



JOB PERFORMANCE MEASURE (JPM)

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 MinutesTime Critical: NOAlternate Path / Faulted: YESTASK APPLICABILITY: SRO, RO

Developed by:	Travis Ouret	3/2/05
	Instructor	Date
Validated by:	J. Kempkes	5/5/05
	Validation Instructor	Date
Approved by:		
	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:

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

EVALUATOR'S SIGNATURE: _____

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

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.

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.

Performance Step: Initiate Normal Boration of the RCS at 12 to 15 GPM.**Critical** N**Standard:** Attempts to initiate Normal Boration and recognizes the need to Emergency Borate**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐**Comments:** _____**Performance Step:** Shift running Boric Acid Transfer Pump to FAST speed**Critical** N**Standard:** Running pump shifted to FAST (CS-46163 or CS-46164) and started (CS-46161 or CS- 46162)**Performance:** **SATISFACTORY** ☐ **UNSATISFACTORY** ☐**Comments:** _____

Performance Step: Open in-service BAST recirculation valve to 50%
Critical N

Standard: Inservice BAST recirculation valve (CV-31195 or CV-31197) opened to 50%

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

Comments: _____

Performance Step: Open emergency boration motor valve
Critical N

Standard: Attempts to open MV-32086 using CS-46297

Evaluator Note: MV-32086 will not open

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

Comments: _____

Performance Step: Align RWST to charging.
Critical Y

Standard: Opens MV-32060 using CS-46453

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

Comments: _____

Performance Step: Close VCT TNK OUTLET Valve
Critical N

Standard: MV-32061, VCT TNK OUTLET CLOSED using CS-46305

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

Comments: _____

Terminating Cues: When MV-32060 is open, This JPM is Complete.

Stop Time: _____

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.

INITIATING CUES (IF APPLICABLE):

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



JOB PERFORMANCE MEASURE (JPM)

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 MinutesTime Critical: NOAlternate Path / Faulted: YESTASK APPLICABILITY: SRO, RO

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

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.

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.

Performance Step:

Critical N

Verifies :

Both RHR pumps Running

OR

Both SI pumps Running

Standard:

Verifies Both SI pumps are running

Performance:

SATISFACTORY ☐ **UNSATISFACTORY** ☐

Comments:

Performance Step:

Critical N

SI NOT READY lights – NOT LIT

Standard:

Verifies SI NOT READY lights are not lit

Performance:

SATISFACTORY ☐ **UNSATISFACTORY** ☐

Comments:

Performance Step: SI ACTIVE lights – lit for plant conditions

Critical N

Standard: Verifies SI ACTIVE Lights are LIT

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

Comments: _____

Performance Step: Containment Isolation lights – lit for plant conditions.

Critical N

Standard: Verifies CI lights are lit. Closes Instrument Air to Containment Isolation valves.

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

Comments: _____

Performance Step: Category I doors - CLOSED

Critical N

Standard: Verifies Category I doors are closed.

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

Comments: _____

Performance Step: Check Category I Special Vent Zone Report – NO openings requiring closure within 6 minutes

Critical N

Standard: Checks current report and Verifies there are no openings.

Evaluator Note: **Openings are verified using the printout on the RO Desk**

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

Comments: _____

Performance Step: CLOSE MV-32115, 122 SFP HX Inlet Header MV B

Critical N

Standard: Positions CS-46064 to close position. Green light ON.

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

Comments: _____

Performance Step: Check Cooling Water Header Pressures- Both greater than 65 psig

Critical N

Standard: Verifies CL Header pressures >65psig.

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

Comments: _____

Performance Step: Verify Plant Announcements Complete.

Critical Y

- Announces Unit 1 Reactor Trip & Safety Injection
- Pages Shift Manager & SEC to report to the Control Room

Standard: Pages made or directed.

Evaluator Cue: **IF asked as the SS if announcements have been made, report, The required announcements have been made.**

Candidate may make the Announcements.

