 DSL GEN EMERG START & EMERG START RESET, in "RESET".
<b>Critical <u>Y</u></b>	
<b>Standard:</b>	CS-46958, D6 DSL GEN EMERG START & EMERG START RESET placed in "RESET" and "EMERG START ACTUATED" light extinguishes.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Verify the red indicating light on CS-46958, D6 DSL GEN EMERG START & EMERG START RESET, is NOT LIT.
<b>Critical <u>N</u></b>	
<b>Standard:</b>	CS-46958, D6 DSL GEN EMERG START & EMERG START RESET red indicating light NOT LIT.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Place CS-46971, D6 DIESEL GENERATOR in START.
<b>Critical <u>Y</u></b>	
<b>Standard:</b>	CS-46971, D6 DIESEL GENERATOR placed in "START".
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Direct the placement of the following control switches in the "AUTO" position AND verify the red indicating light is "ON": <ul style="list-style-type: none"><li>• CS-60008</li><li>• CS-60009</li><li>• CS-60010</li><li>• CS-60011</li><li>• CS-60205</li><li>• CS-60207</li></ul>
<b>Standard:</b>	Calls the turbine building operator and tells him/her to place the switches listed in the AUTO position and verify the red indicating lights are ON.
<b>Evaluator Note:</b>	<b>The first four switches return the Radiator fans to AUTO. The last two switches return the fuel oil backup pumps to AUTO.</b>
<b>Evaluator Cue:</b>	<b>Step 5.7.5.B.5 is complete.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Place CS-46939, BKR 26-13 MAN/AUTO CLOSURE SEL SW, in "MANUAL".
<b>Standard:</b>	CS-46939, BKR 26-13 MAN/AUTO CLOSURE SEL SW placed in "MANUAL".
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Place CS-46937, BUS 26 SYNCHROSCOPE SEL SW, in "CT12".
<b>Standard:</b>	CS-46937, BUS 26 SYNCHROSCOPE SEL SW placed in "CT12".
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____



EA-5S, TRANSFER POWER TO OFFSITE POWER FROM D6 DIESEL GENERATOR, Rev. 10

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Operate CS-46973, D6 DSL GEN GOVERNOR CONTROL, until the indicator on 41977, BUS 25/26 SYNCHROSCOPE, is turning slowly in a clockwise direction.
<b>Standard:</b>	SYNCHROSCOPE indicator 41977 turning slowly in a clockwise direction.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Verify the two white indicating lights on 44190, SYNCHRONIZING LIGHT MODULE U-2 BUS 25/26, go out as the Synchroscope indicator passes 12 o'clock position.
<b>Standard:</b>	Observe 44190 for at least one pass through the 12 o'clock position.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Adjust CS-46961, D6 DSL GEN EXCITER CONTROL, until 41914-02, BUS 25/26 INCOMING VOLTS, indicates slightly greater than 41914-01, BUS 25/26 RUNNING VOLTS.
<b>Standard:</b>	41914-02, BUS 25/26 INCOMING VOLTS reads zero to 2.5 volts greater than 41914-01, BUS 25/26 RUNNING VOLTS.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Verify approximately 120 volts on 41914-01, BUS 25/26 RUNNING VOLTS.
<b>Standard:</b>	41914-01, BUS 25/26 RUNNING VOLTS reads 120 ± 2.5 volts.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	As the synchroscope indicator approaches 12 o'clock, place CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12, in "CLOSE".
<b>Standard:</b>	41921, D6 EMERG GENERATOR POWER meter checked upon placing CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12 in "CLOSE".
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Verify red indicating light on CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12, is ON.
<b>Standard:</b>	Operator checks red light on CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12 is ON.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Using CS-46973, D6 DSL GEN GOVERNOR CONTROL, reduce D6 load to 700 KW.
<b>Standard:</b>	If load >700 KW, operator reduces D6 load to 700 KW using CS-46973, D6 DSL GEN GOVERNOR CONTROL
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Lower the VAR load to zero using CS-46961, D6 DSL GEN EXCITER CONTROL
<b>Standard:</b>	Using CS-46961, D6 DSL GEN EXCITER CONTROL, VAR load reduced approximately to zero
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Place CS-46944, BKR 26-16 BUS 26 SOURCE FROM D6 DSL GEN, in "OPEN"
<b>Standard:</b>	CS-46944, BKR 26-16 BUS 26 SOURCE FROM D6 DSL GEN placed in "OPEN".
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Place CS-46939, BKR 26-13 MAN/AUTO CLOSURE SEL SW, in "AUTO".
<b>Standard:</b>	CS-46939, BKR 26-13 MAN/AUTO CLOSURE SEL SW placed in "AUTO".
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Place CS-46937, BUS 26 SYNCHROSCOPE SEL SW, in "OFF".
<b>Critical <u>N</u></b>	
<b>Standard:</b>	CS-46937, BUS 26 SYNCHROSCOPE SEL SW placed in "OFF".
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** Bus 26 powered from CT12 source and D6 output breaker open.

**Stop Time:** \_\_\_\_\_

## SIMULATOR SETUP

**INSTRUCTOR GUIDE:**

- Initialize to IC-10 or other IC set as desired.
- Place breaker 26-2 (2RY to bus 26) in pullout and place a secure card on it.
- Insert Relative Order 0 action to Open CT12-7.
- Place Simulator in RUN until auto restoration of Bus 26 is complete on D6 Diesel Genreator.
- Insert Relative Order 1 (Trigger 1) to Close CT12-7.
- Place the simulator in FREEZE until after turnover has been completed.
- Place the Simulator in RUN when Candidate is ready.
- Ensure a Consumable Copy of 2C20.7, Section 5.7.5 is available.

