Facility:	Ginna	Task No.:	062-021-01-01
Task Title:	Establish 100/0 Electric Lineup on Circuit 767	JPM No.:	2012 Retake N-A
K/A Reference:	062 A4.01 3.3 / 3.1 Ability to manually operate and/or monitor in the control room: All breakers (including available switchyard)	Alternate Path: Time Critical: Category: RO/SRO	Yes X No ____ Yes _ No X

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant is operating at 100% power
- The Electric Plant is currently in a 50/50 NORMAL lineup
- RG&E ECC has requested that the plant be placed in a 100/0 lineup on Circuit 767 for scheduled maintenance on offsite Circuit 7T later today
- An A-52.12 for removal of Circuit 7T is being prepared

Task Standard: Transfer 4160V buses from a 50/50 NORMAL Lineup to 100/0 Lineup on Circuit 767, recognize failure of breaker to auto trip, and implement Attachment 1 of O-6.9.2.

Required Materials: None

General References: O-6.9.2, ESTABLISHING AND/OR TRANSFERRING OFFSITE POWER TO BUS 12A / BUS 12B Rev 02200

Handouts: O-6.9.2, ESTABLISHING AND/OR TRANSFERRING OFFSITE POWER TO BUS 12A / BUS 12B Rev 02200 (marked up)

Initiating Cue:
- The CRS directs you to establish a 100/0 Electric Plant alignment per O-6.9.2 ESTABLISHING AND/OR TRANSFERRING OFFSITE POWER TO BUS 12A / BUS 12B, Section 6.3
- The SM and RG&E ECC have approved performance of this bus re-alignment.

Validation Time: 19 minutes (4/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Loss of power to 4160V Bus 12A.

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:

Indicate reason for unsatisfactory performance in the comment section below each step.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- Reset in **IC-19** or any at-power Initial Condition
- Ensure the electric plant is in a Normal 50/50 electric plant lineup

NOTE:

The simulator electrical model (in 2013) does not have the capability to fail the auto trip feature of 52/12AY when 52/12BY is closed in. Having the 52/12AY synchroscope also ON, however, defeats this interlock and would prevent the breaker from opening. Since there is only one (1) synchroscope handle, however, and is being used to close the 52/12BY breaker, a "software work around" must be accomplished by opening an Event and Schedule file:

1. Open Event in the Events box:
    - Enter **x05i115a** in the Event Code box
    - Type "Trigger on 12A ALT Synch Switch taken to ON position" in the Description box (optional)
2. Open Event 2 in the Events box:
    - Enter **jbk 12by & ! x05i115a** in the Event Code box
    - Type "Remove Override EDS29 when " in the Description box (optional)
3. SAVE the Event with a file name of your choice.
4. Open and LEAVE OPEN the file you just saved.
5. Build a new Schedule file box:
6. Enter the following in the Schedule box:

Insert	Pause	@Time	Event	Action	Description
□	□		1	insert override ovr-eds29 to 1	
□	□		2	remove override ovr-eds29	
□	□	0		Insert OVR-EDS69D to FALSE	12AY Trip signal
□	□	0		Insert OVR-EDS69G to FALSE	12AY Pull-to-stop signal
□	□	0		Insert OVR-EDS69F to FALSE	12AY Norm Aft Trip signal

7. SAVE the schedule file you just created.
8. Open and RUN the schedule file.

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 Verifies the appropriate section of O-6.9.2 to be performed.

_____

Procedure Step: **Table of Contents and Section 6.3**

Standard:
- Reviews Sections 1.0 through 5.0 of O-6.9.2
- Notes in Section 2.1 that the Subsections of Section 6 can be performed as necessary, and subsections NOT performed may be marked N/A.

Evaluator CUE: None

Evaluator NOTE: **Provide examinee with a copy of O-6.9.2, marked up through Precaution Step 5.0**

Comment:

Performance Step: 2 **ESTABLISH** Offsite Power to 12A Bus using Circuit 767 as follows:

_____

MARK BUS 12A NORMAL FEED FROM 7T, 52/12AY, breaker initial position:

- OPEN. . . . . □
- CLOSED . . . . . **X**

Procedure Step: **6.3.1.1**

Standard:
- Verifies BUS 12A NORMAL FEED FROM 7T, 52/12ABY is closed: red light ON and green light OFF
- Checks box that breaker is CLOSED

Evaluator CUE: None

Comment:

Performance Step: 3 **VERIFY CLOSED** CIRCUIT BKR 76702 34 KV BUS

_____

Procedure Step: **6.3.1.2**

Standard:
- Locates Breaker 76702 34 KV BUS indication
- Verifies red light ON and green light OFF.

Evaluator CUE: None

Comment:

√ **Performance Step: 4** **TURN ON** BUS 12A ALT FEED FROM 767, 52/12BY, SYNCHROSCOPE.

_____

Procedure Step: **6.3.1.3**

Standard: [√] Turn ON the synch switch for Bus 12A ALT Feed from 767

Evaluator CUE: None

Evaluator NOTE: **The operator may inform you that J-6, 4KV MAIN OR TIE BREAKER TRIP, and L-20, 12A XFMR OR 12A BUS TROUBLE, will alarm after closing Bus 12A Normal Feed breaker**

Comment:

Performance Step: 5 NOTE identifies that annunciators J-6 and L-20 will alarm after performing the next step, AND to complete steps 6.3.1.5 thru 6.3.1.7 without delay after closing in.

Procedure Step: **NOTE prior to 6.3.1.4**

Standard: Reads the NOTE

Evaluator CUE: None

Comment:

√ **Performance Step: 6** CLOSE BUS 12A ALT FEED FROM 767, 52/12BY

Procedure Step: **6.3.1.4**

Standard:
- [√] Closes 52/12BY breaker
- Verify breaker Red light ON and Green light OFF

Evaluator CUE: None

Evaluator NOTE: **Closing this ALTERNATE feed breaker SHOULD automatically trip the Normal feed breaker and result in J-6, 4KV Main or Tie Breaker Trip**

Comment:

Performance Step: 7 Acknowledges annunciators J-6, 4KV MAIN OR TIE BREAKER TRIP, and L-20, 12 XFMR OR 12A BUS TROUBLE.

Procedure Step: N/A

Standard:
- Notes that J-6 did NOT alarm (since breaker did not trip)
- References the previous NOTE

Evaluator CUE: None

Comment:

Performance Step: 8 IF Bus 12A NORMAL FEED FROM 7T, 52/12AY, was initially OPEN, then VERIFY breaker is OPEN AND RESET (Green light illuminated, White light EXTINGUISHED). OTHERWISE, mark this step N/A.

_____

Procedure Step: **6.3.1.5**

Standard:
- Verifies 52/12AY was initially CLOSED, AND
- Marks this step N/A

Evaluator CUE: None

Comment:

NRC EXAMINER: ALTERNATE PATH BEGINS WITH THE NEXT STEP

Performance Step: 9 IF Bus 12A NORMAL FEED FROM 7T, 52/12AY, was initially CLOSED, then perform the following:

a. Verify breaker OPENED (green and white lights – LIT
b. Place Bus12A NORMAL FEED FROM 7T, 52/12AY, control switch to TRIP and then to AUTO
c. Verify the breaker is OPEN and RESET (green light LIT, white light OFF)

_____

Procedure Step: **6.3.1.6**

Standard:
- Verify breaker did NOT OPEN (red light still LIT)
- Place Bus 12A NORMAL FEED FROM 7T, 52/12AY, control switch to TRIP and then to AUTO
- Verify the breaker is OPEN and RESET (green light LIT, white light OFF)

Evaluator CUE: None

Comment:

√ **Performance Step: 10** IF Bus 12A NORMAL FEED FROM 7T, 52/12AY, is NOT OPEN, THEN immediately perform Attachment 1, 7T/Bus 12A Circulating Current Contingency Action. OTHERWISE, mark this step N/A.

Procedure Step: **6.3.1.7**

Standard:
- [√] Recognizes that the NORMAL FEED 52/12AY breaker did NOT open
- Goes to Attachment 1

Evaluator CUE: None

Comment:

Performance Step: 11 CAUTION: This attachment is only performed as directed when breaker 52/12AY is NOT OPEN.

Procedure Step: **ATT-1, CAUTION prior to Step 1.0**

Standard: Reads CAUTION, confirms this is the correct action based on 52/12AY not opening

Evaluator CUE: None

Comment:

Performance Step: 12 **VERIFY** Bus 12A NORMAL FEED FROM 7T, 52/12AY, is **NOT** OPEN

_____

Procedure Step: **ATT-1, Step 1.0**

Standard: Checks 52/12AY breaker is still closed (red light ON, green light OFF)

Evaluator CUE: None

Comment:

Performance Step: 13 **VERIFY** CLOSED BUS 12A ALT FEED FROM 767, 52/12BY

_____

Procedure Step: **2.0**

Standard: Verifies that ALT FEED from 767, 52/12BY, is CLOSED (in Step 6.3.1.4

Evaluator CUE: None

Comment:

Performance Step: 14 **VERIFY** BUS 12A VOLTMETER4160V indicates approximately 4000 VOLTS

_____

Procedure Step: **3.0**

Standard: Verifies BUS 12A VOLTMETER reads ~4000 VOLTS

Evaluator CUE: None

Comment:

Performance Step: 15 **VERIFY CLOSED** CIRCUIT BREAKER 7T1352 34 KV BUS

_____

Procedure Step: **4.0**

Standard: Verifies 7T1352 34 KV BUS supply breaker is CLOSED

Evaluator CUE: None

Comment:

Performance Step: 16 NOTE:
- Next step SHOULD automatically trip BUS 12A ALT FEED FROM 767, 52/12BY
- Performance of next step will cause MCB alarm J-6, 4KV MAIN or TIE BREAKER TRIP, to illuminate

_____

Procedure Step: **NOTE prior to Step 5.0**

Standard: Reads NOTE

Evaluator CUE: None

Comment:

√ **Performance Step: 17** **TURN OFF** BUS 12A ALT FEED FROM 767, 52/12BY, SYNCHROSCOPE **AND REMOVE** handle

_____

Procedure Step: **5.0**

Standard:
- [√] TURNS OFF BUS 12A ALT FEED FROM 767, 52/12BY, SYNCHROSCOPE
- Removes handle

Evaluator CUE: None

Comment:

Performance Step: 18 **VERIFY** BUS 12A ALT FEED FROM 767, 52/12BY, OPENS (Green light ILLUMINATED, White light ILLUMINATED)

_____

Procedure Step: **6.0**

Standard: Checks MCB indications for 52/12BY: green light LIT, white light LIT

Evaluator CUE: None

Comment:

Performance Step: 19 PLACE BUS 12A ALT FEED FROM 767, 52/12BY, control switch to TRIP and THEN to AUTO

_____

Procedure Step: **7.0**

Standard:

- Places the switch for breaker BUS 12A ALT FEED FROM 767, 52/12BY, to the TRIP position and then to AUTO

Evaluator CUE: None

Comment:

Performance Step: 20 **VERIFY** BUS 12A ALT FEED FROM 767, 52/12BY, is OPEN and RESET(Green light ILLUMINATED, White light EXTINGUISHED)

_____

Procedure Step: **8.0**

Standard: Verifies that green light is ON, white light is OFF

Evaluator CUE: None

Comment:

Performance Step: 21 **PLACE** BUS 12A NORMAL FEED FROM 7T, 52/12AY, control switch to CLOSE **AND THEN** to AUTO

_____

Procedure Step: **9.0**

Standard:

- Places the switch for breaker BUS 12A NORMAL FEED FROM 7T, 52/12AY, to the CLOSE position and then to AUTO
- Verifies that RED light is ON, white light is OFF

Evaluator CUE: None

Comment:

Performance Step: 22 **VERIFY** BUS 12A NORMAL FEED FROM 7T, 52/12AY, is CLOSED and RESET(Red light ILLUMINATED, White light EXTINGUISHED)

_____

Procedure Step: **10.0**

Standard: Verifies that red light is ON, white light is OFF

Evaluator CUE: None

Comment:

Terminating Cue: **"No further action is required."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

JR062.027, Rev. 0

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Establish 100/0 Lineup on Circuit 767 (Power 12A and 12B Buses from Ckt 767)**

TASK: 062-021-01-01, Lineup the Electrical Distribution System

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
4	6.3.1.3	Required switch action(s) to perform correctly
6	6.3.1.4	Required switch action(s) to perform correctly
10	6.3.1.7	Critical to the recognition of the failure and correct transition to Attachment 1
17	ATT-1, step 5.0	Required switch action(s) to perform correctly

JPM CUE SHEET

INITIAL CONDITIONS:

- The plant is operating at 100% power
- The Electric Plant is currently in a 50/50 NORMAL lineup
- RG&E ECC has requested that the plant be placed in a 100/0 lineup on Circuit 767 for scheduled maintenance on offsite Circuit 7T later today
- An A-52.12 for removal of Circuit 7T is being prepared

INITIATING CUE:

- The CRS directs you to establish a 100/0 Electric Plant alignment per O-6.9.2 ESTABLISHING AND/OR TRANSFERRING OFFSITE POWER TO BUS 12A / BUS 12B, Section 6.3
- The SM and RG&E ECC have approved performance of this bus re-alignment

JPM VERIFICATION OF COMPLETION

Facility:	Ginna	Task No.:	061-003-01-01
Task Title:	Place Standby AFW System In Service per FR-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK	JPM No.:	JR061.001
K/A Reference:	E05 EA1.1 (4.1 / 4.0) Ability to operate and/or monitor the following as they apply to the Loss of Secondary Heat Sink: Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	Alternate Path: YES ____ NO X Time Critical: YES ____ NO X Category: RO/SRO	

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant was at power when both Main Feedwater Pumps tripped
- Bus 16 has an overcurrent fault
- The A Motor Driven Auxiliary Feedwater Pump is removed for maintenance
- The Turbine Driven Auxiliary Feedwater Pump has steam supplied from both the A and B Steam Generators, but is not supplying feedwater. Mechanical Maintenance is investigating the problem
- After transitioning from E-0, REACTOR TRIP or SAFETY INJECTION to ES-0.1, REACTOR TRIP RESPONSE, the STA determined that a RED path condition existed on the HEAT SINK CSFST
- The crew is responding per FR-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK, and has completed the procedure up to step 5

Task Standard: The 'C' SAFW Pump started with a flowpath to the 'A' S/G established.

Required Materials: None

General References:
- ATT-5.1, SAFW, Rev 01002
- ATT-22.0, RESTORING FEED FLOW, Rev 00600
- FR-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK, Revision 04002

Handouts:
- FR-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK (marked up to Step 5)
- ATT-5.1, SAFW
- ATT-22.0, RESTORING FEED FLOW

Initiating Cue:
- The CRS has directed you to complete steps 5 and 6 of FR-H.1 to feed the 'A' S/G utilizing the 'C' SAFW pump.

Time Critical Task: No

Validation Time: 10 Minutes (04/05/13)

SIMULATOR SETUP

Malfunctions:

- Reset to **IC-19**, then go to RUN
- Ensure 'A', 'C', and 'D' SW pumps running
- Take 'A' MDAFW pump out of service: place 'A' MDAFW pump in Pullstop and close MOV-4007. Place CAUTION tags on switches for both components.
- To fail TDAFW pump, insert **MALF FDW12, 0 RPM**
- To trip Bus 16, set **EDS04B** true on **Trigger 1**.
- To trip both MFPs, set **FDW02A** and **FDW02B** true on **Trigger 1**. **Insert Trigger 1.** (This will trip the reactor and initiate the procedural response)
- Ensure BOTH Tavg values are < 550°F prior to FREEZE
- AFTER Step 4 of FR-H.1 has been completed (Stop both RCPs), **FREEZE** the simulator and take shapshot.

Procedures:

- Placekeep the Control Room laminated copy of E-0 through Step 4
- Note that ES-0.1 will not be place-kept because CSFSTs were monitored when E-0 was exited, and FR-H.1 has been entered
- Placekeep the Control Room copy of FR-H.1 through step 4.

(Denote Critical Steps with a √)

Start Time: _____.