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

Comments: _____

Performance Step:	Check if MSIVs and bypasses - closed.
Critical <u>Y</u>	<ul style="list-style-type: none"> • IF OPEN, then check if MSIV isolation is required. • IF required, THEN CLOSE MSIVs and bypass valves
Standard:	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
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

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.



JOB PERFORMANCE MEASURE (JPM)

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: NOAlternate Path / Faulted: NOTASK APPLICABILITY: SRO, RO

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

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.

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.

Performance Step:

Critical Y

Verify SI is inadvertent:

- RCS pressure <1800 psig prior to SI (was 302)
- Containment pressure <3 psig
- RCS subcooling >50°F
- RCS pressure stable or increasing

Standard:

SI determined to be inadvertent and transition is NOT made to 1E-0, and Train A SI is NOT actuated.

Performance:

SATISFACTORY ☐ **UNSATISFACTORY** ☐

Comments:

Performance Step: Stop running SI pump.**Critical** Y**Standard:** Determines 12 SI pump is running and places 12 SI pump in PULLOUT.**Evaluator Note:** 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**Performance:** SATISFACTORY ☐ UNSATISFACTORY ☐**Comments:** _____**Performance Step:** Check if RCP should be stopped.**Critical** N**Standard:** Running RCP #1 seal D/P verified >210 psid and RCP stop not required.**Performance:** SATISFACTORY ☐ UNSATISFACTORY ☐**Comments:** _____**Performance Step:** Check if RCS purification flow should be stopped.**Critical** N**Standard:** 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)

IF asked, reply "Purification jumper is not in service."

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐**Comments:** _____

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

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

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

Performance Step: Reset Containment Isolation
Critical N

Standard: Containment Isolation reset using pushbutton PB-46084 and verified by checking annunciator 47018-0505 is NOT lit.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

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.
- 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.

	JOB PERFORMANCE MEASURE (JPM)
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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

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

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.

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.

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.

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

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

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

Performance Step: Critical <u>N</u>	Attempt to identify the cause by checking for proper operation the following: <ul style="list-style-type: none"> ○ Verify greater than 3 psig steam pressure on PI-4121902, 1 TURB GLD STM SEAL SPLY. ○ Verify Condenser Vacuum Breakers Closed. <ul style="list-style-type: none"> ○ MV-32052, 1B CDSR VAC BKR ○ MV-32049, 1A CDSR VAC BKR ○ Verify air ejectors are functioning properly ○ Check for proper Circ Water flow. <ul style="list-style-type: none"> ○ Both pumps are running
Standard:	Candidate verifies proper equipment operation
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Critical <u>N</u>	Place standby air ejector in service to B condenser per C26, Air Removal System.
Standard:	Candidate Opens the following: <ul style="list-style-type: none"> ○ MV-32328, STBY AIR EJCTR STM SPLY, using CS-46402 ○ MV-32358, STBY SECONDARY AIR EJCTR SUCT, using CS-46400 ○ MV-32347, STBY PRIMARY AIR EJCTR SUCT FROM B CDSR, using CS-46399.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step:	Manually trip the Reactor and Turbine due to high condenser pressure.
Critical <u>Y</u>	
Standard:	<p>Identify any turbine limit is exceeded and initiate a manual Reactor and Turbine trip <u>prior</u> to automatic turbine trip.</p> <ul style="list-style-type: none"> ○ Condenser Differential pressure >2.5" hg (expected first) ○ Condenser Pressure not within allowable limit (8" backpressure)
Evaluator Note:	The Candidate should trip the Reactor when any one of the listed conditions exist. This may occur at any time during the JPM.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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	FW03B	20			Loss of 1B Condenser Vacuum
1		MALF	FW03B	100			Loss of 1B 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.



JOB PERFORMANCE MEASURE (JPM)

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 MinutesTime Critical: NOAlternate Path / Faulted: YESTASK APPLICABILITY: **SRO, RO**

Developed by:	Travis Ouret	3/1/05
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	Training Supervisor	Date

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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.