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0		REMOTE	ED129	OPEN			4.16KV Bus Supply BKR CT12-7
1		REMOTE	ED129	CLOSED	1		4.16KV Bus Supply BKR CT12-7


## TURNOVER SHEET

### INITIAL CONDITIONS:

- Breaker 26-2 (2RY source to bus 26) was removed for maintenance when the plant experienced a loss of power to bus 26 from CT12.
- D6 diesel generator auto started and loaded onto safeguard bus 26.
- Power has been restored to CT12.
- You are the Unit 2 Lead.

### INITIATING CUES (IF APPLICABLE):

- The Unit 2 SS directs you to transfer Bus 26 to CT12 and remove D6 from the bus per 2C20.7 starting at step 5.7.5.B.
- The breaker disagreement light on BKR-26-13 is NOT due to a lockout. Reset is allowed.

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** Prairie Island

**JPM TITLE:** N35 Failure High with Failure of Reactor Trip

**JPM NUMBER:** NI-4SF-1                      **REV.** 0

**RELATED PRA INFORMATION:**

**TASK NUMBERS / TASK TITLE(S):** 015 ATI 03/  
Respond to Intermediate Range NIS Failure

**K/A NUMBERS:** 015 A2.02

**APPLICABLE METHOD OF TESTING:**

Discussion:       Simulate/walkthrough:       Perform:

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

   Simulator:                       Other:

   Lab:

Time for Completion:   15   Minutes                      Time Critical:   No  

Alternate Path / Faulted:   Yes  

**TASK APPLICABILITY:**   SRO, RO  

<b>Developed by:</b>	<b>J. Kempkes</b>	<b>7-13-05</b>
	Instructor	Date
<b>Validated by:</b>	Validation Instructor	Date
	(See JPM Validation Checklist, Attachment 1)	
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: NI-4SF-1

JPM Title: N35 Failure High with Failure of Reactor Trip

Examinee: \_\_\_\_\_ Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_ Date: \_\_\_\_\_

Start Time \_\_\_\_\_ Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*



## JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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 Reactor Operator.
- Unit 1 Reactor Startup has just completed, and power is being maintained at  $10^{-8}$ A for shift change.
- Alarm 47013-0302 INTERMEDIATE RANGE HI FLUX LVL ROD WITHDRAWAL STOP will come in as soon as turnover is complete.

### **INITIATING CUES (IF APPLICABLE):**

- Respond to alarm 47013-0302 INTERMEDIATE RANGE HI FLUX LVL ROD WITHDRAWAL STOP using applicable plant procedures.

**JPM PERFORMANCE INFORMATION**

**Required Materials:**       None

**General References:**      Appendix C1B, C51, 1E-0

**Task Standards:**           Reactor tripped and N35 removed from service per 1C51.

**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).

**NOTE:** 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.

<b>Performance Step:</b>	<b>ARP 47013-0302 INTERMEDIATE RANGE HI FLUX LVL ROD WITHDRAWAL STOP Check intermediate range flux levels.</b>
<b>Standard:</b>	<b>Determines N35 has failed high and reactor is still critical at 10<sup>-8</sup>A using board indications.</b>
<b>Evaluator Note:</b>	<b>The operator may diagnose that a reactor trip failure has occurred and initiate a manual reactor trip at any time. IF this occurs, state "Another operator will perform actions of 1E-0, you are to continue with the alarm response (instrument failure guide)."</b>
<b>Evaluator Note:</b>	<b>N35 failure will be entered when turnover is completed.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Determines alarm is not valid OR power is already below 15%.
<b>Standard:</b>	May diagnose failure or refer to PRNIS to determine <15%.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Determine that the alarm is not expected per 1C1.2 as it is due to equipment failure. DO NOT block the intermediate range high flux trip and rod stop.
<b>Standard:</b>	Determines block is not appropriate.
<b>Evaluator Note:</b>	IF SS is informed that the step is N/A, state "You may N/A this step and continue."
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Transition to 1C51 Instrument Failure Guide section 1C51.1 Intermediate Range Nuclear Instrument N-35 - HIGH
<b>Standard:</b>	Transition made to correct section of 1C51.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	1C51.1 Verify reactor power is <10% and indicator for N-35 is failed high.
<b>Standard:</b>	Determines power <10% using PRNIS and verifies N-35 level is failed high.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical	Verify reactor trip breakers OPEN.
<b>Standard:</b>	Uses either control board reactor trip switch to manually OPEN the trip breakers and trip the reactor.
<b>Evaluator Note:</b>	The critical task is met provided the reactor is manually tripped OR rods are inserted with the intent of taking the reactor to a shutdown condition.
<b>Evaluator Cue:</b>	<p>IF the operator requests permission to trip the reactor, THEN direct a manual reactor trip.</p> <p>IF the operator requests to insert rods, question the operator until you understand whether the reactor is to be shutdown or maintained critical at a different power. WHEN the operator states intention to insert rods to shutdown the reactor, THEN direct a manual reactor trip.</p> <p>WHEN the reactor is tripped, state "Another operator will perform actions of 1E-0. Continue with actions per C51."</p>
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Verify annunciator 47017-0203 INTERMEDIATE RANGE HI FLUX LVL REACTOR TRIP is lit.
<b>Standard:</b>	Notes not lit due to failure.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Verify red status light on for Intermediate Range Reactor Trip.
<b>Standard:</b>	Notes light is not lit due to failure.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Select NR-45 recorder to Source Range for failed IR channel.
<b>Standard:</b>	Determines plant was initially in MODE 2 and transfers NR-45 recorder pen to indicate N31 or N32 instead of failed N35 reading.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b>	WHEN power decreases to the Source Range, THEN manually reinstate Source Range Instruments by momentarily placing both SOURCE RANGE RESET/BLOCK switches to the "RESET" position.
<b>Standard:</b>	CS-46271 and CS-46272 taken to "RESET" and Source Range detectors energized.
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Refer to T.S. LCO 3.3.1 Condition A and Table 3.3.1-1 Functions 4, 16a.
<b>Standard:</b>	Informs SS of Technical Specifications.
<b>Evaluator Cue:</b>	WHEN informed, state "I will refer to Technical Specifications."
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b>	Place N-35 Level Trip Bypass switch in "BYPASS".
<b>Standard:</b>	N-35 Level Trip Bypass switch in "BYPASS"
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** Required corrective actions of 1C51.1 complete.