Performance Step: 1 Obtain copy of FR-H.1, RESPONSE to LOSS of SECONDARY HEAT SINK

_____

Procedure Step: N/A

Standard: Obtains/ reviews first four (4) steps of marked-up FR-H.1

Evaluator CUE: None

Evaluator NOTE: **Provide student with a marked-up copy of FR-H.1**

Comments:

Performance Step: 2 Reset SI If Actuated

_____

Procedure Step: **FR-H.1, Step 5**

Standard:
- Recognizes that SI has NOT occurred
- Goes to Step 6

Evaluator CUE: None

Evaluator NOTE: **During a Safety Injection, MOV thermal overload relays are bypassed. The thermal overloads are put back in service by resetting Safety Injection. Therefore, if K-6 is extinguished, SI is RESET. In this event, no SI has occurred.**

Comment:

Performance Step: 3 Try to establish SAFW flow to at least one intact S/G:

a. Perform the following:

1) Align SAFW system for operation (Refer to ATT-5.1, ATTACHMENT SAFW)

_____

Procedure Step: **FR-H.1, Step 6a**

Standard: Refers to Attachment 5.1.

Evaluator CUE: **Provide a copy of ATT-5.1**

Evaluator NOTE: **SAFW controls and indications are on the back of the MCB Panel.**

Comment:

Performance Step: 4 _____	CAUTION: If selected S/G Wide Range Level less than 50 Inches (100 Inches Adverse CNMT), THEN refer to Attachment 22.0, Restoring Feed Flow, prior to starting SAFW Pump
Procedure Step:	**ATT-5.1, CAUTION prior to Step A)**
Standard:	Reads CAUTION prior to Step A)
Evaluator CUE:	None
Evaluator NOTE:	• **'A' and 'B' wide range levels will be ~180" in this JPM setup** • **Examiner should be standing by with a copy of ATT-22.0**
Comment:	

Performance Step: 5 _____	If SW is not available to SBAFW, THEN go to ER-AFW.1 ALTERNATE WTER SUPPLY TO THE AFW PUMPS, to operate SAFW on city water supply.
Procedure Step:	**ATT-5.1, Step A)**
Standard:	• Verifies SW is available by verifying PI-2060 and 2061 indicate approximately 70 psig OR by the number of running SW pumps and absence of SW isolation. • Does NOT go to ER-AFW.1
Evaluator CUE:	None
Evaluator NOTE:	**SW header pressure meters are on the front of the center vertical section of MCB, right side**
Comment:	

Performance Step: 6	Align SAFW Pump C to selected S/G as follows:
_____	1) Ensure SI Reset
Procedure Step:	**ATT-5.1, Step B) 1)**
Standard:	Observes K-6, THERMAL OVERLOAD RELAY BYPASSED extinguished, **OR** vocalizes that SI has not occurred
Evaluator CUE:	None
Evaluator NOTE:	**SI was extinguished previously in Step 5 of FR-H.1, AND SI has not occurred in this initial condition.**
Comment:	

Performance Step: 7	Ensure the following valves open: • MOV-9701A, SAFW PUMP C DISCHARGE VLV • MOV-4616, AUX BLDG SW ISOL VLV • MOV-9704A, SAFW PUMP C ISOL VLV
_____	
Procedure Step:	**ATT-5.1, Step B) 2)**
Standard:	Verifies Red light is lit for the following valves: • MOV-9701A, SAFW PUMP C DISCHARGE VLV (Back of MCB) • MOV-4616, AUX BLDG SW ISOL VLV (Front of MCB) • MOV-9704A, SAFW PUMP C ISOL VLV (Back of MCB)
Evaluator CUE:	None
Comment:	

√

Performance Step: 8 Open MOV-9629A, SAFW PUMP C SUCTION VLV

_____

Procedure Step: **ATT-5.1, B) 3)**

Standard:
- (√) Rotates the handswitch to the OPEN position (RED light illuminated) on MOV-9629A, SAFW PUMP 'C' SUCTION VLV
- Observes the Red light LIT for MOV-9629A, SAFW PUMP 'C 'SUCTION VLV

Evaluator CUE: None

Comment:

Performance Step: 9 Verify at least 1 SW pump running

_____

Procedure Step: **ATT-5.1, B) 4)**

Standard:
- Returns to front of MCB and observes the Red light lit for the A, C and D Service Water pumps
- Observes approximately 55 psig on PI-2160 and 2161, SW Header Pressure.

Evaluator CUE: None

Comment:

Performance Step: 10 NOTE: Perform Step 5a to feed 'A' S/G OR Step 5b to feed 'B' S/G

Procedure Step: **ATT-5.1, NOTE prior to Step B) 5a)**

Standard:
- Recalls from Initiating CUE that the direction provided was to feed the 'A' S/G
- Goes to Step 5a for further guidance

Evaluator CUE: None

Evaluator NOTE: **Background document for FR-H.1 has the crew select and feed ONE S/G at a TIME. Initiating Cue was to feed 'A' S/G.**

Comment:

Performance Step: 11 To feed S/G 'A', go to Step 6.

Procedure Step: **ATT-5.1, B) 5a)**

Standard: Goes to Step 6

EXAMINER CUE: None

Comment:

Performance Step: 12 Restore SAFW flow as directed by procedure in effect.

Procedure Step: **ATT-5.1, Step B) 6)**

Standard: Transitions back to FR-H.1, Step 6.a.2)

Evaluator CUE: None

Comment:

Performance Step: 13 Determine SAFW flow requirements per ATT-22.0, ATTACHMENT RESTORING FEED FLOW

Procedure Step: **FR-H.1, Step 6.a.2)**

Standard: Refers to ATT-22.0

Evaluator CUE: **Provide candidate with ATT-22.0**

Comment:

Performance Step: 14

_____

CAUTION
Feed flow rates should be controlled to prevent excessive RCS cooldown and associated RCS pressure and inventory reduction.

NOTE:
- This attachment provides the desired feed flow rate when restoring feed flow to a S/G during FR-H.1
- If feedwater is restored via main feedwater or condensate the following may be used to indicate flow to the S/G:
- S/G feedwater flow meters (MCB)
- S/G feedwater flow recorders (MCB)
- S/G feedwater flow (PPCS Point ID F0466, F0467, F0476, F0477)
- S/G feedwater RTD temperature lowers (PPCS Point ID T2096, T2097)

Procedural Step: **ATT-22.0, NOTE and CAUTION prior to Step 1**

Standard: Reads CAUTION and NOTES prior to Step 1

Evaluator CUE: None

Comment:

√ **Performance Step: 15** Check affected S/G Loop RCS Temperature:

a. Tavg in the affected loop less than 550°F
b. Fill affected S/G as necessary to restore level
c. Go to Step 3

Procedure Step: **ATT-22.0, Step 1**

Standard:

- Checks MCB meters (TI-401 & TI-402 for Loop 'A') or PPCS for RCS average temperature, determines Tavg < 550°F
- (√) Determines that there are no flow restrictions on restoring AFW flow
- Does NOT start the SAFW pump in this attachment
- Returns to FR-H.1, Step 6.a.3) after making flow determination

Evaluator CUE: None

Evaluator NOTE:

- **FR-H.1, Step 6.a.2) had candidate determine the flow requirements in ATT-22.0 prior to starting the SAFW pump. After making the determination of flow restrictions, the candidate returns to FR-H.1, Step 6.a.3) to start the SAFW pump.**
- **Even IF Tavg was > 550°F, feed and bleed is NOT required due to WR levels > 120", and Step 2 RNO will direct filling as desired to restore S/G levels (i.e., still no flow restrictions).**

Comment:

(√) **Performance Step: 16** Start selected SAFW pump(s)

_____

Procedure Step: **FR-H.1, Step 6.a.3)**

Standard:
- (√) Rotates the handle for the C SAFW Pump to the START position (RED light illuminated)
- Verifies SAFW flow on FI04084B automatically throttles to between 215 – 280 GPM

Evaluator CUE: None

Evaluator NOTE: **Candidate was directed to start the 'C' SAFW pump in Initiating Cue**

Comment:

Terminating Cue: **After SAFW flow is verified: "Evaluation on this JPM is complete."**

Stop Time: _____.

JPM VERIFICATION OF COMPLETION

2012 SROI RETAKE JPM-B

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Place Standby AFW System in Service per FR-H.1**

TASK: 061-003-01-01, Perform Lineups of the Auxiliary Feedwater System (MCB)

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
8	ATT-5.1, step B)3)	Required switch action(s) to perform correctly
15	ATT-22, step 1	Required action for proper procedural sequence
16	FR-H.1, step 6.a.3)	Required switch action(s) to perform correctly

INITIAL CONDITIONS:

- The plant was at power when both Main Feedwater Pumps tripped
- Bus 16 has an overcurrent fault
- The A Motor Driven Auxiliary Feedwater Pump is removed for maintenance
- The Turbine Driven Auxiliary Feedwater Pump has steam supplied from both the A and B Steam Generators, but is not supplying feedwater. Mechanical Maintenance is investigating the problem
- After transitioning from E-0, REACTOR TRIP or SAFETY INJECTION to ES-0.1, REACTOR TRIP RESPONSE, the STA determined that a RED path condition existed on the HEAT SINK CSFST
- The crew is responding per FR-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK, and has completed the procedure up to step 5

INITIATING CUE:

- The CRS has directed you to complete steps 5 and 6 of FR-H.1 to feed the 'A' S/G utilizing the 'C' SAFW pump

Facility:	Ginna	Task No.:	004-004-02-04
Task Title:	Place Letdown in Service	JPM No.:	JR004.012
K/A Reference:	004 A4.05 (3.6 / 3.1) Ability to manually operate and/or monitor in the control room: Letdown pressure and temperature control valves	Alternate Path	Yes X No __
		Time Critical	Yes ___ No X
		Category:	RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant is at power with the normal letdown system secured
- Excess letdown is in service with one Charging Pump in operation
- The letdown line has been isolated for 40 minutes and was not drained
- A flush is NOT required
- The setpoint of TCV-130 has been verified by FCMS points SP-3771 and SP-3758 to be 100°F

Task Standard: Letdown PCV-135 is in MANUAL and maintaining ~250 psig, or letdown is isolated due to a failure of PCV-135 to respond in AUTO.

Required Materials: None

General References: S-3.2E, PLACING IN OR REMOVING FROM SERVICE NORMAL LETDOWN/EXCESS LETDOWN, Revision 02603

Handouts: S-3.2E, PLACING IN OR REMOVING FROM SERVICE NORMAL LETDOWN/EXCESS LETDOWN, Revision 02603 (Marked up copy)

Initiating Cue:
- The Shift Manager directs you to return Normal Letdown to service per Section 6.3 of S-3.2E, PLACING IN OR REMOVING FROM SERVICE NORMAL LETDOWN/EXCESS LETDOWN, using the 40 GPM orifice
- After Normal Letdown is in service, remove Excess Letdown from service
- If an auto makeup occurs, the other board operator will monitor the auto makeup using S-3.1

Validation Time: 18 minutes (4/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

- Lifting of the letdown line relief valve, RV-203
- Possible damage to letdown line

SAFETY CONSIDERATIONS:

Rotating equipment

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step.
- Make available a copy of S-3.2E to the Operator at the appropriate cue, signed off/initial per setup notes.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- Select **IC-19,** 100% MOL, or ANY at-power IC
- Remove Normal Letdown from service per Section 6.2 of S-3.2E
- Place Excess Letdown in service per Section 6.1 of S-3.2E
- Shift to single running charging pump ('A") in AUTO in step 6.1.13
- Ensure VCT level is at ~35%
- Insert **MALF CVC07A, 0% open, Trigger 1**. (Letdown pressure control valve PCV-135 failure with MANUAL control available)

PROCEDURAL MARKUPS:

- Markup the procedure Sections 6.1, 6.2, and 6.5

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 Performs page check of S-3.2E procedure provided

_____

Procedure Step: N/A

Standard: Reviews the procedure

Evaluator CUE: **Provide Operator with a clean copy of S-3.2E**

Comment:

Performance Step: 2 Review Table of Contents of procedure to ensure correct section to be performed.

_____

Procedure Step: **Table of Contents**

Standard: Identifies section 6.3, Placing Normal Letdown In Service, is required per the Initiating Cue.

Evaluator CUE: None

Comment:

Performance Step: 3 Review PRECAUTIONS AND LIMITATIONS section of procedure.

_____

Procedure Step: **4.0**

Standard: N/A

Evaluator CUE: None

Comment:

Performance Step: 4 Reviews PREREQUISITES section of procedure.

_____

Procedure Step: **Section 5.0, PREREQUISITES**

Standard: Ensures PREREQUISITES section of procedure is completed

Evaluator CUE: None

Evaluator NOTE: **Initial Conditions have provided information that the setpoint of TCV-130 has been verified to be 100°F**

Comment:

Performance Step: 5 Placing Normal Letdown In Service

_____

Procedure Step: **NOTE and CAUTIONS prior to Step 6.3.1**

Standard: N/A

Evaluator's Cue: None

Evaluator NOTE: **From the Initial Conditions, flush is not required based on isolation time. Letdown line has been isolated for 40 minutes and has not been drained. Section 6.5 of procedure should be "N/A."**

Comment:

Performance Step: 6 Determine if a flush is required:

_____

- If the letdown line has been isolated for less than one hour perform section 6.4 and N/A section 6.5, with the permission of the Shift Manager or Control Room Supervisor.
- If the letdown line has been isolated for greater than one hour perform section 6.5 and N/A section 6.4, with the permission of the Shift Manager or Control Room Supervisor.

Procedure Step: **6.3.1**

Standard:

- Determines flush NOT required based on isolation time and Initial Conditions provided
- Recognizes that Section 6.5 should be "N/A"
- Proceeds to section 6.4, RESTORE LETDOWN WITHOUT A FLUSH

Evaluator CUE: None

Comment:

Performance Step: 7 **ENSURE** letdown is secured **PER** Section 6.2 prior to restoring.

_____

Procedure Step: **6.4.1.1**

Standard: Proceeds to section 6.2, Removing Normal Letdown From Service

Evaluator CUE: None

Comment:

Performance Step: 8 **PLACE** Charging Pumps in MANUAL.

_____

Procedure Step: **6.2.1**

Standard: Place 'A' Charging Pump Speed Controller in MANUAL.

Evaluator CUE: None

Comment:

Performance Step: 9 **ENSURE CLOSED** Letdown Orifice isolation valves.

_____

- ☐ AOV-200A
- ☐ AOV-200B
- ☐ AOV-202

Procedure Step: **6.2.2**

Standard: Verifies associated MCB valve control switches in CLOSE, green lights ON, red lights OFF.

Evaluator CUE: None

Comment:

Performance Step: 10 **CLOSE** LTDN ISOLATION VLV RHR to NRHX, AOV-427.

Procedure Step: **6.2.3**

Standard: Verifies MCB valve control switch for AOV-427 in CLOSE (green light ON, red light OFF).

Evaluator CUE: None

Evaluator NOTE: **Taking Normal Letdown OOS previously has closed AOV-427**

Comment:

Performance Step: 11 NOTE prior to Step 6.2.4

Procedure Step: NOTE prior to Step 6.2.4

Standard: Observes NOTE

Evaluator CUE: None

Comment:

Performance Step: 12 **REDUCE** charging flow while throttling closed charging flow to Regenerative Heat Exchanger HCV-142 to maintain greater than 20" RCP labyrinth seal ΔP.

Procedure Step: **6.2.4**

Standard: Observes labyrinth seal ΔP and MCB HCV-142 controller at 100% demand.

Evaluator CUE: None

Evaluator NOTE: **Candidate may adjust charging speed to maintain labyrinth seal ΔP greater than 20 inches.**

Comment:

Performance Step: 13 **CLOSE** LETDOWN ISOL VLV RHR TO NRHX AOV-371.

Procedure Step: **6.2.5**

Standard: Observes MCB valve control switch in CLOSE, green light ON, and red light OFF.

Evaluator CUE: None

Comment:

Performance Step: 14 Read Caution prior to Step 6.2.6.