Performance Step: Ensure PRT pressure is approximately 6 psig.**Critical** N**Standard:** Candidate verifies PRT pressure is approximately 6 psig.**Performance:** SATISFACTORY ☐ UNSATISFACTORY ☐**Comments:** _____**Performance Step:** Open CV-31323, PRZR RELIEF TNK DRN, using CS-46268 to reduce the level in the PRT.**Critical** Y**Standard:** Candidate opens CV-31323 using CS-46268**Performance:** SATISFACTORY ☐ UNSATISFACTORY ☐**Comments:** _____

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

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

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

Performance Step: Place CS-46353, 11 RCDT PUMP, in PULLOUT.
Critical N

Standard: CS-46353, 11 RCDT PUMP, placed PULLOUT.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Start 12 RCDT PUMP using CS-46354.
Critical Y

Standard: Candidate places CS-46354 to Start

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: When PRT level decreases to ABOUT 72%, then CLOSE CV-31323, PRZR RELIEF TNK DRN, using CS-46268
Critical Y

Standard: Candidate CLOSES CV-31323 using CS-46268.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

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.



JOB PERFORMANCE MEASURE (JPM)

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: NOAlternate Path / Faulted: NOTASK APPLICABILITY: SRO, RO

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

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.

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.

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.

Performance Step:	Place the following control switches in the "ON" position: <ul style="list-style-type: none"> • CS-60008 • CS-60009 • CS-60010 • CS-60011 • CS-60205 • CS-60207
Standard:	Calls the turbine building operator and tells him/her to place the switches listed in the ON position.
Evaluator Note:	The first four switches turn ON the Radiator fans. The last two switches turn ON the fuel oil backup pumps.
Evaluator Cue:	Control switches CS-60008, 60009, 60010, 60011, 60205, and 60207 are in the on position.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Reset Emergency Start Relay by momentarily placing CS-46958, D6 DSL GEN EMERG START & EMERG START RESET, in "RESET".

Critical Y

Standard: CS-46958, D6 DSL GEN EMERG START & EMERG START RESET placed in "RESET" and "EMERG START ACTUATED" light extinguishes.

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

Comments: _____

Performance Step: Verify the red indicating light on CS-46958, D6 DSL GEN EMERG START & EMERG START RESET, is NOT LIT.

Standard: CS-46958, D6 DSL GEN EMERG START & EMERG START RESET red indicating light NOT LIT.

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

Comments: _____

Performance Step: Place CS-46971, D6 DIESEL GENERATOR in START.

Standard: CS-46971, D6 DIESEL GENERATOR placed in "START".

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

Comments: _____

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

Performance Step:	Place the following control switches in the "AUTO" position AND verify the red indicating light is "ON": <ul style="list-style-type: none"> • CS-60008 • CS-60009 • CS-60010 • CS-60011 • CS-60205 • CS-60207
Standard:	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.
Evaluator Note:	The first four switches return the Radiator fans to AUTO. The last two switches return the fuel oil backup pumps to AUTO.
Evaluator Cue:	Control switches CS-60008, 60009, 60010, 60011, 60205, and 60207 are in the Auto position and the red indicating lights are ON.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

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

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

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

Performance Step:	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.
Standard:	Observe 44190 for at least one pass through the 12 o'clock position.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step:	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.
Standard:	41914-02, BUS 25/26 INCOMING VOLTS reads zero to 2.5 volts greater than 41914-01, BUS 25/26 RUNNING VOLTS.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Verify approximately 120 volts on 41914-01, BUS 25/26 RUNNING VOLTS.

Standard: 41914-01, BUS 25/26 RUNNING VOLTS reads 120 ± 2.5 volts.

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

Comments: _____

Performance Step: As the synchroscope indicator approaches 12 o'clock, place CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12, in "CLOSE".
Critical Y

Standard: 41921, D6 EMERG GENERATOR POWER meter checked upon placing CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12 in "CLOSE".

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

Comments: _____

Performance Step: Verify red indicating light on CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12, is ON.

Standard: Operator checks red light on CS-46941, BKR 26-13 BUS 26 SOURCE FROM BUS CT12 is ON.