**Stop Time:** \_\_\_\_\_

# SIMULATOR SETUP

## INSTRUCTOR GUIDE:

- Initiate to IC-24.
- Enter Relative Order 0 actions and trigger.
- WHEN turnover is complete, enter Trigger #1.

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0		Var Setpt	NI316	1E-3	0		Change N-35 high flux setpt
1		Malf	NI03A	99	1		N-35 Failure High

# TURNOVER SHEET


## **INITIAL CONDITIONS:**

- You are the Unit 1 Reactor Operator.
- Unit 1 Reactor Startup has just completed, and power is being maintained at  $10^{-8}$ A for shift change.
- Alarm 47013-0302 INTERMEDIATE RANGE HI FLUX LVL ROD WITHDRAWAL STOP will come in as soon as turnover is complete.

## **INITIATING CUES (IF APPLICABLE):**

- Respond to alarm 47013-0302 INTERMEDIATE RANGE HI FLUX LVL ROD WITHDRAWAL STOP using applicable plant procedures.



	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** RESPOND TO A RCP THERMAL BARRIER HX LEAK

**JPM NUMBER:** CC-4S **REV.** 1

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 008.ATI.011

**K/A NUMBERS:** 2.1.23

**APPLICABLE METHOD OF TESTING:**

Discussion:  Simulate/walkthrough:  Perform:

**EVALUATION LOCATION:** In-Plant:  Control Room:   
 Simulator:  Other:   
 Lab:

Time for Completion:  8  Minutes      Time Critical:  NO   
 Alternate Path / Faulted:  NO

**TASK APPLICABILITY:**  SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b> Instructor	<b>7/14/05</b> Date
<b>Validated by:</b>	Validation Instructor (See JPM Validation Checklist, Attachment 1)	Date
<b>Approved by:</b>	Training Supervisor	Date

JPM Number: CC-4S

JPM Title: RESPOND TO A RCP THERMAL BARRIER HX LEAK

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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.
- Annunciator 47022-0109, HI RADIATION TRAIN A PANEL ALARM has just been received.
- You are the Unit 1 Lead.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to respond to the alarm per the appropriate Alarm Response Procedure.

**JPM PERFORMANCE INFORMATION**

**Required Materials:**       None

**General References:**      C47022, C47047, C14 AOP2

**Task Standards:**           11 CC Surge Tank Vent valve closed and 11 RCP Thermal Barrier HX isolated.

**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).

**NOTE:** 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.

<b>Performance Step:</b> Critical <u>N</u>	Determine the initiating alarm and respond to the alarm as specified in C47047, TRAIN A RADIATION MONITORING SYSTEM ALARM RESPONSE PROCEDURES.
<b>Standard:</b>	R-39 determined to be the alarming rad monitor and C47047 is entered.
<b>Evaluator Note:</b>	This step is prescribed in C47022. The operator may not refer to this procedure, but rather perform this action from memory. (This is a Reference Use Procedure)
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

CC-4S, RESPOND TO A RCP THERMAL BARRIER HX LEAK, Rev. 1

<b>Performance Step:</b>	<b>Close 11 Component Cooling Surge Tank Vent valve, MV-32088.</b>
<b>Critical</b> <u>Y</u>	
<b>Standard:</b>	<b>11 CC Surge Tank Vent Valve, MV-32088 is closed by placing CS-46024 in the Closed position.</b>
<b>Evaluator Note:</b>	<b>This step is an automatic action that should be verified. The valve will fail to close automatically, thus it must be manually closed.</b>
<b>Evaluator Cue:</b>	<b>If the candidate reports the valve failed to close, inform the candidate to follow the ARP. If the candidate reports they are closing the valve, acknowledge the report as the SS.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	<b>Refer to appropriate actions prescribed in C14 AOP2, LEAKAGE INTO THE COMPONENT COOLING SYSTEM</b>
<b>Critical</b> <u>N</u>	
<b>Standard:</b>	<b>Candidate enters C14 AOP2</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> Critical <u>Y</u>	<b>Check RCP CC outlet flow and temperatures. If flow or temperature is higher than normal, then close the affected RCP thermal barrier heat exchanger CC return valve:</b> <ul style="list-style-type: none"><li>• 11 RCP CV-31245, 11 RCP THERM BARRIER CLNT OUTL</li><li>• 12 RCP CV-31246, 12 RCP THERM BARRIER CLNT OUTL</li></ul>
<b>Standard:</b>	<b>Candidate determines flow and temp for 11 RCP CC flow is higher than 12 RCP and closes CV-31245 using CS-46022</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