Procedure Step: CAUTION prior to Step 6.2.6

Standard: Observes CAUTION

Evaluator CUE: None

Comment:

Performance Step: 15 _____	**PLACE** NRHX LTDN OUTLET TEMP (TI-130) TCV-130 in MANUAL/ CLOSED.
Procedure Step:	**6.2.6**
Standard:	• Observes MCB TCV-130 controller selected to MANUAL with a closed demand signal; • Returns to section **6.4.1.2**
Evaluator CUE:	None
Comment:	

Performance Step: 16 _____	**IF** charging flowpath to Loop B COLD Leg is desired (preferred method), **THEN PERFORM** the following: a. **ENSURE CLOSED** CHARGING VLV RHX TO LOOP B HOT, AOV-392A. b. **OPEN** CHARGING VLV RHX TO LOOP B COLD LEG AOV-294.
Procedure Step:	**6.4.1.2**
Standard:	Determines charging flowpath should be to (normal) Loop B COLD Leg.
Evaluator CUE:	**If requested, feedback charging flowpath to Loop B COLD leg is desired.**
Comment:	

Performance Step: 17 a. **ENSURE CLOSED** CHARGING VLV RHX TO LOOP B HOT, AOV-392A.

_____

Procedure Step: **6.4.1.2 a**

Standard: Observes MCB valve control switch in CLOSE, green light ON, red light OFF.

Evaluator CUE: None

Comment:

Performance Step: 18 **OPEN** CHARGING VLV RHX TO LOOP B COLD LEG AOV-294

_____

Procedure Step: **6.4.1.2 b**

Standard: Verifies that AOV-294 is already open: red light ON, green light OFF

Evaluator CUE: None

Comment:

Performance Step: 19 **START** a second Charging Pump at minimum speed.

_____

Procedure Step: **6.4.2**

Standard:
- Ensure associated pump controller demand to minimum;
- Rotates pump control switch to START;
- Verifies red light ON, green light OFF, red flag visible, and charging flow rising on MCB FI128C.

Evaluator CUE: **If requested, feedback "AO reports pump is ready to start and all personnel are clear of the pump."**

Comment:

Performance Step: 20 Read CAUTION prior to step 6.4.3

_____

Procedure Step: **CAUTION prior to Step 6.4.3**

Standard: Determines CAUTION is not applicable since AOV-392A flowpath is not aligned.

Evaluator CUE: None

Comment:

√ **Performance Step: 21** **SLOWLY OPEN** charging flow to Regenerative Heat Exchanger HCV-142 to reduce labyrinth seal ΔP to - 40".

_____

Procedure Step: **6.4.3**

Standard: [√] Slowly raises HCV-142 controller demand to open valve and reduce MCB labyrinth seal delta P to ~40 inches (PI131/124).

Evaluator CUE: None

Comment:

Performance Step: 22 **ADJUST** Charging Pump speed while maintaining - 40" labyrinth seal ΔP UNTIL HCV-142 is fully OPEN.

_____

Procedure Step: **6.4.4**

Standard:

- Alternately adjusts charging pump speed and opens HCV-142 until HCV-142 is full open with ~40 inches labyrinth seal delta P (PI131/124).

Evaluator CUE: None

Comment:

√ **Performance Step: 23** **ESTABLISH** greater than or equal to 22 gpm charging line flow.

_____

Procedure Step: **6.4.5**

Standard: [√] Monitors MCB charging flow indication (FI128B) and adjusts charging pump speed to greater than or equal to 22 gpm charging line flow.

Evaluator CUE: None

Comment:

√ **Performance Step: 24** **IF** placing 40 GPM orifice in service
THEN PERFORM the following:

1. **PLACE** LOW PRESS LTDN PRESS PCV-135 in MANUAL at - 40% open.

_____

Procedure Step: **6.4.6.1**

Standard:
- [√] Places PCV-135 controller in MANUAL and
- [√] Opens valve to ~40% as determined by controller output indication.

Evaluator CUE: **Insert MALF CVC07A, 0% Open on Trigger 1**

Evaluator NOTE:

Comment:

√ **Performance Step: 25**

IF placing 40 GPM orifice in service
THEN PERFORM the following:

2. **PLACE** NRHX LTDN OUTLET TEMP (TI-130) TCV-130 in MANUAL at -40% open.

Procedure Step: **6.4.6.2**

Standard:
- [√] Places TCV-130 controller in MANUAL
- [√] Opens valve ~40% as determined by controller output indication.

Evaluator CUE: None

Comment:

√ **Performance Step: 26**

OPEN LETDOWN ISOL VLV RHR TO NRHX AOV-371.

Procedure Step: **6.4.8**

Standard:
- [√] Rotates AOV-371 MCB control switch to OPEN
- Verifies red light ON, green light OFF

Evaluator CUE: None

Comment:

√ **Performance Step: 27** **PLACE** LTDN LOOP B COLD LEG TO RHX AOV-427 to OPEN and THEN to AUTO.

_____

Procedure Step: **6.4.9**

Standard:
- [√] Rotates AOV-427 MCB control switch to OPEN
- Verifies red light on, green light off.
- [√] Rotates switch to AUTO

Evaluator CUE: None

Comment:

Performance Step: 28 Step 6.4.11 **SHOULD** be performed promptly after Step 6.4.10 to prevent overpressurization of letdown line

_____

Procedure Step: **NOTE prior to 6.4.10**

Standard: Observes note prior to 6.4.10

Evaluator CUE: None

Comment:

√ **Performance Step: 29**

OPEN desired Letdown orifice valve AOV-200A, AOV-200B, or AOV-202 **AND**
MARK AOV's not opened N/A.

- AOV-200A
- AOV-200B
- AOV-202

Procedure Step: **6.4.10**

Standard:

- [√] Rotates AOV-200A or B control switch to OPEN
- Verifies red light ON, green light OFF

Evaluator CUE: **If requested, direct AOV-200A be placed in service.**

Evaluator NOTE: **Candidate should proceed to next step without delay.**

Comment:

Performance Step: 30

ADJUST LOW PRESS LTDN PRESS PCV-135 to achieve Letdown pressure of -250 psig on PI-135.

Procedure Step: **6.4.11**

Standard: Adjusts PCV-135 controller to ~250 (+/- 20) psig (PI135) without alarming annunciators A-3, A-4, A-11, A-12 or A-19

Evaluator CUE: None

Comment:

NRC EXAMINER: ALTERNATE PATH BEGINS WITH THE NEXT STEP

√ **Performance Step: 31** **PLACE** LOW PRESS LTDN PRESS, PCV-135 IN AUTO.

_____

Procedure Step: **6.4.12**

Standard:
- Places PCV-135 controller in AUTO;
- [√] Determines PCV-135 failure using MCB letdown line pressure indication, PI-135, and/or AR-11 or AR-A-3 alarm annunciation.

Evaluator's Cue:
- **If requested, direct Operator to place PCV-135 in MANUAL and control pressure to ~250 (+/- 20) psig.**
- **Note that Operator may use guidance contained with AR-A-11 and/or AR-A-3 to respond to failure.**

Comment:

√ **Performance Step: 32** Place PCV-135 in MANUAL; control pressure at ~250 (+/- 20) psig. or isolates letdown

_____

Procedure Step: **Previous Step 6.4.11**

Standard:
- [√] Places PCV-135 in MANUAL;
- Controls pressure at ~250 (+/- 20) psig, OR
- [√] Isolates letdown by closing AOV-427, LETDOWN ISOLATION VLV RHR to NRHX

Evaluator CUE: None

Evaluator NOTE: **Either action above is an acceptable response**

Comment:

Terminating Cue: **"No further action required."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

JR004.012, Rev. 0

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Place Letdown in Service**

TASK: 004-004-02-04, Place Letdown in Service

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
21	S-3.2E, 6.4.3	Required switch action(s) to perform correctly
23	S-3.2E, 6.4.5	Required switch action(s) to perform correctly
24	S-3.2E, 6.4.6.1	Required switch action(s) to perform correctly
25	S-3.2E, 6.4.6.2	Required switch action(s) to perform correctly
26	S-3.2E, 6.4.8	Required switch action(s) to perform correctly
27	S-3.2E, 6.4.9	Required switch action(s) to perform correctly
29	S-3.2E, 6.4.10	Required switch action(s) to perform correctly
31	S-3.2E, 6.4.12	Required action necessary to take corrective actions
32	S-3.2E, 6.4.11	Required action to mitigate failure response

INITIAL CONDITIONS:

- The plant is at power with the normal letdown system secured
- Excess letdown is in service with one Charging Pump in operation
- The letdown line has been isolated for 40 minutes and was not drained
- A flush is NOT required
- The setpoint of TCV-130 has been verified by FCMS points SP-3771 and SP-3758 to be 100°F

INITIATING CUE:

- The Shift Manager directs you to return Normal Letdown to service per Section 6.3 of S-3.2E, PLACING IN OR REMOVING FROM SERVICE NORMAL LETDOWN/EXCESS LETDOWN, using the 40 GPM orifice
- After Normal Letdown is in service, remove Excess Letdown from service
- If an auto makeup occurs, the other board operator will monitor the auto makeup using S-3.1

JPM VERIFICATION OF COMPLETION

Facility:	Ginna	Task No.:	012-003-05-01
Task Title:	Perform Immediate Actions of E-0 with SI	JPM No.:	2012 Retake N-D
K/A Reference:	EPE007 EA2.02 (4.3 / 4.6) Ability to determine or interpret the following as they apply to a reactor trip: Proper actions to be taken if the automatic safety functions have not taken place.	Alternate Path Time Critical Category:	Yes X No Yes No X RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:
- The plant is stable at 100 percent power.
- No equipment is out of service.

Task Standard: Successfully complete all Immediate Actions in E-0 from memory AND perform required actions for failed component in Att.-27.0.

Required Materials: None

General References:
- E-0, REACTOR TRIP OR SAFETY INJECTION, Rev 04500
- Att-27.0, AUTOMATIC ACTION VERIFICATION, Rev 00200

Handouts: Att.-27.0 (when directed by E-0, Step 6)

Initiating Cue:
- You are the HCO assigned the monitoring function.

Validation Time: 6 min (4/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:
Timelines and assumptions made in UFSAR are invalidated.

SAFETY CONSIDERATIONS:
None

INSTRUCTOR NOTES:
- Indicate reason for unsatisfactory performance in the comment section below each step.
- ***Per ES-603, Section C.1.d, JPMs that test the immediate action steps are acceptable. However, JPMs should not solely test IA steps, and should include testing additional steps or items that are not from memory.***

DIRECTIONS TO PERFORMER:
1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- **IC-19** 100% MOL
- **GEN08**, **['A' D/G]**, Autostart failure
- **RPS11-B1, [Isol signal only],** CI failure AOV-5738
- **RPS11-B2, [Isol signal only],** CI failure AOV-5737
- **RPS11-E3, [Isol signal only],** CI failure AOV-5735
- **RPS11-E4, [Isol signal only],** CI failure AOV-5736

After the individual has taken the watch:

- **SIS01, [Train A],** Inadvertent SI train "A" only, **Trigger 1**
- **EDS01A**, Loss of circuit 7T, **Trigger 1**
- **RCS05B**, RCP 1B trip, **Trigger 1**

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 Verify Reactor Trip

_____

Procedure Step: **Step 1 (IA)**

Standard:
- Check at least one train of Reactor trip breakers open Trip A and/or Trip B indicating lights green
- Checks MRPI indicating all rods on the bottom
- Checks Neutron flux lowering (IR Current NI-35B, NI-36B) (IR SUR NI-35D, NI-36D)

Evaluator CUE: None

Comment:

Performance Step: 2 Verify Turbine Stop Valves - CLOSED.

_____

Procedure Step: **Step 2**

Standard:
- Checks both Turbine Stop Valves (SVL and SVR) indicate Closed (GREEN) on EH valve status panel

Evaluator CUE: None

Comment:

√ **Performance Step: 3** Verify both trains of AC Emergency Buses energized to at least 440 Volts.

Procedure Step: **Step 3**

Standard:
- [√] Checks Bus 14 and Bus 18 buses are deenergized
- Checks Bus 16 and Bus 17 voltmeters >440 Volts

Evaluator CUE: None

Comment:

√ **Performance Step: 4** Attempt to start the "A" Diesel Generator

Procedure Step: **Step 3 RNO**

Standard:
- [√] Depresses the "A" Diesel Generator start push button
- Verifies the "A" diesel starts and loads buses 14 and 18

Evaluator CUE: None

Evaluator NOTE: **The MALF inserted was Auto-start failure ONLY**

Comment:

Performance Step: 5 Verify both trains of AC Emergency Buses energized to at least 440 Volts.

_____

Procedure Step: **Step 3**

Standard:
- Checks Bus 14 and Bus 18 voltmeters >440 Volts
- Checks Bus 16 and Bus 17 voltmeters >440 Volts

Comment:

Performance Step: 6 Check if SI is actuated:

_____ a. Any SI Annunciator - LIT

Procedure Step: **Step 4.a**

Standard:
- Verifies no SI annunciator is lit by checking D-19, D- 21, D-22 and D-28 extinguished.

Evaluator CUE: None

Evaluator NOTE: **The referenced annunciators relate to plant parameter inputs to auto SI. The "Inadvertent SI on Train A" malfunction does not result in any of these alarms.**

Comment:

√ **Performance Step: 7** Manually actuate SI and CI

_____

Procedure Step: **Step 4.a RNO**

Standard: Checks various SI set point conditions

- [√] Operator recognizes that only "A" train of SI has started
- [√] Depresses the SI and CI manual push buttons to actuate both trains

Evaluator CUE: None

Comment:

Performance Step: 8 Check if SI is actuated:

b. SI sequencing – BOTH TRAINS STARTED

_____

Procedure Step: **Step 4.b**

Standard:

- Checks BOTH SI trains have actuated (multiple indications).
- Operator should announce that "Immediate Actions Are Complete"

Evaluator CUE: **IF the student stops after the IA are completed, inform him that "this JPM is not yet complete."**

Evaluator NOTE: **Previous experience with only IA JPMs may condition the students to stop after Step 4 is completed.**

Comment:

Performance Step: 9

_____

- Verification of Steps 1-4 using the procedure
- Verification that CNMT spray is not required (Step 5)
- Performance of Att.27, AUTOMATIC ACTION VERIFICATION (Step 6)

Procedure Step: **Steps 5 & 6**

Standard: None

Evaluator CUE:

- **"The CRS has verified the Immediate Action steps and completed Step 5."**
- **"You have been directed to perform Att.-27.0"**

Comment:

Performance Step: 10 Verify SI and RHR pumps running

_____

Procedure Step: **Att.-27.0, Step 1**

Standard:

- Checks that all SI pumps – RUNNING
- Checks both RHR pumps - RUNNING

Evaluator CUE: None

Comment:

Performance Step: 11 Verify CNMT RECIRC fans Running

_____

Procedure Step: **Att.-27.0, Step 2**

Standard:
- Checks all fans – RUNNING
- Charcoal filter dampers green lights – Extinguished

Evaluator CUE: None

Comment:

Performance Step: 12 Check if Main Steamlines Should Be Isolated:

_____

a. Any MSIV – OPEN
b. CNMT pressure – LESS THAN 18 PSIG
c. Check if any MSIV should be isolated:
   - Low Tavg (545°) AND high steam flow (0.5×10^6 lb/hr) from either S/G, or
   - High-high steam flow (4.4×10^6 lb/hr) from either S/G
d. Verify MSIV closed on affected S/G

Procedure Step: **Att.-27.0, Step 3**

Standard:
- Recognizes that MSIVs are closed ('A' closed on the loss of 'B' Instrument Bus and 'B" closed on HI-HI steam flow + SI when all of the steam demand shifted to 'B' S/G)
- Goes to Step 4

Evaluator CUE: None

Comment:

√ **Performance Step: 13** Verify MFW Isolation:
a. MFW pumps – TRIPPED
b. MFW Isolation valves – CLOSED
c. S/G blowdown and sample valves - CLOSED

Procedure Step: **Att.-27.0, Step 4**

Standard:
- Recognizes that both MFPs are tripped
- Recognizes Both MFW isolation valves are closed
- [√] Recognizes that "A" and 'B' S/G Sample valves are open. (CI STATUS LIGHTS DIM)
- [√] Takes S/G blow down and sample valve isolation switch to CLOSE (CI STATUS LIGHTS BRIGHT)

Evaluator CUE: None

Comment:

Terminating CUE: **No further actions are required.**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

JR012.012, Rev. 2

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Perform Immediate Actions of E-0 with SI**

TASK: 012-003-05-01, Perform Immediate Actions of E-0 with SI

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

DATE:

EVALUATOR'S SIGNATURE: _____ _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
3	E-0, step 3	Required to recognize condition to perform step correctly
4	E-0, step 3 RNO	Required switch action(s) to perform Immediate Action correctly
7	E-0, step 4	Required to recognize condition to perform step correctly
	E-0, step 4 RNO	Required switch action(s) to perform Immediate Action correctly
13	ATT-27.0, step 4c	Required to recognize condition to perform step correctly
	ATT-27.0, step 4c RNO	Required to complete containment isolation

JPM CUE SHEET

INITIAL CONDITIONS:
- The plant is stable at 100 percent power
- No equipment is out of service

INITIATING CUE:
- You are the HCO assigned the monitoring function

Facility:	Ginna	Task No.:	026-008-05-01
Task Title:	Secure Containment Spray	JPM No.:	2012 Retake N-E
K/A Reference:	026 A4.01 (4.5 / 4.3) CNMT Spray System: Ability to manually operate and/or monitor in the control room: CSS controls	Alternate Path: YES ____ NO _X_ Time Critical: YES ____ NO _X_ Category: RO/SRO	

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:
- Plant has experienced a large break LOCA
- The crew has completed E-0, REACTOR TRIP or SAFETY INJECTION, and is at Step 13 of E-1, LOSS OF REACTOR OR SECONDARY COOLANT.