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

Comments: _____

Performance Step: Using CS-46973, D6 DSL GEN GOVERNOR CONTROL, reduce D6 load to 700 KW.

Standard: If load >700 KW, operator reduces D6 load to 700 KW using CS-46973, D6 DSL GEN GOVERNOR CONTROL

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

Comments: _____

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

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

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

Performance Step: Place CS-46937, BUS 26 SYNCHROSCOPE SEL SW, in "OFF".

Standard: CS-46937, BUS 26 SYNCHROSCOPE SEL SW placed in "OFF".

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

Comments: _____

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.

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.



JOB PERFORMANCE MEASURE (JPM)

SITE: **Prairie Island**JPM TITLE: **EJECTED ROD WITH FAILURE OF REACTOR TRIP**JPM NUMBER: **FL-20SF-2** REV. **0**RELATED PRA
INFORMATION: **None**TASK NUMBERS /
TASK TITLE(S): **CRO 001.014.01.01**K/A NUMBERS: **012 A2.06**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐Simulator: ☒ Other: ☐Lab: ☐Time for Completion: 2 MinutesTime Critical: NOAlternate Path / Faulted: YESTASK APPLICABILITY: SRO, RO

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

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.

INITIAL CONDITIONS:

- You are the only Unit 1 RO in the control room.
- Reactor power is being maintained at 10^{-8} Amps

INITIATING CUES (IF APPLICABLE):

- Respond to conditions per applicable procedures.

JPM PERFORMANCE INFORMATION

Required Materials: None

General References: 1E-0 Immediate Actions

Task Standards: Reactor tripped using DSS

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.

Performance Step: 1 Critical <u>N</u>	Respond to alarm 47013-0407 ROD AT BOTTOM
Standard:	ARP referenced and transition to 1C5 AOP4, DROPPED RCCA. May not be performed if student acts on power change indications.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: 2 Critical <u>N</u>	Confirm rod ejection using diverse indications
Standard:	Notes Rod G-3 IRPI at 0 steps and rod bottom light LIT Notes reactor power increasing and positive SUR
Evaluator Note:	Rod ejection causes loss of IRPI. Power change is in opposite direction of dropped rod.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: 3 Critical <u>N</u>	Manually trip the reactor and go to 1E-0, REACTOR TRIP OR SAFETY INJECTION.
Standard:	Attempts manual reactor trip using both control board switches
Evaluator Note:	Not a critical task as trip breakers are failed closed.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: 4 Critical <u>Y</u>	Manually trip the reactor using the Diverse Scram System.
Standard:	DSS taken to INITIATE using CS-46447.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: 5 Critical <u>N</u>	Verify Reactor Trip (1E-0 Step 1)
Standard:	<ul style="list-style-type: none">- Notes reactor trip breakers failed to open and enters RNO- Manually trips reactor (already completed)- Verifies reactor power is <5% using PRNIS- MAY verify remaining rod bottom lights and IRPI but not procedurally required.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Terminating Cues: When the Reactor is verified tripped. This JPM is Complete.

Stop Time: _____

SIMULATOR SETUP**INSTRUCTOR GUIDE:**

- IC-26 Reactor Power is 10^{-8} A
- Enter Relative Order 0 Malfunctions
- Dilute the RCS while inserting rods to achieve stable power at 10^{-8} A with CBD at 25 steps (can use VC117 to adjust directly, final boron concentration 1732 ppm)
- Allow ERCS to come up (if necessary)
- WHEN turnover is complete, enter Relative Order 1, 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		Malfunction	RP07				Mechanical Failure of Reactor Trip Breakers
1		Malfunction	RD08		1		Control Rod G3 Ejection

TURNOVER SHEET

INITIAL CONDITIONS:

- You are the only Unit 1 RO in the control room.
- Reactor power is being maintained at 10^{-8} Amps

INITIATING CUES (IF APPLICABLE):

- Respond to conditions per applicable procedures.