**Terminating Cues:** After the Candidate closes CV-31245, This JPM is Complete.

**Stop Time:** \_\_\_\_\_

CC-4S, RESPOND TO A RCP THERMAL BARRIER HX LEAK, Rev. 1  
**SIMULATOR SETUP**

**INSTRUCTOR GUIDE:**

- Reset the Simulator to IC-10.
- Enter Overrides to fail the Auto Closure of the 11 CC Surge Tank Vent. *(Relative Order 0)*
- Enter the 40 gpm leak in 11 RCP Thermal Barrier Heat Exchanger. *(Relative Order 0)*
- When the Candidate assumes the duty, place the Simulator in RUN
- When the Candidate places CS-46024, 11 CC Surge Tank Vent valve MV-32088 in the CLOSED position, DELETE the override for Auto Closure of the 11 CC Surge Tank Vent. *(Relative Order 1)*

<i>Relative Order</i>	<i>System or Panel Drawing</i>	<i>TYPE</i>	<i>CODE</i>	<i>Severity or Value</i>	<i>Event Trigger</i>	<i>TIMING</i>	<i>DESCRIPTION</i>
0	SIMCC01B	Override DI	DI-46024O Open	ON			MV-32088 control switch
0	SIMCC01B	Override DI	DI-46024C Close	OFF			MV-32088 control switch
0	SIMRC05A	Malfunction	VC21A	2.5		120 sec Ramp	11 RCP Thermal Barrier HX Leak
1	SIMCC01B	Override DI	DI-46024O Open	DELETE			MV-32088 control switch
1	SIMCC01B	Override DI	DI-46024C Close	DELETE			MV-32088 control switch

## TURNOVER SHEET


**INITIAL CONDITIONS:**

- Unit 1 is at 100% power.
- Annunciator 47022-0109, HI RADIATION TRAIN A PANEL ALARM has just been received.
- You are the Unit 1 Lead.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to respond to the alarm per the appropriate Alarm Response Procedure.



	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** START UP THE HYDROGEN RECOMBINER

**JPM NUMBER:** HC-1 **REV.** 12

**RELATED PRA INFORMATION:** **PRA Identified Task**

**TASK NUMBERS / TASK TITLE(S):** NLO 028.002.01.04

**K/A NUMBERS:** 2.1.23

**APPLICABLE METHOD OF TESTING:**

Discussion:  Simulate/walkthrough:  Perform:

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

Simulator:  Other:

Lab:

Time for Completion:  13  Minutes Time Critical:  NO

Alternate Path / Faulted:  NO

**TASK APPLICABILITY:**  SRO, RO, NLO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/3/05</b>
	Instructor	Date
<b>Validated by:</b>	John Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>		
	Training Supervisor	Date

JPM Number: HC-1

JPM Title: START UP THE HYDROGEN RECOMBINER

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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 LOCA has occurred on Unit 1.
- Containment H<sub>2</sub> concentration is 2%.
- Adequate power is available to supply the Hydrogen Recombiners.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to start up 11 Containment Hydrogen Recombiner per C19.8, beginning at step 5.1.2.

**JPM PERFORMANCE INFORMATION**

**Required Materials:** Consumable copy of C19.8 and calculator.

**General References:** C19.8

**Task Standards:** 11 Containment Hydrogen Recombiner inservice at required power setting.

**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).

**NOTE:** 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.

<b>Performance Step:</b> <b>Critical N</b>	At the recombiner panel, verify the PWR ADJ potentiometer is set to zero.
<b>Standard:</b>	PWR ADJ potentiometer verified to be set at zero.
<b>Evaluator Cue:</b>	<b>PWR ADJ potentiometer reads 0.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical N</b>	At the recombiner panel, verify the PWR IN AVAIL lamp is lit.
<b>Standard:</b>	PWR IN AVAIL lamp verified to be lit.
<b>Evaluator Cue:</b>	<b>PWR IN AVAIL lamp is illuminated.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

HC-1, START UP THE HYDROGEN RECOMBINER, Rev. 12

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Turn the PWR OUT SW to the "ON" position. The red lamp on the switch face plate should be lit.
<b>Standard:</b>	PWR OUT SW turned to the ON position.
<b>Evaluator Cue:</b>	<b>PWR OUT SW is in the ON position; red lamp is illuminated.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Obtain the following plant conditions: <ul style="list-style-type: none"><li>• Present post-LOCA Containment Pressure</li><li>• Pre-LOCA Containment Temperature and Pressure from plant computer logs.</li></ul>
<b>Standard:</b>	Present post-LOCA Containment Pressure and pre-LOCA Containment Temperature and Pressure obtained.
<b>Evaluator Cue:</b>	<b>When asked, inform examinee that, "containment pressure is 3.6 psig and containment temperature was 90 °F and 0 psig."</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Determine the pressure factor, Cp, from the Recombiner Power Correction Factor Versus Containment Pressure Curve (Figure 1)
<b>Standard:</b>	Cp determined to be $1.2 \pm 0.05$ .
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