Task Standard: Both CS Pumps secured with system controls and valves properly aligned.

Required Materials: A marked up copy of E-1 completed to Step 13 available in the simulator.

General References: E-1, LOSS OF REACTOR OR SECONDARY COOLANT, Revision 04100

Handouts: E-1, pages 1-14, marked up to and including Step 12

Initiating Cue:
- Perform Step 13 of E-1.
- Another board operator will respond to alarms NOT associated with the task.

Time Critical Task: No

Validation Time: 8 Minutes

SIMULATOR SETUP

- Reset to **IC-19** or any at-power Initial Condition
- Insert **MALF RCS03A** (Loop A hot leg DBA), **RCS03B** (Loop A cold leg DBA), **RCS03C** (Loop B hot leg DBA), *OR* **RCS03D** (Loop B cold leg DBA)
- Perform and placekeep the actions of **E-0**, transition to E-1, and **complete the actions of E-1 up to and including Step 12**
- Allow simulator to run **until CNMT pressure is < 4 psig and D-28, CNMT PRESSURE 4 PSI,** is extinguished

NOTE: Use of a large (e.g., 5000-6000 gpm) break may save time in bringing CNMT pressure down below 4 psig assumed in the initial cue.

(Denote Critical Steps with a √)

Start Time: _____.

Performance Step: 1 Reviews marked-up procedure and FOLDOUT page

_____

Procedure Step: **E-1 Steps 1-12**

Standard: N/A

Examiner CUE: None

Examiner NOTE: **Provide a copy of E-1, Step 13 (Pgs. 1-14), properly place-kept up to Step 13**

Comment:

Performance Step: 2 Monitor if CNMT Spray Should Be Stopped:
a. CNMT spray pumps – ANY RUNNING

_____

Procedure Step: **E-1, Step 13.a**

Standard:
- Observes red light LIT for each of two (2) CS pumps
- Observes CS flow on FI-930

Examiner CUE: None

Examiner NOTE: **Provide a copy of E-1, Step 13 (Pgs. 1-14), properly place-kept up to Step 13**

Comment:

√ **Performance Step: 2** Monitor if CNMT Spray Should Be Stopped:

a. CNMT Spray Pumps – ANY RUNNING

b. Determine number of CNMT spray pumps required from table:

CNMT PRESSURE	CNMT RECIRC FANS RUNNING	CNMT SPRAY PUMPS REQUIRED
GREATER THAN 60 PSIG	-	2
BETWEEN 4 PSIG AND 60 PSIG AND RISING	-	2
BETWEEN 4 PSIG AND 60 PSIG AND LOWERING	0 or 1	2
	2, 3, or 4	1
LESS THAN 4 PSIG	-	0

Procedure Step: **Step 13.b**

Standard:

- Identifies that CNMT pressure is less than 4 PSIG on PI-944, PI-945, PI-947, & PI-949 and lowering and observes D-28, CNMT PRESSURE 4 PSI, extinguished
- Determines four (4) CRFs are running by observing red lights LIT
- [√] Using the values for CNMT pressure and the number of CNMT Recirc Fans running, determines 0 CNMT Spray Pumps are required

Examiner CUE: None

Evaluator NOTE: **Any combination of CNMT pressure indicators is acceptable to determine the value/trend of CNMT pressure.**

Comment:

NRC EXAMINER: ALTERNATE PATH BEGINS WITH THE NEXT STEP

Performance Step: 3 Monitor if CNMT Spray Should Be Stopped:

_____

c. CNMT spray pumps running – EQUAL TO NUMBER REQUIRED

Procedure Step: **Step 13.c**

Standard:

- Observes 2 CS pumps running using the red light LIT for each pump.
- Recalls **no** CS pumps are required per Table in step 13.b.
- Proceeds to step 13.c. RNO

Evaluator CUE: None

Comment:

√ **Performance Step: 4** Stop CNMT spray pumps as necessary to meet table requirements:

_____

IF CNMT spray pump is to be stopped, THEN perform the following:

1) Place CNMT Spray Pump in PULL STOP

Procedure Step: **Step 13.c.1) RNO**

Standard: [√] Rotates handles counter-clockwise and then pulls out to the locked position on EACH of the following pumps:

- [√] CS Pump A
- [√] CS Pump B

Evaluator CUE: None

Comment:

√ **Performance Step: 5** IF CNMT pressure < 4 psig, THEN perform the following:

a. Place NaOH Tank outlet valve switches to OPEN
   - AOV-836A
   - AOV-836B

Procedure Step: **Step 13.c.2)a) RNO**

Standard: [√] Rotates EACH switch clockwise to the OPEN position:
- [√] AOV-836A
- [√] AOV-836B

Evaluator CUE: None

Evaluator NOTE: **Considered critical because it properly aligns the valves in the event that CS Pumps must be manually started should CNMT pressure start to rise.**

Comment:

√ **Performance Step: 6** Reset CNMT spray

Procedure Step: **Step 13.c.2)b) RNO**

Standard:
- [√] Depresses the CNMT Spray Reset green pushbutton on the vertical section of MCB
- Checks that A-27, CNMT SPRAY, has cleared

Evaluator CUE: None

Comment:

√ **Performance Step: 7**

_____

Close discharge valves for idle CNMT Spray Pump:

- CS Pump 'A'
  - MOV-860A
  - MOV-860B

  -OR-
- CS Pump 'B'
  - MOV-860C
  - MOV-860D

Performance Step: **E-1, Step 13.c.2)c) RNO**

Standard: [√] Closes (GREEN light LIT) each of the four (4) valves associated with the two (2) idle CNMT Spray Pumps by rotating switches for each valve counter-clockwise:

- [√] MOV-860A
- [√] MOV-860B
- [√] MOV-860C
- [√] MOV-860D

Evaluator CUE: None

Evaluator NOTE: **Considered critical because this action ensures containment isolation.**

Terminating Cue: **After closing the four discharge valves or when the operator proceeds to Step 14: Evaluation on this JPM is complete.**

Stop Time: _____

2012 SRO RETAKE EXAM JPM N-E (Simulator)

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Evaluate CNMT Spray Flow Requirements During E-1 Performance**

TASK: 026-008-05-01: Secure Containment Spray

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
2	E-1, step 13.b	Required assessment to implement procedural action correctly
4	E-1, step 13.c.1) RNO	Required component manipulation to perform correctly
5	E-1, step 13.c.2)a) RNO	Critical because this action properly aligns the valves in the event that CS Pumps must be manually started should CNMT pressure start to rise.
6	E-1, step 13.c.2)b) RNO	Required component manipulation to perform correctly
7	E-1, step 13.c.2)c) RNO	Performance of this step ensures CNMT isolation

INITIAL CONDITIONS:

- Plant has experienced a large break LOCA
- The crew has completed E-0, REACTOR TRIP or SAFETY INJECTION, and is at Step 13 of E-1, LOSS OF REACTOR OR SECONDARY COOLANT.

INITIATING CUE:

- Perform Step 13 of E-1.
- Another board operator will respond to alarms NOT associated with the task.

Facility:	Ginna	Task No.:	029-007-01-01
Task Title:	Startup the Containment Mini Purge	JPM No.:	JR029.001
K/A Reference:	029 A2.03 (2.7 / 3.1) CNMT Purge System: Ability to predict the impacts of the following malfunctions or operations on the CNMT purge system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Startup operations and the associated valve lineups	Alternate Path:	Yes X No _
		Time Critical:	Yes ___ No X
		Category:	RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The Unit is operating at 100% power.
- A routine Containment entry is scheduled for tomorrow.
- A Containment Mini-Purge Release has been initiated by Radiation Protection (RP)
- SM and RP approvals have been received
- All RMS channels are operating normally
- Nitrogen venting from the SI Accumulators is NOT in progress

Task Standard: Mini-purge is secured after R-14 indicates an Alarm condition.

Required Materials: None.

General References:
- S-23.2.3, CONTAINMENT MINI-PURGE SYSTEM OPERATION, Rev 12
- AR-E-16, RMS PROCESS MONITOR HIGH ACTIVITY, Rev 11
- AR-RMS-14, R14 VENT GAS, Rev 8

Handouts: S-23.2.3

Initiating Cue:
- The Shift Manager directs you to place the Containment Mini-Purge System in service in accordance with S-23.2.3, CONTAINMENT MINI-PURGE SYSTEM OPERATION

Validation Time: 13 minutes (04/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Possible release greater than approved release limits.

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step.
- Make available a copy of S-23.2.3 to the Operator at the appropriate cue.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues, the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- **IC-19,** but ANY at-power IC will work
- Verify Containment Mini-Purge System is secured in selected IC
- Set **Trigger 30** conditional on taking the CNMT Mini-Purge Supply Blower to START: set **x08i074b ==1**
- Set **MALF RMS02D, 1.3E05, 60 second ramp, 30 second delay** on **Trigger 30** (The HIGH alarm setpoint for R-14, per P-9, is **1.2E5** and the release rate limit is 3.0E5.)

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 _____	Reviews Initial Conditions and Initiating Cue, obtains a current revision of S-23.2.3.
Procedure Step:	N/A
Standard:	N/A
Evaluator CUE:	**Provide Operator a copy of S-23.2.3.**
Comment:	

Performance Step: 2 _____	Containment Radiation Monitoring R-11 or R-12 are operating.
Procedure Step:	**3.1**
Standard:	Confirms via RMS panel indications that both R-11 and R-12 are operating.
Evaluator CUE:	None
Evaluator NOTE:	**Candidate may take time to set up PPCS displays to trend RMS values and/or CNMT pressure.**
Comment:	

Performance Step: 3 _____	Either Auxiliary Building Iodine Radiation Monitor R-10B or R-14A is operable.
Procedure Step:	**3.2**
Standard:	Confirms via panel indications that R-10B or R-14A (PPCS) are operable.
Evaluator CUE:	None
Comment:	

Performance Step: 4 Auxiliary Building Radiation Monitor R-13 is operating or samples are continuously collected with auxiliary equipment.

_____

Procedure Step: **3.3**

Standard: Confirms via panel indications that R-13 is operating.

Evaluator CUE: None

Comment:

Performance Step: 5 If either R-11 or R-12 is inoperable, ensure requirements of LCO 3.6.3, Actions Note 1 are met, otherwise N/A.

_____

Procedure Step: **3.3.1**

Standard: Confirms via panel indications that both R-11 and R-12 are operable, and "N/As" this step.

Evaluator CUE: None

Comment:

Performance Step: 6 At least one containment recirculation fan is running.

_____

Procedure Step: **3.4**

Standard: Describes/points out the MCB indications for each of the four (4) CNMT RECIRC FAN switches that at least one containment recirculation fan is running (red light LIT).

Evaluator CUE: None

Comment:

Performance Step: 7	Plant ventilation system operating.
Procedure Step:	**3.5**
Standard:	Confirms that annunciator L-1, AUX BLDG VENT SYSTEM CONTROL PANEL, is NOT lit
Evaluator CUE:	When asked as AO, **"Aux Bldg ventilation systems are lined up normally and operating properly."**
Evaluator NOTE:	**There are no Aux Bldg plant ventilation component indications or controls available in the MCR, so candidate should:** • **Contact the primary AO for confirmation** • **Check L-1 not lit**
Comment:	

Performance Step: 8	Containment mini-purge release has been initiated by Radiation Protection and approved by the Shift Manager and either Radiochemist or Health Physicist.
Procedure Step:	**3.6, 3.7, 3.8**
Standard:	Confirms via Initial Conditions provided that: • The mini-purge release has been initiated by Radiation Protection • SM has approved • RP approval has been obtained
Evaluator CUE:	If queried, confirm **"mini-purge release initiated by Radiation Protection."**
Comment:	

Performance Step: 9 ____	Auxiliary Building Radiation Monitor R-14 is operating or grab samples are being taken at least once per 4 hours and these samples analyzed for isotopic activity within 24 hours or if RM-14A is operable a review of data from channel 5 "Low Range Noble Gas" is performed at least every 4 hours.
Procedure Step:	**3.9**
Standard:	Observes via panel indication that R-14 is operating
Evaluator CUE:	None
Comment:	

Performance Step: 10 ____	PRECAUTIONS
Procedure Step:	**4.1 through 4.7**
Standard:	• Reviews each Precaution • Verifies R-11 and R-12 below release limits prior to release
Evaluator CUE:	None
Evaluator NOTE:	**Precaution 4.5, "Secure the mini-purge system if either R-13, R-14, or R-14A goes into alarm (except during performance of PT-17.2 or PT-12.5)" is the one to be exercised during this JPM**
Comment:	

Performance Step: 11 ____	Verify Mini Purge Roof Vent Isolation Valve, V-7479, locked closed.
Procedure Step:	**5.1.1**
Standard:	Directs Secondary AO to verify V-7479 locked closed.
Evaluator CUE:	**When requested: "Secondary AO reports that V-7479 is locked closed."**
Comment:	

√ **Performance Step: 12** Open Mini Purge Exhaust Valve, AOV-7970. (Inside CNMT)

_____

Procedure Step: **5.1.2**

Standard:
- [√] Rotates AOV-7970 valve control switch to OPEN
- Verifies red light ON, green light OFF

Evaluator CUE: None

Evaluator NOTE: **The mini-purge components are located BEHIND the left hand section of the MCB**

Comment:

√ **Performance Step: 13** Open Mini Purge Exhaust Valve, AOV-7971. (Outside CNMT)

_____

Procedure Step: **5.1.3**

Standard:
- [√] Rotates AOV-7971 valve control switch to OPEN
- Verifies red light ON, green light OFF

Evaluator CUE: None

Comment:

√ **Performance Step: 14** Open Mini Purge Supply Valve, AOV-7478. (Inside CNMT)

_____

Procedure Step: **5.1.4**

Standard:
- [√] Rotates AOV-7478 valve control switch to OPEN
- Verifies red light ON, green light OFF

Evaluator CUE: None

Comment:

√ **Performance Step: 15** Open Mini Purge Supply Valve, AOV-7445. (Outside CNMT)

_____

Procedure Step: **5.1.5**

Standard:
- [√] Rotates AOV-7445 valve control switch to OPEN
- Verifies red light ON, green light OFF

Evaluator CUE: None

Comment:

Performance Step: 16 NOTE: Blower discharge valve AOV-7480 will stroke open on blower start

_____

Procedure Step: **NOTE prior to Step 5.1.6**

Standard: Reads NOTE

Evaluator CUE: None

SIM DRIVER: **ENSURE that Trigger 30 is activated in the next step 30 seconds after the Mini-Purge Supply Blower is started**

Comment:

NRC EXAMINER: ALTERNATE PATH BEGINS WITH THE NEXT STEP

√ **Performance Step: 17** Start 1A Mini-Purge Supply System Blower and verify Containment pressure increase. (Pressure should rise in 4-5 minutes)

_____

Procedure Step: **5.1.6**

Standard:
- [√] Momentarily rotates blower control switch to START
- Verifies blower red light ON, green light OFF, red flag visible
- Monitors MCB Containment pressure (PI-945/947/949) indication
- Logs Purge START TIME _____

Evaluator CUE: None

Evaluator NOTE: **C-17, CONTAINMENT VENT SYSTEM, will alarm momentarily during blower start**

Comment:

Performance Step: 18 R-14 Channel Indication Rises to > 1E+05 HIGH ALARM setpoint

_____

Procedure Step: **PRECAUTIONS 4.1 and 4.5**

Standard:
- Recognizes that R14 is rising
- Recognizes PPCS R14 alarm
- Acknowledges E-16, RMS PROCESS MONITOR HIGH ALARM
- Acknowledges L-1, AUX BLDG VENT SYSTEM CONTROL PANEL, due to AB Ventilation trip due to R14 alarm
- Informs CRS that he is securing the Mini-Purge per the guidance provided in Precaution 4.5 for R-14 in Alarm
- Goes to Section 5.2, Securing CNMT Mini-Purge

Evaluator CUE: **"The SM understands that you are securing the mini-purge due to an R-14 high alarm."**

Evaluator NOTE: **Candidate may also refer to AR-E-16, then to AR-RMS-14, for direction to secure mini-purge if in progress**

Comment:

Performance Step: 19 NOTE: If Nitrogen is being vented from the SI Accumulators, then DO NOT secure mini-purge operation

_____

Procedure Step: **Section 5.2, NOTE prior to Step 5.2.1**

Standard:
- Reads NOTE, identifies that NOTE is N/A

Evaluator CUE: None

Comment:

Performance Step: 20 Ensure the shutdown of containment mini-purge is authorized by:

_____
- Shift Manager
- Health Physicist

Procedure Step: **Step 5.2.1**

Standard:
- Notes that previous communication to evaluator has identified the need to secure the mini-purge, and the SM has concurred

Evaluator CUE: None

Comment:

√ **Performance Step: 21** Stop 1A containment mini-purge supply system blower.