JOB PERFORMANCE MEASURE (JPM)

SITE: **Prairie Island**

JPM TITLE: **TERMINATE ACCIDENTAL RADIOACTIVE LIQUID RELEASE**

JPM NUMBER: **WD-1S** **REV. 1**

RELATED PRA INFORMATION: **None**

TASK NUMBERS / TASK TITLE(S): **CRO 059 05 01**

K/A NUMBERS: **068 A2.04**

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

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

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.

INITIAL CONDITIONS:

- Unit 1 is at 100% power
- You are the Unit 1 Lead

INITIATING CUES (IF APPLICABLE):

- Respond as necessary.

JPM PERFORMANCE INFORMATION

Required Materials: **None**

General References: **C47048 for R18**

Task Standards: **Operator terminates liquid radioactive release**

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.

Performance Step:	Respond to annunciator for HIGH RADIATION TRAIN B PANEL ALARM.
Critical <u>N</u>	
Standard:	Alarm is acknowledged and C47 is used to direct operator to check Radiation Alarm Panel.
Evaluator Cue:	If necessary, acknowledge as second Control Room Operator that you understand he/she is stepping around back to check the Radiation Monitor Panel.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Critical <u>N</u>	Operator calls Aux. Bldg. Operator to see if a release is in progress.
Standard:	Operator pages Aux. Bldg. Operator.
Evaluator Cue:	If asked, respond as Aux. Bldg. Operator that, "We are releasing 121 ADT monitor tank, the release paperwork was cleared last shift. We started the release 5 minutes ago."
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Critical <u>N</u>	Operator calls/asks Aux. Bldg. Operator to verify the Waste Liquid Common Discharge Header valve (CV-31256) closes.
Standard:	Operator directs the Aux. Bldg. Operator to close/verify closed CV-31256, using C47048, Alarm Response Procedure for R-18.
Evaluator Cue:	If asked, respond as Aux. Bldg. Operator that, "CV-31256 is OPEN." When directed, respond as Aux. Bldg. Operator that you, "understand you want me to CLOSE CV-31256." After a short delay time, respond as Aux. Bldg. Operator that, CV-31256 is STUCK OPEN."
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Critical <u>Y</u>(SEQ-1)	Close Waste Liquid Common Discharge Header keylock release valve (CV-31841).
Standard:	Operator directs the Aux. Bldg. Operator to close Waste Liquid Common Discharge Header keylock release valve CV-31841.
Evaluator Cue:	<p>When directed, respond as Aux. Bldg. Operator that you, "understand you want me to CLOSE CV-31841."</p> <p>After a short delay time, respond as Aux. Bldg. Operator that, CV-31841 is CLOSED."</p>
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Critical <u>N</u>	Inform SS that conditions may warrant classification per F3-2.
Standard:	SS informed that conditions might warrant possible classification per F3-2.
Evaluator Cue:	When directed, respond as SS that you, "understand conditions may warrant classification per F3-2, and I will consult F3-2."
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Terminating Cues: After responding as SS that you will consult F3-2, inform candidate that, "this JPM is complete."

Stop Time: _____

SIMULATOR SETUP

INSTRUCTOR GUIDE:

- Initialize the simulator to IC-10.
- Enter annunciator malfunction to disable Liquid Waste Disposal Local Alarm. **(Relative Order 0)**
- Place simulator in "RUN".
- When turnover completed and Operator appears ready, enter malfunction to cause high radiation alarm on R-18. **(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	B1-B2	ANN MALF	M47015:0503W	DISABLE			Liquid Waste Disposal Alarm
1		MALF	RM14	80	1		R-18 High Radiation

TURNOVER SHEET

INITIAL CONDITIONS:

- Unit 1 is at 100% power
- You are the Unit 1 Lead

INITIATING CUES (IF APPLICABLE):

- Respond as necessary.



JOB PERFORMANCE MEASURE (JPM)

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: NOAlternate Path / Faulted: NOTASK APPLICABILITY: SRO, RO, NLO

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

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

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.

INITIAL CONDITIONS:

- A LOCA has occurred on Unit 1.
- Containment H₂ 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.