HC-1, START UP THE HYDROGEN RECOMBINER, Rev. 12

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Multiply Cp, determined above, by the reference power setting to determine required recombiner power setting.
<b>Standard:</b>	Required recombiner power setting determined to be 44 to 48 kw (1.2 ± 0.05 multiplied by 38.25 kw).
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Turn the PWR ADJ potentiometer clockwise until 5 KW is obtained on the PWR OUT meter.
<b>Standard:</b>	PWR ADJ potentiometer turned clockwise until 5 kw is indicated on the PWR OUT meter.
<b>Evaluator Cue:</b>	<b>PWR ADJ potentiometer is adjusted and PWR OUT meter is indicating 5 kw.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Hold for 10 minutes, then advance to 10 KW.
<b>Standard:</b>	After holding at 5 kw for 10 minutes, PWR ADJ potentiometer turned clockwise until 10 kw is indicated on the PWR OUT meter.
<b>Evaluator Cue:</b>	<b>When examinee indicates that he/she would hold for 10 minutes, inform examinee that, "10 minutes have elapsed." When examinee indicates that he/she would advance to 10 kw, inform examinee that, "PWR ADJ potentiometer is adjusted and PWR OUT meter is indicating 10 kw."</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

HC-1, START UP THE HYDROGEN RECOMBINER, Rev. 12

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Hold for 10 minutes, then advance to 20 KW.
<b>Standard:</b>	After holding at 10 kw for 10 minutes, PWR ADJ potentiometer turned clockwise until 20 kw is indicated on the PWR OUT meter.
<b>Evaluator Cue:</b>	<b>When examinee indicates that he/she would hold for 10 minutes, inform examinee that, "10 minutes have elapsed." When examinee indicates that he/she would advance to 20 kw, inform examinee that, "PWR ADJ potentiometer is adjusted and PWR OUT meter is indicating 20 kw."</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Hold for 5 minutes, then advance to power setting obtained above (determined required power setting).
<b>Standard:</b>	After holding at 20 kw for 5 minutes, PWR ADJ potentiometer turned clockwise until required power setting (44 to 48 kw as determined previously) is indicated on the PWR OUT meter.
<b>Evaluator Cue:</b>	<b>When examinee indicates that he/she would hold for 5 minutes, inform examinee that, "5 minutes have elapsed." When examinee indicates that he/she would advance to required power setting, inform examinee that, "PWR ADJ potentiometer is adjusted and PWR OUT meter is indicating (44 to 48 kw as determined previously)."</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

**Terminating Cues:** When examinee has adjusted potentiometer to required power setting, inform examinee that, "this JPM is complete."

**Stop Time:** \_\_\_\_\_

## TURNOVER SHEET


### INITIAL CONDITIONS:

- A LOCA has occurred on Unit 1.
- Containment H<sub>2</sub> concentration is 2%.
- Adequate power is available to supply the Hydrogen Recombiners.

### INITIATING CUES (IF APPLICABLE):

- The SS directs you to start up 11 Containment Hydrogen Recombiner per C19.8, beginning at step 5.1.2.



	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** RESPOND TO BYPASSED INSTRUMENT INVERTER

**JPM NUMBER:** IP-3 **REV.** 0

**RELATED PRA INFORMATION:** **None**

**TASK NUMBERS / TASK TITLE(S):** CRO 062.ATI.024

**K/A NUMBERS:** 062 A3.04

**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 / Faulted:  NO

**TASK APPLICABILITY:**  SRO, RO, NLO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/3/05</b>
	Instructor	Date
<b>Validated by:</b>	John Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>		
	Training Supervisor	Date

JPM Number: IP-3

JPM Title: RESPOND TO BYPASSED INSTRUMENT INVERTER

Examinee: \_\_\_\_\_

Evaluator: \_\_\_\_\_

Job Title: \_\_\_\_\_

Date: \_\_\_\_\_

Start Time \_\_\_\_\_

Finish Time \_\_\_\_\_

PERFORMANCE RESULTS:

SAT:

UNSAT:

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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%
- C47505-0108, 22 INVERTER INSTR BUS I (RED) BYPASSED is received in the Control Room.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to respond to the alarm per 2C20.8 AOP1, starting at step 2.4.3.

**JPM PERFORMANCE INFORMATION**

- Required Materials:** Consumable Copy of 2C20.8 AOP1
- General References:** 2C20.8 AOP1
- Task Standards:** 22 Instrument Inverter returned to Normal operation.

**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).

**NOTE:** 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.

<b>Performance Step:</b> <b>Critical <u>N</u></b>	If the INVERTER OUTPUT (AC VOLTS) indicates less than 115 volts or greater than 125 volts, then proceed to step 2.4.3.H.
<b>Standard:</b>	Candidate reads Inverter AC Volts.
<b>Evaluator Cue:</b>	Point to 120 Volts mark or state "as you see" if in 115-125V range.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

IP-3, RESPOND TO BYPASSED INSTRUMENT INVERTER, Rev 0

<b>Performance Step:</b> <b>Critical <u>N</u></b>	If inverter circuit breaker CB1 or CB2 or CB4 is OPEN/TRIPPED, then proceed to step 2.4.3.H.
<b>Standard:</b>	Candidate determines all breakers are ON.
<b>Evaluator Cue:</b>	As seen. If necessary due to the Inverter being OOS or malfunctioning, "CB1 is ON" "CB2 is ON" "CB4 is ON"
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	If the AC Input Breaker, CB401, is tripped, then place CB401 in the ON position.
<b>Standard:</b>	Candidate determines CB401 is in the ON position.
<b>Evaluator Cue:</b>	As seen. If necessary due to the Inverter being OOS or malfunctioning, "CB401 is ON".
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>N</u></b>	Verify all indicating lights except for the INV SUPPLYING LOAD amber indicating light, PL201, are LIT.
<b>Standard:</b>	Candidate verifies all lights are LIT except, PL201, INV SUPPLYING LOAD amber indicating light
<b>Evaluator Cue:</b>	As Candidate asks about each light, "Light is LIT" Except for PL201 "Light is NOT LIT"
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