_____

Procedure Step: **5.2.2**

Standard:
- [√] Momentarily rotates MINI-PURGE SUPPLY blower control switch counter-clockwise to STOP
- Verifies blower red light OFF, green light ON, red flag not visible
- Logs Purge STOP TIME _____

Evaluator CUE: None

Comment:

√ **Performance Step: 22** Close Mini Purge Supply Valve, AOV-7478. (Inside CNMT)

_____

Procedure Step: **5.2.3**

Standard:
- [√] Rotates AOV-7478 valve control switch counter-clockwise to CLOSE
- Verifies red light OFF, green light ON
- Checks R-14 for indication that release has been terminated

Evaluator CUE: None

Evaluator NOTE: **This valve closure, OR the closure of AOV-7445 in the next step, will isolate the CNMT mini-purge supply line**

Comment:

√ **Performance Step: 23** Close Mini Purge Supply Valve, AOV-7445. (Outside CNMT)

_____

Procedure Step: **5.2.4**

Standard:
- [√] Rotates AOV-7445 valve control switch counter-clockwise to CLOSE
- Verifies red light OFF, green light ON

Evaluator CUE: None

Evaluator NOTE: **This valve closure, OR the closure of AOV-7478 in the previous step, will isolate the CNMT mini-purge supply line**

Comment:

√ **Performance Step: 24** Close mini-purge exhaust valve, AOV-7970. (Inside CNMT)

_____

Procedure Step: **5.2.5**

Standard:
- [√] Rotates AOV-7971 valve control switch counter-clockwise to CLOSE
- Verifies red light OFF, green light ON

Evaluator CUE: None

Evaluator NOTE: **This valve closure, OR the closure of AOV-7971 in the next step, will isolate the CNMT mini-purge exhaust line**

Comment:

√ **Performance Step: 25** Close mini-purge exhaust valve, AOV-7971 (Outside CNMT)

_____

Procedure Step: **5.2.6**

Standard:
- [√] Rotates AOV-7971 valve control switch counter-clockwise to CLOSE
- Verifies red light OFF, green light ON

Evaluator CUE: None

Evaluator NOTE: **This valve closure, OR the closure of AOV-7970 in the previous step, will isolate the CNMT mini-purge exhaust line**

Comment:

Terminating Cue: **"No further action is required."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

JR029.001, Rev. 1

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Startup the Containment Mini Purge and Terminate Upon Indications of HIGH Radiation**

TASK: 029-007-01-01, Startup the Containment Mini Purge

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
12	S-23.2.3, step 5.1.2	Required switch action(s) to perform correctly
13	S-23.2.3, step 5.1.3	Required switch action(s) to perform correctly
14	S-23.2.3, step 5.1.4	Required switch action(s) to perform correctly
15	S-23.2.3, step 5.1.5	Required switch action(s) to perform correctly
17	S-23.2.3, step 5.1.6	Required switch action(s) to perform correctly
21	S-23.2.3, step 5.2.2	Required switch action(s) to perform correctly
22 OR 23	S-23.2.3, step 5.2.3 S-23.2.3, step 5.2.4	Required switch action(s) to isolate CNMT mini-purge supply line
24 OR 25	S-23.2.3, step 5.2.5 S-23.2.3, step 5.2.6	Required switch action(s) to isolate CNMT mini-purge exhaust line

INITIAL CONDITIONS:

- The Unit is operating at 100% power.
- A routine Containment entry is scheduled for tomorrow.
- A Containment Mini-Purge Release has been initiated by Radiation Protection (RP)
- SM and RP approvals have been received
- All RMS channels are operating normally
- Nitrogen venting from the SI Accumulators is NOT in progress

INITIATING CUE:

- The Shift Manager directs you to place the Containment Mini-Purge System in service in accordance with S-23.2.3, CONTAINMENT MINI-PURGE SYSTEM OPERATION

JPM VERIFICATION OF COMPLETION

Facility:	Ginna	Task No.:	012-006-01-01
Task Title:	Defeat a Failed PRZR Pressure Channel	JPM No.:	2012 Retake JPM N-G
K/A Reference:	012 A4.04 3.3 / 3.3 Ability to manually operate and/or monitor in the control room: Bistable, trips, reset and test switches	Alternate Path	Yes _ No X
		Time Critical	Yes ____ No X
		Category:	RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom _____ Simulator X Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant was operating at 100% power when PI-430 failed high due to PT-430 failure
- The operators took actions per ER-INST.1, up to step 6.3.4
- A Turbine Runback did not occur

Task Standard: Complete the defeat of PRZR Pressure PI-430 without error

Required Materials: Key to Protection Racks

General References: ER-INST.1, REACTOR PROTECTION BISTABLE DEFEAT AFTER INSTRUMENTATION LOOP FAILURE, Rev 03602

Handouts: ER-INST.1 (pages 1-16) and Attachment 6

Initiating Cue:
- The Shift Supervisor directs you to defeat the failed PRZR instrument channel per ER-INST.1, Attachment-6, White Channel
- Pre-Job Brief has been completed

Time Critical Task: No

Validation Time: 15 minutes (04/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

None

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:

Indicate reason for unsatisfactory step performance in the comment section below each step.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- Load **IC-19**, 100%, MOL
- Insert **MALF PZR02B, [2500 psig]**

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1	Obtain controlled copy of ER-INST.1.
_____	
Procedure Step:	N/A
Standard:	Obtains controlled copy of ER-INST.1.
Evaluator CUE:	**Provide the candidate with copy of ER-INST.1., marked up to step 6.3.4, and Attachment 6**
Comment:	

Performance Step: 2	IF PRZR pressure channel failure resulted in a runback, THEN PERFORM the following....
_____	
Procedure Step:	**ATT. 6, step 1.0**
Standard:	• Recognizes that per the Initial Conditions, a runback did NOT occur • Goes to step 2.0
Evaluator CUE:	None
Comment:	

Performance Step: 3	NOTE: Performing the following step will remove the affected channel from control of PORV-430 **AND** inputs to alarms F-2, PRESSURIZER HI PRESS 2310 PSI and F-10, PRESSURIZER LO PRESS 2205 PSI
_____	
Procedure Step:	**ATT.6, NOTE prior to Step 2.0**
Standard:	Reads NOTE
Evaluator CUE:	None
Comment:	

√ **Performance Step: 4**

In the PLP PRZR PRESS AND LEVEL rack, **VERIFY** the PRZR pressure DEFEAT switch P/429A position.

2.1 IF P/429A is in NORMAL, THEN place P/429A to DEFEAT-2

2.2 IF P/429A is NOT in NORMAL, THEN notify the SM

Procedure Step: **ATT.6, steps 2.0 – 2.3**

Standard:
- Obtains cabinet key, goes to PLP Rack, unlocks and opens
- [√] Verify P/429A is in Normal position, turns DEFEAT switch counter-clockwise to DEFEAT-2 position

Evaluator CUE: None

Evaluator NOTE: **P/429A is initially in the Normal position**

Comment:

Performance Step: 5

NOTE: Performing the following step will defeat the ΔT Runback and Rodstop for the failed channel AND remove the associated ΔT input from the RIL computer. Annunciators F-30 and F-31 will clear if lit

Procedure Step: **ATT.6, NOTE prior to Step 3.0**

Standard: Reads NOTE before performing step 3.0

Evaluator CUE: None

Comment:

√ **Performance Step: 6** In the RIL INSERTION LIMIT rack, **PLACE** T/405E DELTA T DEFEAT switch to LOOP A UNIT 2

_____

Procedure Step: **ATT.6, step 3.0**

Standard:
- Unlocks the RIL Rack and opens door.
- [√] Turns T/405E DELTA-T DEFEAT switch clockwise from Operate to LOOP A Unit 2 position
- Closes and locks door

Evaluator CUE: None
Comment:

Performance Step: 7 NOTE contains a list of bistable status lights and Annunciators that are expected to be LIT after the defeat

_____

Procedure Step: **ATT.6, NOTE prior to Step 4.0**

Standard: Reads NOTE before step 4.0

Evaluator CUE: None
Comment:

Performance Step: 8 RECORD the following data:

_____

• PRZR Pressure	PI-430	**2500**	PSIG
• LOOP 1A-2 ΔT TEMP	TI-406B	**67**	°F
• OT ΔT SP1 LOOP 1A-2 TEMP	TI-406A	**85**	°F

Procedure Step: **ATT.6, step 4.1**

Standard: Records data from MCB indications

Evaluator CUE: None
Comment:

Performance Step: 9 **DETERMINE** the expected post defeat Bistable proving light status and circle the expected status in table below:

_____

Procedure Step: **ATT.6, step 4.2**

Standard:

406 LOOP A-2

- OVERTEMP TRIP — Light OFF IF TI-406B ≥ TI-406A

430 CHANNEL 2

- HIGH PRESS TRIP — Light OFF IF PI-430 > 2377 psig
- LOW PRESS TRIP — Light OFF IF PI-430 ≤ 1873 psig
- SI — Light OFF IF PI-430 ≤ 1750 psig
- UNBLOCK SI — Light OFF IF PI-430 > 1992 psig

Bistable	Expected Proving Light status (Circle)	Post Defeat Light Status Verified
406 LOOP A-2 OVERTEMP TRIP	(ON) OFF	
430 CHANNEL 2 HIGH PRESS TRIP	ON (OFF)	
430 CHANNEL 2 LOW PRESS TRIP	(ON) OFF	
430 CHANNEL 2 SI	(ON) OFF	
430 CHANNEL 2 UNBLOCK SI	ON (OFF)	

Evaluator CUE: None

Comment:

√ **Performance Step: 10** In the (WHITE) W-1 PROTECTION CHANNEL 2 rack, **PLACE** the following bistable proving switches to DEFEAT (UP) **AND VERIFY** the proving light status is correct per the table above.

406 LOOP A-2

- OVERTEMP TRIP

430 CHANNEL 2

- HIGH PRESS TRIP
- LO PRESS TRIP
- SI
- UNBLOCK SI

Procedure Step: **ATT.6, step 5.0**

Standard:

- [√] Pulls and lifts OVERTEMP TRIP switch (Light ON)
- [√] Pulls and lifts HIGH PRESS TRIP switch (Light OFF)
- [√] Pulls and lifts LOW PRESS TRIP switch (Light ON)
- [√] Pulls and lifts LOW PRESS SI TRIP switch (Light ON)
- [√] Pulls and lifts UNBLOCK SI switch (Light OFF)

Evaluator CUE: None

Comment:

Performance Step: 11 PLACE the PRZR pressure recorder switch (MCB) to position 1-3

Procedure Step: **6.0**

Standard: Places MCB recorder switch to 1-3 position

Evaluator CUE: None

Comment:

Performance Step: 12 **VERIFY** the bistable status lights AND Annunciators listed below are lit

_____

Procedure Step: **7.0**

Standard: Verifies correct Bistable Status Light and Annunciator status lights

NOTE

The following bistable status lights are expected to be lit after the DEFEAT:

- PRZR High Press PC430A (Trip)
- PRZR Lo Press PC430H (Trip)
- PRZR Lo Press PC430E (SI)
- PRZR Lo Press PC430E-1 (SI)
- OTΔT LOOP A TC406C

The following Annunciators are expected to be lit after the DEFEAT:

- F-26, PRESSURIZER HI PRESS CHANNEL ALERT 2377 PSI
- F-27, PRESSURIZER LO PRESS CHANNEL ALERT 1873 PSI
- C-27, PRESSURIZER LO PRESS SI CHANNEL ALERT 1750 PSIG
- C-28, PRESSURIZER LO PRESS SI CHANNEL ALERT 1750 PSIG
- F-23, RCS OT DELTA T CHANNEL ALERT

Evaluator CUE: None

Evaluator NOTE: **JPM is complete when the proper bistable indications have been verified.**

Comment:

Terminating Cue: **"No further action is required."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 Retake JPM N-G

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Defeat a Failed PRZR Pressure Channel**

TASK: 012-006-01-01, Defeat a Failed PRZR Pressure Channel

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
4	ATT.6, step 2.1	Required switch action(s) to perform task correctly
6	ATT.6, step 3.0	Required switch action(s) to perform task correctly
10	ATT.6, step 5.0	Required switch action(s) to perform task correctly

JPM CUE SHEET

INITIAL CONDITIONS:

- The plant was operating at 100% power when PI-430 failed high due to PT-430 failure
- The operators took actions per ER-INST.1, up to step 6.3.4
- A Turbine Runback did not occur

INITIATING CUE:

- The Shift Supervisor directs you to defeat the failed PRZR instrument channel per ER-INST.1, Attachment-6, White Channel
- Pre-Job Brief has been completed

Facility:	Ginna	Task No.:	062-029-05-04
Task Title:	Energize a Minimum of 100 KW Backup heaters onto D/G	JPM No.:	JC010.001
K/A Reference:	APE056 AA1.03 (3.2 / 3.3) Adjustment of ED/G load by selectively energizing PZR backup heaters.	Alternate Path	Yes _ No X
		Time Critical Category:	Yes ___ No X RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom _____ Simulator _____ Plant X

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant was operating at 100% power when it experienced an SI coincident with a loss of all AC power.
- The 'B' D/G is now running and carrying approximately 1650 KW on Buses 16 and 17.
- PRZR level is 20% and stable
- CNMT pressure is 0.4 psig
- SI has been RESET

Task Standard: 125 KW of pressurizer backup heaters are energized per ER-PRZR.1.

Required Materials: Hard Hat, Safety Glasses, Hearing Protection, Safety Shoes, gloves and Dosimetry.

General References:

- ER-PRZR.1: RESTORATION OF PRZR HEATERS DURING BLACKOUT, Rev 00700
- Drawing 03200-0122, Sheets 1 & 2
- Drawing 03200-0123, Sheets 1 & 2

Handouts: ER-PRZR.1: RESTORATION OF PRZR HEATERS DURING BLACKOUT, Rev 00700

Drawing 03200-0122, Sheets 2

Initiating Cue:
- The CRS has directed you to energize a minimum 100 KW of PRZR BACKUP heaters per ER-PRZR.1, Section 4.2.