Performance Step: At the recombiner panel, verify the PWR ADJ potentiometer is set to zero.
Critical N

Standard: PWR ADJ potentiometer verified to be set at zero.

Evaluator Cue: PWR ADJ potentiometer reads 0.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: At the recombiner panel, verify the PWR IN AVAIL lamp is lit.
Critical N

Standard: PWR IN AVAIL lamp verified to be lit.

Evaluator Cue: PWR IN AVAIL lamp is illuminated.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

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

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

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

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

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

Performance Step: Multiply C_p , determined above, by the reference power setting to determine required recombiner power setting.

Critical Y

Standard: Required recombiner power setting determined to be 44 to 48 kw (1.2 ± 0.05 multiplied by 38.25 kw).

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

Comments: _____

Performance Step: Turn the PWR ADJ potentiometer clockwise until 5 KW is obtained on the PWR OUT meter.

Critical N

Standard: PWR ADJ potentiometer turned clockwise until 5 kw is indicated on the PWR OUT meter.

Evaluator Cue: **PWR ADJ potentiometer is adjusted and PWR OUT meter is indicating 5 kw.**

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

Comments: _____

Performance Step: Hold for 10 minutes, then advance to 10 KW.

Critical N

Standard: After holding at 5 kw for 10 minutes, PWR ADJ potentiometer turned clockwise until 10 kw is indicated on the PWR OUT meter.

Evaluator Cue: **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."

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

Comments: _____

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

Performance Step: Hold for 10 minutes, then advance to 20 KW.
Critical N

Standard: After holding at 10 kw for 10 minutes, PWR ADJ potentiometer turned clockwise until 20 kw is indicated on the PWR OUT meter.

Evaluator Cue: 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."

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Hold for 5 minutes, then advance to power setting obtained above (determined required power setting).
Critical Y

Standard: 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.

Evaluator Cue: 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)."

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

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 H₂ 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.



JOB PERFORMANCE MEASURE (JPM)

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 MinutesTime Critical: NOAlternate Path / Faulted: NOTASK APPLICABILITY: SRO, RO, NLO

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

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

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.

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.

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

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

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

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

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

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

Performance Step: 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.

Critical Y

Standard: Candidate depresses PB201, observes PL201 amber light turns ON and PL202 red light goes OFF

Evaluator Cue: 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"

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: If the AC Input Breaker CB401 tripped during transfer, then place CB401 in the ON position.

Critical Y

Standard: Candidate observes the position of CB401

Evaluator Cue: If necessary due to the Inverter being OOS or malfunctioning,
 "CB401 is ON"

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Terminating Cues: After CB401 position is determined to be ON, 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 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: NOAlternate Path / Faulted: NOTASK APPLICABILITY: SRO, RO

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

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.

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.

Performance Step:	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.
Critical	
Standard:	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.
Evaluator Note:	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.
Evaluator Cue:	<p>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.</p> <p>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."</p>
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step:	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.)
Critical	
Standard:	Candidate goes to Screenhouse 695' level.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

Performance Step:**Critical Y**

If 12 DDCLP is not running, then perform the following:

- 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.
- Return the knob to the "SHUTOFF" position when the engine gets up to full speed.

Standard:

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.

Evaluator Cue:

When candidate indicated they would check the status of 12 DD CLP, inform the candidate "You hear only background noise".

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."

When candidate indicates that he/she would return the knob to the "SHUTOFF" position, inform candidate that, " the knob is in SHUTOFF."

Performance:

SATISFACTORY ☐ **UNSATISFACTORY** ☐

Comments:

Performance Step:**Critical**

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).

Standard:

Candidate isolates air to CD-34136, 11 SCAV & COMBUSTION AIR DAMPER

Evaluator Cue:

When candidate indicated that he/she would isolate air, inform candidate that, "valve is closed."

Performance:

SATISFACTORY ☐ **UNSATISFACTORY** ☐

Comments:

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

Performance Step: Critical <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.
Standard:	CS-19058 placed in the "ON" position.
Evaluator Cue:	CS-19058 is in "ON".
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Terminating Cues: When 12 DD CLWP is running with ventilation in service.