IP-3, RESPOND TO BYPASSED INSTRUMENT INVERTER, Rev 0

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	Momentary depress the INV STATIC SW TO LOAD pushbutton, PB201, and verify the INV SUPPLYING LOAD amber indicating light, PL201 comes ON while the ALT SCR SUPPLYING LOAD red indicating light, PL202 goes OFF.
<b>Standard:</b>	Candidate depresses PB201, observes PL201 amber light turns ON and PL202 red light goes OFF
<b>Evaluator Cue:</b>	When required, "PB201 is Depressed" PL201/202 "as you see them" if inverter operating normally. If necessary due to the Inverter being OOS or malfunctioning, "PL201 amber light ON" "PL202 red light OFF"
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	If the AC Input Breaker CB401 tripped during transfer, then place CB401 in the ON position.
<b>Standard:</b>	Candidate resets and closes CB401
<b>Evaluator Cue:</b>	When asked, inform the Candidate "CB401 is TRIPPED" so the candidate will shut CB401.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** After CB401 is closed, This JPM is Complete.

**Stop Time:** \_\_\_\_\_

## TURNOVER SHEET

**INITIAL CONDITIONS:**

- Unit 2 is at 100%
- C47505-0108, 22 INVERTER INSTR BUS I (RED) BYPASSED is received in the Control Room.

**INITIATING CUES (IF APPLICABLE):**

- The SS directs you to respond to the alarm per 2C20.8 AOP1, starting at step 2.4.3.



**JOB PERFORMANCE MEASURE (JPM)**

**SITE:** Prairie Island

**JPM TITLE:** F5 APPENDIX B, ATTACHMENT A – UNIT 1 SHIFT SUPERVISOR ACTIONS

**JPM NUMBER:** F5-7 **REV.** 5

**RELATED PRA INFORMATION:** PRA Identified Task

**TASK NUMBER(S) / TASK TITLE(S):** SS 344.ATI.039

**K/A NUMBERS:** 2.1.27

**APPLICABLE METHOD OF TESTING:**

Discussion:  Simulate/walkthrough:  Perform:

**EVALUATION LOCATION:** In-Plant:  Control Room:   
 Simulator:  Other:   
 Lab:

Time for Completion: 20 Minutes Time Critical: NO

Alternate Path / Faulted: NO

**TASK APPLICABILITY:** SRO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/23/05</b>
	Instructor	Date
<b>Validated by:</b>	<b>John Kempkes</b>	<b>5/5/05</b>
	Validation Instructor	Date
<b>Approved by:</b>		
	Training Supervisor	Date



**F5-7, F5 Appendix B, Attachment A – Unit 1 Shift Supervisor, Rev 5**

**JPM Number:** F5-7

**JPM Title:** F5 APPENDIX B, ATTACHMENT A – UNIT 1 SHIFT SUPERVISOR ACTIONS

**Examinee:** \_\_\_\_\_

**Evaluator:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Start Time** \_\_\_\_\_

**Finish Time** \_\_\_\_\_

**PERFORMANCE RESULTS:**

**SAT:**

**UNSAT:**

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

**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.*

**F5-7, F5 Appendix B, Attachment A – Unit 1 Shift Supervisor, Rev 5**

**JPM BRIEFING/TURNOVER**

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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:**

- Both Units are at 100% power.
- A fire has occurred in the Control Room and thick black smoke is making visibility very difficult.
- As the Unit 1 SS, you have decided to implement F5 Appendix B, Control Room Evacuation (Fire) procedure.
- F5 Appendix B, Attachment A is complete through step N.

**INITIATING CUES (IF APPLICABLE):**

- Per step O, align Auxiliary Feedwater per F5 Appendix B, Attachment I.

**F5-7, F5 Appendix B, Attachment A – Unit 1 Shift Supervisor, Rev 5**

**JPM PERFORMANCE INFORMATION**

**Required Materials:** Copy of F5 Appendix B, Attachment A signed off through step N  
Copy of F5 Appendix Attachment I

**General References:** F5 Appendix B

**Task Standards:** F5 Appendix B, Attachment I- Unit 1 Shift Supervisor Actions completed.

**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).

**NOTE:** 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.

**F5-7, F5 Appendix B, Attachment A – Unit 1 Shift Supervisor, Rev 5**

<b>Performance Step:</b>	Align Auxiliary Feedwater per Attachment I.
<b>Critical <u>Y</u></b>	
	A. OPEN the following MCC breakers:
	<ul style="list-style-type: none"><li>• 1A1-B2, 11 TD AFW PMP COND SPLY MV-32333</li><li>• 2A2-B2, 22 TD AFW PMP COND SPLY MV-32345</li></ul>
<b>Standard:</b>	MCC breakers 1A1-B2 and 2A2-B2 are opened.
<b>Evaluator Cue:</b>	<b>MCC breakers 1A1-B2 and 2A2-B2 are open.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Align Auxiliary Feedwater per Attachment I (cont'd).
<b>Critical <u>N</u></b>	
	B. Check OPEN the following valves (if not open, then manually open using local handwheel(s):
	<ul style="list-style-type: none"><li>• MV-32333, 11 TD AFW PMP SUCT FROM CST MV</li><li>• MV-32345, 22 TD AFW PMP SUCT FROM CST MV</li></ul>
<b>Standard:</b>	Valves MV-32333 and MV-32345 are checked opened.
<b>Evaluator Cue:</b>	<b>Valves MV-32333 and MV-32345 are open.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**F5-7, F5 Appendix B, Attachment A – Unit 1 Shift Supervisor, Rev 5**