Validation Time: 9 Minutes (4/03/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Equipment Damage

SAFETY CONSIDERATIONS:

- Radiological Hazard
- Personal Protective Equipment

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step.
- Make a copy of ER-PRZR.1 available to the Operator at the appropriate cue.
- Assess Auxiliary Building for radiological and/or personnel safety concerns prior to start of JPM. **Validation on 11/20/12 showed a potential problem with the height of panel ACPDPPAB12 (located above ACPDPPAB13). Use the lower panel for both performance steps 7 and 8.**
- Proper use of H/U tools shall be exhibited for all steps.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. SIMULATE only. Do NOT actually manipulate any plant equipment.
4. Verbalize all your actions and observations while performing the JPM.
5. Where necessary, consider the examiner for peer checks as appropriate.
6. Verbalize when you consider your performance of the JPM complete.
7. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
8. Are there any questions before beginning this JPM?

SIMULATOR SETUP

N/A

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1

_____

PRECAUTIONS:

3.1 A minimum of 100KW of PRZR heaters should be restored within 1 hr of initiation of natural circulation to prevent loss of subcooling (ITS LCO 3.4.9)

3.2 PRZR level must be greater than 13% [50%] to energize PRZR heaters.

3.3 Continuous D/G loading should not exceed 1950 KW.

3.4 During accident conditions, the on-duty RP Technician should be consulted prior to entry into the controlled area.

3.5 The PASS surge line to the VCT may require flushing to minimize radiological hazards prior to entering the SPF Hx area.

Procedure Step: **Section 3.0**

Standard: Reads PRECAUTIONS, compares with Initial Conditions

Evaluator CUE: **If RP is consulted per Precaution 3.4, report "No additional radiological precautions required at this time".**

Evaluator NOTE: **Provide a copy of ER-PRZR.1**

Comment

Performance Step: 2 Proceeds to PRZR backup heater breaker panel.

Procedure Step: N/A

Standard: Locates panel **ACPDPAB12**

Evaluator CUE: None

Examiner NOTE:
- **Panel is located on the AB Middle level, behind 'A' SFP heat exchanger.**
- **Candidate may review performance steps 3, 4, 5 and 6 prior to proceeding to Panel**

Comment:

Performance Step: 3

4.2 Perform the following to restore all or part of the PRZR Backup heaters:

4.2.1 Verify SI has been reset (Annunciator K-6 clear). Reset SI if necessary.

Procedure Step: **4.2.1**

Standard: Verifies that SI has been reset.

Evaluator CUE: IF candidate verifies SI is reset with the Control Room, feedback **"SI is Reset, Annunciator K-6 is clear".**

Evaluator NOTE: SI RESET was part of the Initial Conditions

Comment:

Performance Step: 4 Verify Emergency D/G B is supplying Bus 16

_____

Procedure Step: **4.2.2**

Standard: Determines from initial conditions that the 'B' D/G is supplying Bus 16 (and Bus 17)

Evaluator CUE: None

Comment:

√ **Performance Step: 5** To energize all PRZR Backup heaters (400KW) perform the following:

_____

- Verify Emergency D/G B load less than 1550 KW, IF NOT, then go to step 4.2.4

Procedure Step: **4.2.3, 4.2.3.1**

Standard:

- [√] Determines from initiating cue that ED/G /B/ loading is 1650 KW and goes to step 4.2.4
- Also notes from the Initiating Cue that the direction given was to energize a minimum of 100 KW of Backup heaters.

Evaluator CUE: None

Comment:

Performance Step: 6 To energize a minimum of 125 KW of PRZR Backup heaters, perform the following:

- IF Emergency D/G B load is greater than 1825 KW, THEN evaluate plant status and reduce D/G loading to less than 1825 KW

Procedure Step: **4.2.4, 4.2.4.1**

Standard: Determines from initial conditions that the 'B' D/G load is 1650 KW and therefore reducing 'B' D/G load is NOT necessary.

Evaluator CUE: **IF Control Room is asked to verify, 'B' D/G load is 1650 KW and stable."**

Comment:

√ **Performance Step: 7** At ACPDPAB12, open all breakers EXCEPT Breaker Switch #4.

Procedure Step: **4.2.4.3**

Standard: [√] Simulates opening all heater breakers EXCEPT Breaker Switch #4.

Evaluator CUE:

- **Due to potential safety concern with panel's elevation, after identifying the panel inform candidate that they may simulate/ describe breaker actions on provided panel arrangement drawing 03200-0122. sheet 2**
- **Feed back "Breaker is OFF" as the Operator simulates opening each heater breaker**

Evaluator NOTE:

- **Breakers in panel ACPDPA12 are identical to the breakers in ACPDPAB13 in upcoming step.**
- **Nearest ladder station is on the wall next to the Spent Fuel Pool DI room gate.**

Comment:

√ **Performance Step: 8** At ACPDPAB13, open all breaker switches except Breaker Switch #1, #3, #6. (Total capacity available should be ~ 125 KW)

_____

Procedure Step: **4.2.4.4**

Standard: [√] Simulates opening all heater breakers except Breaker Switch #1, #3, #6.

Evaluator CUE: **Feed back "Breaker is OFF" as the Operator simulates opening each heater breaker**

When reported to control room, acknowledge status of breakers.

Comment:

Terminating Cue: When all pressurizer backup heater breakers are aligned as required:

"No further Action required."

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 SRO RETAKE EXAM – JPM-N-H (In plant)

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Energize a Minimum of 100 KW Backup heaters onto D/G**

TASK: 062-029-05-04, Energize a Minimum of 100 KW Backup heaters onto D/G

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
5	ER-PRZR.1, step 4.2.3, 4.2.3.1	Required action for proper procedural sequence
7	ER-PRZR.1, step 4.2.4.3	Required switch action(s) to perform correctly
8	ER-PRZR.1, step 4.2.4.4	Required switch action(s) to perform correctly

JPM CUE SHEET

INITIAL CONDITIONS:

- The plant was operating at 100% power when it experienced an SI coincident with a loss of all AC power.
- The 'B' D/G is now running and carrying approximately 1650 KW on Buses 16 and 17.
- PRZR level is 20% and stable
- CNMT pressure is 0.4 psig
- SI has been RESET

INITIATING CUE:

- The CRS has directed you to energize a minimum 100 KW of PRZR BACKUP heaters per ER-PRZR.1, Section 4.2.

Facility:	Ginna	Task No.:	068-001-01-01
Task Title:	Perform transfer operations from the RCDT and the PRT	JPM No.:	2012 Retake N-I
K/A Reference:	068 K1.04 (2.4 / 2.5) Knowledge of physical connections and/or cause effect relationships between the Liquid Radwaste system and the following systems: Reactor drain tank	Alternate Path	Yes _ No X
		Time Critical Category:	Yes ___ No X RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom _____ Simulator _____ Plant X

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:
- The plant is operating at 100% power.
- RCDT Level is 31% and stable
- RCDT is in a normal configuration lineup
- RCDT 'B' is tagged out for a minor PM

Task Standard: Manually pump down RCDT

Required Materials: Hard Hat, Safety Glasses, Gloves, Safety shoes, dosimetry

General References: O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET, Rev. 16700

Handouts: O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET, Rev. 16700, Attachment 15, Weekly Operation Of Reactor Coolant Drain Tank Pumps

Initiating Cue:
- The CRS directs you to perform the weekly Operation Of Reactor Coolant Drain Tank Pumps per O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET

Validation Time: 7 Minutes

CONSEQUENCES OF INADEQUATE PERFORMANCE:

- Possible Pump damage/ degradation
- Possible damage to MSA Gas Analyzer

SAFETY CONSIDERATIONS:

Radiological requirements

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step.
- Make available a copy of O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET, Rev. 16700, Attachment 15, Weekly Operation Of Reactor Coolant Drain Tank Pumps.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must correctly perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your reactions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- N/A

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 _____	Obtain a copy of O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET, Rev. 16700
Procedure Step:	**N/A**
Standard:	Obtains a copy of procedure from FCMS.
Evaluator CUE:	**Provide Operator a copy of O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET, Rev. 16700.**
Comment:	

Performance Step: 2 _____	Review procedure to determine correct section/ Attachment to be performed.
Procedure Step:	**6.1.11**
Standard:	• Identifies Attachment 15, Weekly Operation of Reactor Coolant Drain Tank Pumps, required per Initiating Cue. Observes requirements of ~30% level to pump down RCDT manually
Evaluator CUE:	If asked when looking at LI-1003 on waste panel: **"LI-1003 reads ~30%"**
Evaluator NOTE:	**RCDT level given in Cue.**
Comment:	

Performance Step: 3 **PERFORM** this Attachment on Saturday to exercise the RCDT Pumps. This Attachment may also be performed, at any time, to lower RCDT level prior to 40%, to prevent auto pump down

Procedure Step: **ATT-15, Step 1.0**

Standard: Reviews Attachment 15, Weekly Operation Of Reactor Coolant Drain Tank Pumps.

Evaluator CUE: None

Comment:

Performance Step: 4 **IF** RCDT GAS OUTLET ISOL TO VENT HDR, V-1716A, is CLOSED,**THEN PERFORM** section 3.0
OTHERWISE, MARK this step N/A

Procedure Step: **2.0**

Standard: Determines, by checking locally, that V-1716A is open and that step does not apply. N/A's this step.

Evaluator CUE: If checked locally, feedback that **"valve indicates open, stem out".**

Evaluator NOTE:
- **V-1716A is a Normally Open valve that would be closed only for maintenance or for leakage path isolation (e.g., Refueling OE)**
- **Located AB Intermediate Level, behind SFP 'A HX (6ft)**

Comment:

Performance Step: 5 **IF** RCDT GAS OUTLET ISOL TO VENT HDR, V-1716A, is OPEN,**THEN PERFORM** section 4.0
OTHERWISE, MARK this step N/A

Procedure Step: **2.1**

Standard:
- Determines, by checking locally, that V-1716A is open.
- Determines that the step applies.
- Proceeds to step 4.0, to **PERFORM** the following to exercise RCDT Pump A
-

Evaluator CUE: If checked locally, feedback: **"V-1716A is open."**

Comment:

√ **Performance Step: 6** **PLACE** Switch for RCDT Pump A suction AOV-1003A to OPEN (Waste Panel).

Procedure Step: **4.1**

Standard: [√] Simulates placing the switch for RCDT Pump A suction AOV-1003A (LCV-1003) to OPEN.

Evaluator CUE:
- If requested, feedback: **"Switch is in the OPEN position". "Red light is LIT, Green light is Out"**
- If verification is requested pertaining to labels, **"AOV-1003 is the same as LCV-1003"**

Comment:

√ **Performance Step: 7** **START** RCDT Pump A at the Waste Panel.

_____

Procedure Step: **4.2.**

Standard: [√] Simulates **STARTING** RCDT Pump A (1/CDP1A-L) at the Waste Panel.

Evaluator CUE:
- Feedback:" **Red light lit, Green light out"**
- If RCDT level checked, feedback "**level lowering on LI-1003"**
- If Candidate informs Control Room of RCDT Pump down, **acknowledge**

Evaluator NOTE: **When RCDT pump is started, level will begin to lower.**

Comment:

√ **Performance Step: 8** **WHEN** a level decrease is noted in RCDT level, THEN STOP RCDT Pump A.

_____

Procedure Step: **4.3**

Standard:
- [√] Verifies level lowering on LI-1003
- [√] Simulates stopping RCDT Pump A

Evaluator CUE:
- If candidate checks RCDT level, after RCDT Pump is stopped feedback **"Level is 25% and stable"**

Evaluator NOTE: **RCDT Low Level Alarm is received at 13%.**

Comment:

√ **Performance Step: 9** **PLACE** Switch for RCDT Pump A suction AOV-1003A switch to AUTO Position.

_____

Procedure Step: **4.4**

Standard: [√] Positions switch for AOV-1003 (LCV-1003) to AUTO
[√] Observes valve AOV-1003A CLOSES, red light OFF.

Evaluator CUE: **"Red Light OFF, Green Light ON"**
If guidance is requested pertaining to labels, "AOV-1003 is the same as LCV-1003"

Evaluator NOTE: **Valve AOV-1003A will open/cycle closed automatically to pump down when the switch is in AUTO**

Comment:

Performance Step: 10 Report Completion of Pump exercise.

_____

Procedure Step: N/A

Standard: Reports to CRS/Control Room that pump-down is completed

Evaluator CUE: **Acknowledge communication**

Comment:

Terminating Cue: **When report is made to the Control Room: " This JPM is complete."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 SRO RETAKE EXAM JPM N-I (In plant)

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Weekly Operation of Reactor Coolant Drain Tank Pumps**

TASK: 068-001-01-01 Perform transfer operations from the RCDT and the PRT

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
6	ATT-15, step 4.1	Required switch action(s) to perform correctly
7	ATT-15, step 4.2	Required switch action(s) to perform correctly
8	ATT-15, step 4.3	Required action for proper procedural sequence
9	ATT-15, step 4.4	Required switch action(s) to perform correctly

JPM CUE SHEET

INITIAL CONDITIONS:

- The plant is operating at 100% power.
- RCDT Level is 31% and stable
- RCDT is in a normal configuration lineup
- RCDT Pump B is tagged out for a minor PM

INITIATING CUE:

- The CRS directs you to perform the weekly Operation Of Reactor Coolant Drain Tank Pumps per O-6.11, SURVEILLANCE REQUIREMENT/ROUTINE OPERATIONS CHECK SHEET

Facility:	Ginna	Task No.:	033-003-01-04
Task Title:	Start up Fuel Cooling system in different Pump/ Heat Exchanger combinations.	JPM No.:	JR033.006 (New)
K/A Reference:	033 G2.1.29 (RO 4.1/ SRO 4.0) Knowledge of how to conduct system lineups, such as valves, breakers, switches, etc.	Alternate Path	Yes __ No X
		Time Critical	Yes ____ No X
		Category:	RO/SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: X Actual Performance: _____

Classroom _____ Simulator _____ Plant X

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant is Shutdown for a Refueling Outage and has just entered MODE 3.
- Preparations are being made to accommodate an upcoming Full Core Off-Load to the SFP.
- Initial SFP temperature is 80°F
- SFP cooling system A just been removed from service

Task Standard: Properly performs all steps of procedure S-9 to alternate SFP Cooling Systems.

Required Materials: Hard Hat, Safety Glasses, Hearing Protection, Gloves, Safety Shoes and Dosimetry.

General References:
- S-9, SFP COOLING SYSTEM OPERATION, Rev 00500.
- 33013-1248 AUXILIARY COOLING SPENT FUEL POOL COOLING.
- 33013-1250, 2 STATION SERVICE COOLING WATER SAFETY RELATED.

Handouts:
- S-9, SFP COOLING SYSTEM OPERATION, Rev 00500

Initiating Cue:
- The CRS has requested that you continue the swap of the SFP cooling systems by placing SFP cooling system 'B' in service starting at step 6.6.4 of S-9, SFP COOLING SYSTEM OPERATION

Validation Time: 15 Minutes

CONSEQUENCES OF INADEQUATE PERFORMANCE:
- Inadequate SFP cooling for expected core off-load.
- System component damage
- Tech Spec Violation
- TRM Violation

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:
- If SFP system is "Protected Equipment", contact SM for permission for performing JPM in area
- Indicate reason for unsatisfactory performance in the comment section below each step.
- Simulate all component manipulations should be stressed
- Make available a copy of S-9, SFP COOLING SYSTEM OPERATION, Rev 00500, to the Operator at the appropriate cue.

DIRECTIONS TO PERFORMER:
1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- N/A

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1	Obtains the working copy of S-9, SFP COOLING SYSTEM OPERATION, Rev. 00500
_____	
Procedure Step:	N/A
Standard:	N/A
Evaluator CUE:	**Provide Operator a marked-up copy of S-9, SFP COOLING SYSTEM OPERATION, Rev. 00500**
Comment:	

Performance Step: 2	Review applicable sections to be performed in procedure.
_____	
Procedure Step:	**Table of Contents**
Standard:	N/A
Evaluator CUE:	**If requested, "CRS directs placing B in service per section 6.6."**
Evaluator NOTE:	Candidate may N/A sections not used
Comment:	

Performance Step: 3	Reviews PRECAUTIONS AND LIMITATIONS section of procedure.
_____	
Procedure Step:	**4.0**
Standard:	Reviews PRECAUTIONS and LIMITATIONS section
Evaluator CUE:	None
Comment:	

Performance Step: 4 Review PREREQUISITES section.