Stop Time: _____

TURNOVER SHEET

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.



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

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

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

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.

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.

INITIATING CUES (IF APPLICABLE):

- Perform Unit 1 SS actions in accordance with F5 Appendix B, Attachment A starting at Step G.

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 and Attachment I

General References: F5 Appendix B

Task Standards: F5 Appendix B, Attachment A- 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.

Performance Step: Critical	Proceed with radio, flashlight, hard hat with head lamp, set of keys, and this Attachment (A), to hot shutdown panels in the Auxiliary Feedwater Pump rooms. (Use lighted stairwell, near Records Room.)
Standard:	Candidate goes to Auxiliary Feedwater Pump room with radio, flashlight, hard hat with head lamp, set of keys, and Attachment A.
Evaluator Note:	Candidate should use stairways instead of elevators due to the potential for a loss of offsite power at any time during this event.
Evaluator Cue:	As candidate states that he/she would obtain a radio, flashlight, hard hat with head lamp, and set of keys, inform candidate that they have obtained said items.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

Performance Step: Place the following Local/Remote Control Switches on "A" Train HSDP 51000 to
Critical Y "LOCAL".

Unit 1

CS-51001, UNIT 1 PZR HEATERS GROUP A
 CS-51003, 11 TD AFWP TO11 STM GEN MV-32238
 CS-51005, 11 TD AFWP TO 12 STM GEN MV-32239
 CS-51009, LTDN ORIFICE ISOL 40 GPM CV-31325
 CS-51011, LTDN ORIFICE ISOL 40 GPM CV-31326
 CS-51013, LTDN ORIFICE ISOL 80 GPM CV-31327
 CS-51007, 11 BORIC ACID TRANSFER PUMP

Standard: Listed Local/Remote Control Switches placed to "LOCAL".

Evaluator Cue: As candidate places each Local/Remote Control Switch to "LOCAL", inform candidate that, "Local/Remote Control Switch is in LOCAL."

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Place the following Local/Remote Control Switches on "A" Train HSDP to "LOCAL"
Critical Y (cont'd).

Unit 2

CS-51101, UNIT 2 PZR HEATERS GROUP A
 CS-51103, 21 MD AFWP TO 21 STM GEN MV-32383
 CS-51105, 21 MD AFWP TO 22 STM GEN MV-32384
 CS-51109, LTDN ORIFICE ISOL 40 GPM CV-31347
 CS-51111, LTDN ORIFICE ISOL 40 GPM CV-31348
 CS-51113, LTDN ORIFICE ISOL 80 GPM CV-31349
 CS-51107, 21 BORIC ACID TRANSFER PUMP

Standard: Listed Local/Remote Control Switches placed to "LOCAL".

Evaluator Cue: As candidate places each Local/Remote Control Switch to "LOCAL", inform candidate that, "Local/Remote Control Switch is in LOCAL."

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

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

Performance Step: Critical <u>Y</u>	Place the following Power Operated Relief Valves to "MANUAL CLOSE": HC-28400, 1A ATM STM RELIEF (Power Op) CV-31084 HC-28408, 2A ATM STM RELIEF (Power Op) CV-31102
Standard:	Power Operated Relief Valves CV-31084 and CV-31102 placed to "MANUAL CLOSE".
Evaluator Cue:	As candidate places each PORV to "MANUAL CLOSE", inform candidate that, "PORV is in MANUAL CLOSE."
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

Performance Step: Critical <u>Y</u>	Place the following AFW Pump Local/Remote Switches to "LOCAL": CS-51517, 12 MD AFWP CS-51617, 22 TD AFWP CS-19640, CLG WTR TO 12 MD AFWP SUCT CS-19642, COND TO 12 MD AFWP SUCT CS-19650, COND TO 22 TD AFWP SUCT CS-19648, CLG WTR TO 22 TD AFWP SUCT
Standard:	Listed Local/Remote Control Switches placed to "LOCAL".
Evaluator Cue:	As candidate places each Local/Remote Control Switch to "LOCAL", inform candidate that, "Local/Remote Control Switch is in LOCAL." WHEN COMPLETED, State "Steps K, L and M are completed." The ability to perform these steps is adequately demonstrated by the previous Train A steps.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