<b>Performance Step:</b>	Align Auxiliary Feedwater per Attachment I (cont'd).
<b>Critical <u>N</u></b>	C. Check 11 and 22 AFW Pumps RUNNING, if either pump is not running then start the non-running TDAFWP(s) as follows:
<b>Standard:</b>	Determine 11 TD AFW Pump is not running.
<b>Evaluator Cue:</b>	<b>If candidate asks if 11 and 22 TD AFW Pumps are running, inform candidate that, "11 TD AFW Pump is NOT running, 22 TD AFW Pump is running."</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Align Auxiliary Feedwater per Attachment I (cont'd).
<b>Critical <u>Y</u></b>	C.1 If the auxiliary lube oil pump is not running, then depress pushbutton CS-19333, 11 TD AFW PMP AUX L-O PMP START/STOP PB.
<b>Standard:</b>	Candidate depresses pushbutton CS-19333, 11 TD AFW PMP AUX L-O PMP START/STOP PB.
<b>Evaluator Cue:</b>	<b>If candidate asks if 11 TD AFW Pump Aux Lube Oil Pumps is running, inform candidate that, "11 TD AFW Pump Aux Lube Oil Pump is NOT running."</b>  <b>When candidate starts 11 TD AFW Pump Aux Lube Oil Pump, inform candidate that, "11 TD AFW Pump Aux Lube Oil Pump is running."</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**F5-7, F5 Appendix B, Attachment A – Unit 1 Shift Supervisor, Rev 5**

<b>Performance Step:</b>	Align Auxiliary Feedwater per Attachment I (cont'd).
<b>Critical <u>Y</u></b>	C.2 Place AF-292-1, 11 TD AFW PMP MN STM SPLY CV-31998 ROOT ISOL, in the OPEN position
<b>Standard:</b>	Candidate places AF-292-1 in the open position.
<b>Evaluator Note:</b>	<b>The TDAFWP should roll up to full speed within 30 seconds.</b>
<b>Evaluator Cue:</b>	<b>When candidate starts 11 TD AFW Pump, inform candidate that, "11 TD AFW Pump is running."</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b>	Align Auxiliary Feedwater per Attachment I (cont'd).
<b>Critical <u>N</u></b>	D. Check AFW flow for each unit using flow indicators FI-18032 and FI-18035.
<b>Standard:</b>	AFW flow checked using FI-18032 and FI-18035.
<b>Evaluator Cue:</b>	<b>AFW flow is 200 gpm on FI-18032 and FI-18035.</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

**Terminating Cues:** After AFW Flow is established to 11 SG, This JPM is Complete

**Stop Time:** \_\_\_\_\_


## TURNOVER SHEET

### **INITIAL CONDITIONS:**

- Both Units are at 100% power.
- A fire has occurred in the Control Room and thick black smoke is making visibility very difficult.
- As the Unit 1 SS, you have decided to implement F5 Appendix B, Control Room Evacuation (Fire) procedure.
- F5 Appendix B, Attachment A is complete through step N.

### **INITIATING CUES (IF APPLICABLE):**

- Per step O, align Auxiliary Feedwater per F5 Appendix B, Attachment I.

	<b>JOB PERFORMANCE MEASURE (JPM)</b>
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**SITE:** **Prairie Island**

**JPM TITLE:** F5 APPENDIX B, ATTACHMENT C - UNIT 1 REACTOR OPERATOR ACTIONS

**JPM NUMBER:** F5-9 **REV.** 4

**RELATED PRA INFORMATION:** **PRA Identified Task**

**TASK NUMBERS / TASK TITLE(S):** CRO 000.ATI.005

**K/A NUMBERS:** 2.1.23

**APPLICABLE METHOD OF TESTING:**

Discussion:  Simulate/walkthrough:  Perform:

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

Simulator:  Other:

Lab:

Time for Completion:  20  Minutes Time Critical:  NO

Alternate Path / Faulted:  NO

**TASK APPLICABILITY:**  SRO, RO

<b>Developed by:</b>	<b>Travis Ouret</b>	<b>3/3/05</b>
	Instructor	Date
<b>Validated by:</b>	John Kempkes	5/5/05
	Validation Instructor	Date
<b>Approved by:</b>	Training Supervisor	Date



**JPM Number:** F5-9

**JPM Title:** F5 APPENDIX B, ATTACHMENT C - UNIT 1 REACTOR OPERATOR ACTIONS

**Examinee:** \_\_\_\_\_

**Evaluator:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Start Time** \_\_\_\_\_

**Finish Time** \_\_\_\_\_

**PERFORMANCE RESULTS:**

**SAT:**

**UNSAT:**

<b>COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).</b>

**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.*

JPM BRIEFING/TURNOVER

This section is read once for the entire package of JPMs. It is not required to review this section for every JPM being performed in the package. The initial conditions and initiating cue(s)/tasks to be performed should be read and then provided to the examinee.