_____

Procedure Step: **Step 5.0**

Standard: Reviews marked up section

Completes signature block 5.1.2

Evaluator CUE: None

Evaluator NOTE: Proceeds to section 6.6 Placing SFP System B in service

Comment:

Performance Step: 5 Reads CAUTION ahead of step 6.6.6 not to exceed flow of 2500 GPM as read FI-8683

_____

Procedure Step: **CAUTION prior to Step 6.6.4**

Standard: Verbalizes understanding of CAUTION.

Evaluator CUE: None

Comment:

√	**Performance Step: 6**	THROTTLE OPEN 1B SFP HX SW RETURN ISOL VLV, V-8689, until SFP HX B outlet flow, FI-8683, indicates between 1450 and 1550 GPM RECORD final flow on FI-8683 _____GPM
	Procedure Step:	**6.6.4 and 6.6.5**
	Standard:	[√] Simulates Throttling Open V-8689 to obtain a flow of 1450 to 1550 GPM
	Evaluator CUE:	As candidate throttles valve, and checks flow, feedback **"Flow on FI-8683 begins to rise from 0 GPM and indicates1500 GPM"**
	Comment:	

	Performance Step: 7	OPEN 1B SERVICE WATER OUTLET BLOCK VALVE TO RE-20B, V-8634
	Procedure Step:	**Step 6.6.6**
	Standard:	Opens V-8634.
	Evaluator CUE:	**"Valve no longer turns in that direction"**
	Evaluator NOTE:	**Valve is located between Operating floor between A' SW HX and B' SFP HX (5FT)**
	Comment:	

Performance Step: 8 THROTTLE SFP HX B SW OUTLET BLOCK VLV, V-8685, UNTIL SPENT FUEL POOL HEAT EXCHANGER B OUTLET TO RE-20B FLOW INDICATOR, FI-8631, indicates between 75 and 100 GPM

RECORD final flow on FI-8631 ____GPM

_____

Procedure Step: **Step 6.6.7 and 6.6.8**

Standard: Simulates opening V-8685 and verifies flow on FI-8631.

Evaluator CUE:
- **"Valve is throttled OPEN"**
- When candidate checks flow, **"FI-8631 Indicates 90 GPM"**

Evaluator NOTE: **Valve 8685 is located at Aux Bldg operating floor platform near B CCW HX top of stairs**

Comment:

Performance Step: 9 ENSURE a leak check of the SFP suction line is performed prior to pump start.

ENSURE a visual verification has been performed that ensures the SFP pump suctions are not blocked and SFP area is free of potential foreign material.

_____

Procedure Step: **Steps 6.6.9 and 6.6.10**

Standard: Performs visual check of suction lines for leakage and verifies SFP suctions are not blocked

Evaluator CUE:
- **" No leaks are indicated";**
- **" Suction lines are not blocked"**
- **"Spent Fuel Pool area is free of potential foreign material."**

Comment:

√ **Performance Step: 10** ENSURE OPEN LOW SUCTION ISOL VLV TO SPENT FUEL POOL RECIRC PUMPS (ALT), V-782

_____

Procedure Step: **Step 6.6.11**

Standard: [√] Simulates opening V-782.

Evaluator CUE: **"Valve no longer turns in that direction"**

Comment:

Performance Step: 11 ENSURE OPEN HIGH SUCTION ISOL VLV TO SPENT FUEL POOL RECIRC PUMPS (NORMAL), V-781.

_____

Procedure Step: **Step 6.6.12**

Standard: Ensures V-781 OPEN

Evaluator CUE:
- If checked in closed direction **feedback "valve moves in that direction"**
- **"stem indicates out"**

Evaluator NOTE:

Valve will be open already at this point

Comment:

√ **Performance Step: 12** **THROTTLE CLOSED** ISOLATION GATE VALVE FROM SFP PUMP B TO SFP HEAT EXCHANGER B, V-8667, to approximately 80%-90% CLOSED.

Procedure Step: **Step 6.6.13**

Standard: [√] Simulates closing valve to 80-90% closed.

Evaluator CUE: **"Valve indicates approximately 90% closed"**

Comment:

√ **Performance Step: 13** **START** SFP Pump B.

Procedure Step: **Step 6.6.14**

Standard: [√] Starts SFP Pump B by depressing START pushbutton. Observes 'Red' light lit

Evaluator CUE:

- **"Normal pump motor Noise on startup, Red light lit"**
- If candidate checks Pump pressure on PI-8672, feedback **"60 psig stable "**
- If Control Room is notified of pump start, **acknowledge**.

Comment:

Performance Step: 14 DO NOT exceed 1700 GPM as indicated on FLOW INDICATING TRANSMITTER FOR PACO7B (SPENT FUEL POOL RECIRCULATION PUMP B), FIT-8667

_____

Procedure Step: **CAUTION prior to step 6.6.15**

Standard: Reads CAUTION

Evaluator CUE: None

Comment:

√ **Performance Step: 15** **THROTTLE** ISOLATION GATE VALVE FROM SFP PUMP B TO SFP HEAT EXCHANGER B, V-8667, UNTIL flow is between 1100 and 1700 GPM on (SPENT FUEL POOL RECIRCULATION PUMP B), FIT-8667

_____

Procedure Step: **Step 6.6.15**

Standard: [√] Simulates throttling V-8667 to adjust flow between 1100 and 1700 GPM on FIT-8667.

Evaluator CUE:

- IF Flow is checked initially on FIT-8667checked, feedback **"flow indicates 300 GPM"**
- After simulating throttling V-8667 open, feedback **"flow indicates 1200 GPM"**

Comment:

Performance Step: 16 _____	**IF** SW system flow rate greater than 1800 GPM through B SFP heat exchanger as indicated in Step 4.4, **THEN** an evaluation **SHALL** be performed
Procedure Step:	**CAUTION prior to Step 6.6.16**
Standard:	Observes note and determines that SW system flow was throttled to less than 1800 GPM on FI-8683 in step 6.6.4
Evaluator CUE:	• IF Flow is re-verified on FIT-8683, feedback **"flow indicates 1500 GPM"** • If Control Room is notified of SFP cooling system B in service is made, **acknowledge**.
Evaluator NOTE:	**This was checked in step 6.6.4.**
Comment:	

Performance Step: 17 _____	**THROTTLE SFP HX B SW OUTLET VLV, V8689,** as required to maintain desired maintain SFP temperature.
Procedure Step:	**Step 6.6.16**
Standard:	Verifies SFP Temperature and determines no changes to SW flow required at this time
Evaluator CUE:	• Feedback SFP temperature is **80°F** • If Control Room is notified of SFP cooling system B in service is made, **acknowledge**.
Evaluator NOTE:	**SFP Temperature changes would take a significant amount time to occur**
Comment:	

Terminating Cue:	**"No further action is required."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 SRO RETAKE EXAM JPM N-J (In plant)

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Alternate SFP Cooling Systems (A to B)**

TASK: 033-003-01-04, Start-up Fuel Cooling System in different Pump/ Heat Exchanger combinations

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **precludе successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
6	S-9, step 6.6.4, 6.6.5	Required component manipulation to perform correctly
10	S-9, step 6.6.11	Required component manipulation to perform correctly
12	S-9, step 6.6.13	Required component manipulation to perform correctly
13	S-9, step 6.6.14	Required component manipulation to perform correctly
15	S-9, step 6.6.15	Required component manipulation to perform correctly

JPM CUE SHEET

INITIAL CONDITIONS:

- The plant is Shutdown for a Refueling Outage and has just entered MODE 3.
- Preparations are being made to accommodate an upcoming Full Core Off-Load to the SFP.
- SFP cooling system A just been removed from service
- Initial SFP temperature is 80°F

INITIATING CUE:

- The CRS has requested that you continue the swap of the SFP cooling systems by placing SFP cooling system 'B' in service starting at step 6.6.4 of S-9, SFP COOLING SYSTEM OPERATION

Facility:	Ginna	Task No.:	341-038-03-03
Task Title:	Interpret and Ensure Compliance With Plant Administrative Procedures During Normal and Off-Normal Plant Operations	JPM No.:	2012 Retake SA-1
K/A Reference:	K/A 2.1.8 (3.4 / 4.1) Ability to direct personnel activities outside the control room.	Alternate Path: Time Critical: Category:	Yes _ No X Yes _ No X SRO-Only

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom X Simulator _____ Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- O-22 Cold Weather Walkdown procedure is in progress.
- Attachment 1, Cold Weather Temperature Log is complete
- All other area temperatures are reported to be > 65°F
- A severe lake-effect storm is occurring with 20 inches of snow now on the ground
- Driveway and parking lots are being cleared of snow.
- There are no open work orders/trouble reports numbers generated from M-1306.1, Ginna Station Maintenance Department, Winterizing Inspection Program
- SM has determined no hazards to plant operation exist at this time.

Task Standard:

- Perform applicable portions of O-22 cold weather walk down procedure
- Document the required actions

Required Materials: None

General References:
- O-22 COLD WEATHER WALK DOWN Procedure, Rev 00804
- SC-3.19 Snow Removal for access to Fire Equipment, Rev 11

Handouts: O-22 COLD WEATHER WALK DOWN , Rev 00804 (marked up)
Attachment 1, Cold Weather Log (marked up)

Initiating Cue:
- You are the CRS and have been directed by the SM to review the conditions and information provided by the AO and perform section 6.1, General Instructions, of O-22, Cold Weather Walkdown Procedure
- Document discrepancies, if any, and any required action(s) on the JPM cue sheet.

Validation Time: 8 minutes (4/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Freezing of Critical components/systems

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:
- Indicate reason for unsatisfactory step performance in the comment section below each step.
- Provide a copy of O-22, marked up through step 5.2, to examinee.
- **This JPM is intended to be administered in the classroom to multiple examinees.**

DIRECTIONS TO PERFORMER:
1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

N/A

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 Reviews Sections 1.0 through 4.0

_____

Procedure Step: **Steps 1.1 – 4.1**

Standard: Reviews sections 1.0-4.0

Evaluator CUE: None

Evaluator NOTE: **Provide the candidate with a copy of O-22, marked up through step 5.2 and Attachment 1 marked up with temperatures including GE BETZ water truck and AVT Building temperatures.**

Comment:

Performance Step: 2 Prerequisites Section 5.0

_____

Procedure Step: **5.1**

Standard: Completes signature/ initial block

Evaluator CUE: None

Comment:

Performance Step: 3 Reviews NOTE before step 6.1.1

_____

Procedure Step: **NOTE before Step 6.1.1**

Standard: Reviews NOTE

Evaluator CUE: None

Comment:

√ **Performance Step: 4**

_____

If the temperature in any of the areas listed falls below the listed temperature, THEN the Shift Manager shall contact Plant Management to establish priority corrective actions to raise temperatures in the affected areas AND raise surveillance frequency until temperature can be restored.

Procedure Step: **6.1.1**

Standard: Reviews Attachment 1, Cold Weather Temperature Log:

[√] Performs the 3 substeps and documents that the GE BETZ Water Truck temperature is below set point of 45°F.

[√] Document: Notify plant management to establish priority corrective actions regarding the low temperature in the GE BETZ Water Truck

[√] Document: Informs the AO's to raise frequency of temperature monitoring in the area

Evaluator CUE: **IF asked:**

- **"Plant Management has been notified"**
- **"AO's have been informed to raise temperature monitoring frequency"**

Comment:

Performance Step: 5

_____

If an abnormal condition exists that poses a hazard to plant operation, then submit a work request and immediately notify maintenance to correct the problem. Otherwise mark this step N/A

Procedure Step: **6.1.2**

Standard: Based on the initial conditions, determines that NO abnormal condition exists based and marks step N/A.

Evaluator CUE: None

Comment:

Performance Step: 6 _____	NOTE: Routine thermometer readings are obtained with the Auxiliary Operator's PDA. However, when the Auxiliary Operator's PDA is unavailable, Attachment 1 may also be used to log the following readings.
Procedure Step:	**NOTE prior to 6.1.3**
Standard:	Reads NOTE
Evaluator CUE:	None
Comment:	

Performance Step: 7 _____	Obtain designated thermometer readings in potential cold areas once per shift. (AO using PDA)
Procedure Step:	**6.1.3**
Standard:	Determines temperatures are logged by AO's based on Attachment 1 from initial conditions provided.
Evaluator CUE:	**If asked, "AO's have obtained required thermometer readings on Attachment 1."**
Comment:	

Performance Step: 8 _____	If required by the Shift Manager, then perform the following to install light weight easy view thermometers at locations susceptible to cold or hot air or where temporary work setups would pose a freezing problem. Otherwise mark this step N/A
Procedure Step:	**Step 6.1.4**
Standard:	Determines this is not required based on initial conditions and marks the step N/A
Evaluator CUE:	If asked, **"No temporary thermometer placement is required at this time."**
Comment:	

	Performance Step: 9 _____	When contacted by the Mechanical PM Analyst, then Log open WR/TR numbers and descriptions generated from completion of M-1306.1, Maintenance Department Winterizing Inspection program, on Attachment 2
	Procedure Step:	**Step 6.1.5**
	Standard:	Determines from initial condition this is not required
	Evaluator CUE:	**If asked, "SM has authorized you to initial on his behalf."**
	Evaluator NOTE:	**Examinee may chose to NOT initial this step due to it being an SM initial blank.**
	Comment:	
√	**Performance Step: 10** _____	If Snow Accumulation reduces the 12 inch minimum from a fire hydrant nozzle to ground level THEN NOTIFY Fire Brigade to implement SC-3.19, Snow Removal for Access to Fire Equipment. Otherwise, Mark this step N/A
	Procedure Step:	**Step 6.1.6**
	Standard:	[√] Determines that snow depth is 20 inches and documents: notify the Fire Brigade to implement SC3.19
	Evaluator CUE:	**If asked, "Fire Brigade will implement SC-3.19."**
	Comment:	
	Terminating Cue:	**When examinee hands in completed procedure and JPM cue sheet, then JPM is complete**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 NRC Retake JPM SA-1

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Evaluate data obtained from the latest O-22 cold weather walk down procedure**

TASK: 115-020-02-04

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
4	6.1.1	Parameters required to be identified to perform procedure correctly to ensure task completion
10	6.1.6	Parameters required to be identified to perform procedure correctly to ensure task completion

JPM CUE SHEET

Initial Conditions:

- O-22 Cold Weather Walkdown procedure is in progress.
- Attachment 1, Cold Weather Temperature Log is complete
- All other area temperatures are reported to be > 65°F
- A severe lake-effect storm is occurring with 20 inches of snow now on the ground
- Driveway and parking lots are being cleared of snow.
- There are no open work orders/trouble reports numbers generated from M-1306.1, Ginna Station Maintenance Department, Winterizing Inspection Program
- SM has determined no hazards to plant operation exist at this time.

INITIATING CUE:

- You are the CRS and have been directed by the SM to review the conditions and information provided by the AO and perform section 6.1, General Instructions, of O-22, Cold Weather Walkdown Procedure
- Document discrepancies, if any, and any required action(s) on the JPM cue sheet.