Performance Step:	Place the following MCC breakers in the OFF position
Critical <u>Y</u>	1A1-Z5 SUMP B TO 11 RHR PUMP MV-32077 1A2-A5 SUMP B TO 12 RHR PUMP MV-32078 2A1-A2 SUMP B TO 21 RHR PUMP MV-32180 2A2-A4 SUMP B TO 22 RHR PUMP MV-32181
Standard:	Breakers 1A1-Z5, 1A2-A5, 2A1-A2, 2A2-A4 are open
Evaluator Cue:	As Candidate places each breaker open, state “Breaker is open”
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

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

Performance Step:	Align Auxiliary Feedwater per Attachment I (cont'd).
Critical	<p>B. Check OPEN the following valves (if not open, then manually open using local handwheel(s)):</p> <p>MV-32333, 11 TD AFW PMP SUCTION FROM CST MV MV-32345, 22 TD AFW PMP SUCTION FROM CST MV</p>
Standard:	Valves MV-32333 and MV-32345 are checked opened.
Evaluator Cue:	Valves MV-32333 and MV-32345 are open.
Performance:	SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input type="checkbox"/>
Comments:	_____

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

Performance Step:
Critical Y

Align Auxiliary Feedwater per Attachment I (cont'd).

- C. Check 11 and 22 AFW Pumps RUNNING, if either pump is not running then start the non-running TDAFWP(s) as follows:
- Start 11 TDAFWP as follows:
 - 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.
 - Place 1AF-292-1, 11 TD AFW PMP MN STM SPLY CV-31998 ROOT ISOL, in the "OPEN" position. 11 TDAFWP should roll up to full speed within 30 seconds.

Standard:

11 TD AFW Pump running.

Evaluator Cue:

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."

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."

When candidate starts 11 TD AFW Pump Aux Lube Oil Pump, inform candidate that, "11 TD AFW Pump Aux Lube Oil Pump is running."

When candidate starts 11 TD AFW Pump, inform candidate that, "11 TD AFW Pump is running."

Performance:

SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

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

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

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

Performance Step:
Critical Y

Align Auxiliary Feedwater per Attachment I (cont'd).

E. Manually align AFW System motor valves for the units as follows:

Unit 1

- Open the following MCC breakers:
 - 1A1-Z2, 11 AFW TO 11 SG MV-32238
- Check OPEN or locally OPEN MV-32238, 11 AFW TO 11 SG MV.
- Check Unit 1 AFW flow >200 gpm on FI-18032.
- Throttle flow to 11 SG as necessary by manually operating MV-32238, 11 AFW TO 11 SG MV.

Unit 2

- Open the following MCC breakers:
 - 2A2-C2, 22 AFW TO 21 SG MV-32246
- Check OPEN or locally OPEN MV-32246, 22 AFW TO 21 SG MV.
- Check Unit 2 AFW flow >200 gpm on FI-18035.
- Throttle flow to 21 SG as necessary by manually operating MV-32246, 22 AFW TO 21 SG MV.

Standard:

AFW flow established to 11 and 21 SGs at >200 gpm.

Evaluator Cue:

If candidate asks if MV-32238 or MV-32246 is open, inform candidate that, "MV-32238 or MV-32246 is open."

After candidate closes MV-32238 and MV-32246, inform candidate that, "AFW flow is slightly greater than 200 gpm to 11 and 21 SGs respectively."

Performance:

SATISFACTORY ☐ **UNSATISFACTORY** ☐

Comments:

Terminating Cues:

After AFW Flow is established to 11 and 21 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.

INITIATING CUES (IF APPLICABLE):

- Perform Unit 1 SS actions in accordance with F5 Appendix B, Attachment A starting at Step G.