Review PITC-90, JPM Briefing Checklist with examinee

*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:**

- Both Units were at 100% power.
- A fire occurred in the Control Room and thick black smoke made visibility difficult.
- The Unit 1 SS made the decision to evacuate the Control Room and to implement F5 Appendix B, Control Room Evacuation (Fire).
- The SS determines that SCBAs are not needed.
- You are the Unit 1 RO and have completed steps A through H of F5 Appendix B, Attachment C, such that the:
  - Reactor is tripped,
  - Turbine is tripped,
  - RCPs are tripped,
  - MFW Pumps are tripped,
  - MSIVs are closed,
  - Pressurizer PORV block valves are closed.
  - 11 and 12 CS Pumps are in PULL-TO-LOCK.
  - Both PRZR spray valve controllers are in MANUAL and CLOSED.

**INITIATING CUES: (IF APPLICABLE):**

You are to complete the Unit 1 RO actions for Control Room Evacuation in accordance with F5 Appendix B, Attachment C, starting at Step J.

**JPM PERFORMANCE INFORMATION**

**Required Materials:** Copy of F5 Appendix B, Attachment C

**General References:** F5 Appendix B

**Task Standards:** 12 DDCLP running.

**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).

**NOTE:** 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.

<b>Performance Step:</b> <b>Critical</b>	Proceed with radio, flashlight, hard hat with headlamp, set of keys, and this Attachment (C) to both turbine front standards and verify turbines are tripped.
<b>Standard:</b>	Candidate goes to both turbine front standards with radio, flashlight, hard hat with headlamp, set of keys, and Attachment C and verifies both Units turbines are tripped.
<b>Evaluator Note:</b>	Candidate should indicate how he/she would determine if the turbines are tripped and then how he/she would trip the turbines if they were running.
<b>Evaluator Cue:</b>	As candidate states that he/she would obtain a radio, flashlight, hard hat with headlamp, and set of keys, inform candidate that they have obtained said items.  After candidate demonstrates appropriate methods of determining the status of turbine operation and how to trip the turbines locally, inform candidate that, "both turbines are tripped."
<b>Performance:</b>	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b>	Proceed to the Screenhouse, 695' level. (Use lighted stairwell, near Records Room, across under turbine pedestal, out through Old Admin Bldg door to Screenhouse east door, then use stairwell on east end of Screenhouse to reach 675' level.)
<b>Standard:</b>	Candidate goes to Screenhouse 695' level.
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b> <u>Y</u>	Proceed to 12 DD CLP room and OPEN knife switch SW 7030038, 12 DD CLWP CONT PNL PWR ISOL KNIFE SWITCH. (Inside Panel 70300)
<b>Standard:</b>	Candidate goes to 12 DDCLP room and OPENS knife switch SW 7030038.
<b>Evaluator Cue:</b>	<b>SW 7030038 is "OPEN".</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical <u>Y</u></b>	If 12 DDCLP is not running, then perform the following: <ul style="list-style-type: none"><li>Manually override one of the starting air solenoid valves, by turning the small knob at the base of the solenoid, to admit air to the starting motor.</li><li>Return the knob to the "SHUTOFF" position when the engine gets up to full speed.</li></ul>
<b>Standard:</b>	Determine 12 DD CLP is not running and perform the following; One of the starting air solenoid valves is manually overridden and returned to the "SHUTOFF" position when the engine is up to full speed.
<b>Evaluator Cue:</b>	<b>When candidate indicated they would check the status of 12 DD CLP, inform the candidate "You hear only background noise".</b>  <b>When candidate indicates that he/she would turn the override knob to admit air to the starting motor, inform candidate that, "the engine is up to full speed."</b>  <b>When candidate indicated they would check tachometer, inform candidate, "meter 28240 reads 1200 rpm."</b>  <b>When candidate indicates that he/she would return the knob to the "SHUTOFF" position, inform candidate that, " the knob is in SHUTOFF."</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b>	If 12 DDCLP is running, then locally isolate air supply to CD-34136, 11 SCAV & COMBUSTION AIR DAMPER (on North wall near 121 filter water strainer).
<b>Standard:</b>	Candidate isolates air to CD-34136, 11 SCAV & COMBUSTION AIR DAMPER
<b>Evaluator Cue:</b>	<b>When candidate indicated that he/she would isolate air, inform candidate that, "valve is closed."</b>  <b>If asked the position of the dampers, inform candidate "the dampers are open."</b>
<b>Performance:</b>	<b>SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/></b>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b>	Verify cooling water header is pressurized using PI-11022, 12 DD CLWP DSCH PI.
<b>Standard:</b>	PI-11022 used to verify cooling water header pressurized.
<b>Evaluator Cue:</b>	<b>PI-11022 indicates 85 psig.</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

<b>Performance Step:</b> <b>Critical</b> <u>Y</u>	Proceed to 121 MD Cooling Water Pump Room and place CS-19058, 11 SFGDS SCRNHSE ROOF EXHT FAN, in the "ON" position.
<b>Standard:</b>	CS-19058 placed in the "ON" position.
<b>Evaluator Cue:</b>	<b>CS-19058 is in "ON".</b>
<b>Performance:</b>	<b>SATISFACTORY</b> <input type="checkbox"/> <b>UNSATISFACTORY</b> <input type="checkbox"/>
<b>Comments:</b>	_____

**Terminating Cues:** When 12 DD CLWP is running with ventilation in service, This JPM is Complete.

**Stop Time:** \_\_\_\_\_

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