Attachment 1, Cold Weather Temperature Log

Outside Air Temp (33' Level) or outside Door 11 if Met Tower is OOS	10					
Int. Bldg. East end, top of stairs from Door S-44	72					
A Diesel Generator Room	66					
B Diesel Generator Room	68					
Main Feed Pump Room near NPSH Panel	78					
Main Feed Pump Room Northwest area	78					
Main Feed Pump Room Southwest Area	75					
MCC 1A Turbine Bldg. Basement	69					
Screenhouse South Screen Bay Area, East side	65					
Screenhouse, North wall	67					
Screenhouse, West wall	65					
Standby Aux. Feed Pump Room	68					
TSC Diesel Generator Room	66					
TSC Batt Room Whenever Generator Rm Heat E-28 is on, N/A the rest of the time. Maintain > 66°F	68					
Aux Building North wall by MCC 1E	71					
Aux Building South wall by Door #29	70					
Aux Building North of Door #28	69					
Battery Room A	75					
Battery Room B	76					
GE Betz Water Truck	44					
AVT Building	65					
END OF SHIFT REVIEW by either Shift Manager or CRS						

Facility:	Ginna	Task No.:	344-001-04-02
Task Title:	Perform calculations to determine the Plant Status (e.g. Fluid Flow/heat balance, Quadrant Power Tilts, Shutdown Margin, Etc.)	JPM No.:	2012 Retake N-SA-2
K/A Reference:	G2.1.25 (RO 3.9/SRO 4.2) Ability to interpret reference materials , such as graphs, curves, tables, etc	Alternate Path:	Yes _ No X
		Time Critical:	Yes ___ No X
		Category:	SRO-Only

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom X Simulator _____ Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant is in Mode 5 for a refueling outage
- The plant has been shutdown for 25 hrs
- The pressurizer is solid with LTOP in service
- RCS temperature is 140°F
- The Ginna Defense-In-Depth computer program used to calculate time to boil and core uncovery is unavailable

Task Standard: Properly performs all calculations and transposes answers onto CUE sheet:

- Condition 1 Time to Boil is determined to be 2.46 hrs.
- Condition 2 Time to Boil is determined to be .43 hrs (25.96 min +0.2/-0 min))

Required Materials: Pen/ pencil

General References: IP-OUT-2, OUTAGE RISK MANAGEMENT Rev 01901

Handouts: IP-OUT-2,OUTAGE RISK MANAGEMENT

Initiating Cue: The Shift Manager has directed you to determine the Time to Boil given a Loss of RHR and the following two sets of conditions:

1. For present plant conditions,

   AND

2. Exactly four (4) days from now based on the following conditions:
   - RCS level will be reduced to 64 inches.
   - RCS temperature will be lowered to 100°F
   - PRZR manway will be removed

Validation Time: 8 minutes (4/05/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

- Violation of Federal Regulations
- Tech Spec Violation

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step
- Make available a copy of IP-OUT-2 to the candidate at the appropriate cue.
- Ensure candidate understands to put information on cue sheet.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

- N/A

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 Reviews the copy of IP-OUT-2, OUTAGE RISK MANAGEMENT, provided.

_____

Procedure Step: **N/A**

Standard: Demonstrates knowledge that latest procedure revision is obtained through FCMS

Evaluator CUE: **Provide Operator a copy of IP-OUT-2**

Comment:

Performance Step: 2 Candidate reviews the Table of Contents.

_____

Procedure Step: **IP-OUT-2, Table of Contents**

Standard: Candidate determines that Attachment E, Time to Boil and Core Uncovery, will be required for necessary determinations.

Evaluator CUE: None

Comment:

Performance Step: 3 Determines for condition 1 (current) that Pressurizer is Full and Attachment E, Page 5 of 11 will be required

_____

Procedure Step: **Attachment E, Page 5 of 11**

Standard: Identifies Attachment E, Page 5 of 11 will be required to determine 'Time to Reach Saturation with Pressurizer Full and RCS Closed' from Procedure and Initial Conditions given.

Evaluator CUE: None

Comment:

√ **Performance Step: 4** Determine Time to Reach Saturation (boil) for condition (1)

_____

Procedure Step: **Attachment E, Page 5 of 11**

Standard:
- [√] Determines Time to Saturation (boil) for condition (1) is 2.46 hours using 25 hrs time after Shutdown, and Trcs 140°F
- Records time on Cue sheet for Condition 1

Evaluator CUE: None

Comment:

Performance Step: 5 Determines for condition (2), Loop Level at 64" and with PRZR manway open that Attachment E, Page 7 of 11 will be required.

_____

Procedure Step: **Attachment E, Page 7 of 11**

Standard: Identifies Attachment E, Page 7 of 11 will be required to determine 'Time to Reach Saturation with 64" and RCS Open' from Initial Conditions given.

Evaluator CUE: None

Comment:

√ **Performance Step: 6** Determine Time to Reach Saturation (boil) for condition (2)

_____

Procedure Step: **Attachment E, Page 7 of 11**

Standard:

- [√] Using the current 25 hrs after shutdown, and adding 4 days (96 hrs), determines time after shutdown is 121 hrs.
- [√] Determines Time to Saturation (boil) for condition (1) is 0.43 hours (25.96 min +0.2/-0 min) using 120 hrs time after shutdown, and Trcs 100°F
  - Records time on Cue sheet for Condition 2

Evaluator CUE: None

Comment:

Terminating Cue: When student hands in cue sheet with times: **"JPM is complete."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 SRO RETAKE EXAM – JPM-N-SA-2 (Classroom)

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Determine Time to Boil for a Loss of Shutdown Cooling**

TASK: 344-001-04-02 Perform calculations to determine the Plant Status (e.g. Fluid Flow/heat balance, Quadrant Power Tilts, Shutdown Margin,Etc.)

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
4	IP-OUT-2, ATT E, page 5 of 11	Correct table needs to be selected, and data chosen based on plant conditions to perform calculation correctly
6	IP-OUT-2, ATT E, page 7 of 11	Correct table needs to be selected, and data chosen based on plant conditions to perform calculation correctly

INITIAL CONDITIONS:

- The plant is in Mode 5 for a refueling outage
- The plant has been shutdown for 25 hrs
- The pressurizer is solid with LTOP in service
- RCS temperature is 140°F
- The Ginna Defense-In-Depth computer program used to calculate time to boil and core uncovery is unavailable

INITIATING CUE:

The Shift Manager has directed you to determine the Time to Boil given a Loss of RHR and the following two sets of conditions:

1. For present plant conditions,

   AND

2. Exactly four (4) days from now based on the following conditions:
   - RCS level will be reduced to 64 inches
   - RCS temperature will be lowered to 100°F
   - PRZR manway will be removed

Facility:	Ginna	Task No.:	300-003-03-02
Task Title:	Control of Limiting Conditions for Operation Evaluation	JPM No.:	2012 Retake N-SA-3
K/A Reference:	G 2.2.23 (RO 3.1/ SRO 4.6) Ability to track Technical Specification limiting conditions for operation	Alternate Path	Yes ___ No X
		Time Critical	Yes ___ No X
		Category:	SRO

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: ___ Actual Performance: X

Classroom X Simulator ___ Plant ___

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- Plant is operating at 100% power
- Electricians are preparing to perform a PM on MOV-3996, TDAFW Pump Discharge Valve, under Work Order #C92144243
- No other equipment is currently Out of Service.
- A "What if" risk assessment in EOOS has been performed and it was determined that the highest PRF color is yellow and the highest top level system status color is yellow. Values match IWS expected risk

Task Standard: Properly fill out A-52.4, attachment 1 sections 1.0 through 4.0 and 6.0

Required Materials: None

General References:
- A-52.4, CONTROL OF LIMITING CONDITIONS FOR OPERATING EQUIPMENT Rev 14300
- Technical Specifications Amendment 112
- A-52.3 SAFETY FUNCTION DETERMINATION PROGRAM
- A-52.4, Attachment 1 KEY

Handouts:
- Attachments 1 and 2 of A-52.4, Control of Limiting Conditions for Operating Equipment Rev 14300
- Technical Specifications Amendment 112 available
- A-52.4, Control of Limiting Conditions for Operating Equipment Rev 14300

Initiating Cue:
- The Shift Manager requests that you, the CRS, fill out and submit the required paperwork (A-52.4) for performing maintenance on MOV-3996 at time 0800 on today's date

Time Critical Task: No

Validation Time: 18 Minutes (4/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Technical Specification violation

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step.

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

N/A

(Denote Critical Steps with a √)

Start Time: _____

√ **Performance Step: 1** Reviews A LCO.

_____

Procedure Step: **TECHNICAL SPECIFICATIONS, LCO 3.7.5**

Standard:
- [√] Determines the plant will be in LCO 3.7.5, Auxiliary Feedwater Systems MODES 1, 2, and 3
- [√] Determines Limiting Conditions of Operation with a TDAFW train inoperable.
- See attached KEY (A-52.4, Attachment 1)

Evaluator CUE: None

Examiner NOTE:
- Inoperable component MOV-3996 makes TDAFW Train inoperable as defined by Figure B-3.7.5-1
- **It is NOT critical for Candidate to complete performance steps in order**

Comment:

Performance Step: 2 1.0, INOPERABILITY

_____

Procedure Step: **A-52.4, Attachment 1, Section 1.0, steps 1), 2), 3), 4), and 5)**

Standard:
- See attached KEY
- Proceeds to step 6

Evaluator CUE: None

Examinee NOTE:
- **Work Order in Step 3 will be placed in section 6.0**
- **Candidate may fill in section 4.0 for equipment deemed inoperable at this time for performance step 10.0**

Comment:

Performance Step: 3 **Perform** loss of Safety function determination PER Attachment 2

_____

Procedure Step: **A-52.4, Attachment 1, Step 6**

Standard: Proceeds to Attachment 2

See attached KEY

Evaluator CUE: None

Comment:

Performance Step: 4 Have any of the following supporting system LCO's been entered? YES/ NO

_____

Procedure Step: **A-52.4 Attachment 2, Step 1.0**

Standard:

- Circles NO in step 1.0
- Proceeds to step 2.0

Evaluator CUE: None

Comment:

Performance Step: 5

_____

- Has only one (1) LCO been entered ? (i.e. total # of LCOs in effect is only 1) YES/ NO.
- IF YES AND Question #1 was answered NO, THEN the single LCO provides necessary ACTIONS.
- Return to Attachment 1 and checks of 'Loss of Safety Function Determination box

Procedure Step: **A-52.4 Attachment 2, Step 2.0**

Standard:

- Circles YES in step 2.0
- Determines that the single LCO provides necessary ACTIONS
- Return to Attachment 1 section 1.0, step 7)

Evaluator CUE: None

Comment:

Performance Step: 6

PERFORM a "what if" risk assessment in EOOS for inoperable equipment IAW 5.2.E:

If equipment is being removed for **planned** maintenance, **Verify** EOOS PRF color and value match IWS expected risk:

If color **AND** value match IWM schedule expected risk, then continue with this Attachment.

EOOS highest PRF color:

green □ /yellow □ / orange □ /red □

EOOS highest top level system status color:

green □ /yellow □ / orange □ /red

Procedure Step: **A-52.4, Attachment 1, Section 1, Step 7) and 8)**

Standard:

- Checks the "what if" risk assessment box in step 7)
- Checks box for color and value match with IWM schedule expected risk
- Marks both yellow boxes in step 8).

Evaluator CUE: None

Comment:

Performance Step: 7 If equipment being removed from service is due to **emergent** maintenance issues, THEN PERFORM the following

Procedure Step: **A-52.4, Attachment 1, Section 1, Step 9)**

Standard: Recognizes that steps are due to planned maintenance and N/A's boxes

Evaluator CUE: None

Comment:

√ **Performance Step: 8** REQUIRED ACTIONS:

Procedure Step: **A-52.4, attachment 1, Section 2.0**

Standard: [√] Fills out the REQUIRED ACTIONS table (Attachment 1, step 2.0) In Accordance With the attached key

Evaluator CUE: **See the attached Key with similar wording and times**

Comment:

√ **Performance Step: 9** REQUIREMENTS IF REQUIRED ACTIONS/ COMPLETION TIMES ARE NOT MET:

_____

Procedure Step: **A-52.4, Attachment 1, Section 3.0**

Standard: [√] Fills out the REQUIRED ACTIONS Table In Accordance With the attached key

Evaluator Cue: **See the attached Key with similar wording and times**

Comment:

Performance Step: 10 Declaration of Inoperable Equipment

_____

Procedure Step: **A-52.4, Attachment 1, Section 4.0**

Standard: Declare equipment inoperable (logged in official record from initial conditions)

Candidate signs for Equipment deemed inoperable, Date and time

Evaluator Cue: **If asked feedback to candidate that the the TDAFWP is logged out of service in the Official Record**

See the attached Key

Examinee note Candidate may have performed this in performance step 2.0

Comment:

Terminating Cue: **After the REQUIRED ACTION Table and the DECLARATION OF INOPERABLE EQUIPMENT sections are completed: "Evaluation of this JPM is complete."**

Stop Time: _____

JPM VERIFICATION OF COMPLETION

2012 SRO RETAKE EXAM–JPM-N-SA-3 (classroom)

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Control of Limiting Conditions for Operation Evaluation**

TASK: 300-003-03-02, Control of Limiting Conditions for Operation Evaluation

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
1	ITS LCO 3.7.5	Required assessment to complete attachment correctly
8	A-52.4, ATT-1, section 2.0	Required action to complete Attachment correctly
9	A-52.4, ATT-1, section 3.0	Required action to complete Attachment correctly

INITIAL CONDITIONS:

- Plant is operating at 100% power
- Electricians are preparing to perform a PM on MOV-3996, TDAFW Pump Discharge Valve under Work Order #C92144243
- No other equipment is currently Out of Service.
- A "What if" risk assessment in EOOS has been performed and it was determined that the highest PRF color is yellow and the highest top level system status color is yellow. Values match IWS expected risk

INITIATING CUE:

- The Shift Manager requests that you, the CRS, fill out and submit the required paperwork (A-52.4) for performing maintenance on MOV-3996 at time 0800 on today's date

PERFORMANCE INFORMATION

Facility:	Ginna	Task No.:	341-012-03-03
Task/JPM Title:	Approve Radioactive Waste Discharge/Release Permit	JPM No.:	2012 Retake JPM SA-4
K/A Reference:	2.3.6 (RO 2.0 / SRO 3.8) Ability to approve release permits.	Alternate Path	Yes __ No _X
		Time Critical	Yes __ No _X
		Category:	SRO
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	

Method of testing:

Simulated Performance: _____ Actual Performance: __X__

Classroom __X__ Simulator _____ Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- The plant is at 100% power.
- The A Monitor Tank release was not authorized by the Shift Manager due to discrepancies with the CH-700 Liquid Waste Release Form, Attachment 3.
- No additional actions have been taken

Task Standard: Identify discrepancies on discharge permit and all critical tasks evaluated as satisfactory.

Required Materials: Attached Key.

General References: S-3.4K: Releasing Monitor Tank A or B to Discharge Canal, Rev 03002
CH-700, Liquid Waste Batch Release, Rev. 00600, Attachment 3

Handouts:

- CH-700, Liquid Waste Batch Release, Rev. 00600, Attachment 3 submittal
- CH-700, Liquid Waste Batch Release, Rev. 00600

Initiating Cue:
- Review the CH-700 Liquid Release form, Attachment 3, for the A Monitor Tank and document ALL discrepancies on the JPM CUE SHEET

Time Critical Task: No

Validation Time: 16 minutes (4/3/13)

SIMULATOR SETUP

N/A

PERFORMANCE INFORMATION

(Denote Critical Steps with a √)

START TIME: _____

Performance Step: 1 LIQUID WASTE RELEASE FORM

_____

Procedure Step: **Attachment 3 of CH-700**

Standard:

- Reviews release form.
- Identifies the sample time is greater than 12 hours.
- Identifies R-18 is OOS and that LINE-UP VERIFIED BY should not be N/A.

EXAMINER CUE: **Hand the Examinee the marked up copy of:**

1) **CH-700, Liquid Waste Batch Release, Rev. 00600, Attachment 3, LIQUID WASTE RELEASE FORM, and**
2) **CH-700, Liquid Waste Batch Release, Rev. 00600**

Comment:

√ **Performance Step: 2** Answer the questions on the JPM CUE SHEET.

_____

Standard:

- [√] Documents that the sample time is greater than 12 hours. (CH-700 step 6.10.4)
- [√] Documents that with R-18 being OOS the LINE-UP VERIFIED BY would be required. (CH-700 step 6.10.2.2)

EXAMINER NOTE:

Comment:

Terminating Cue: **(When examinee returns JPM to the Examiner) "Evaluation of this JPM is complete."**

STOP TIME: _____

JPM CUE SHEET

2012 SROI RETAKE JPM SA-4

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Review & Approve Radioactive Waste Discharge/Release Permit**

TASK: 341-012-03-03: Approve Radioactive Waste Discharge/Release Permit

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS/GRADING:

1. All discrepancies listed on JPM CUE sheet SATISFACTORY? ☐ YES ☐ NO

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
2	CH-700, Attachment 3 (1st bullet)	Required assessment to complete answer correctly (sample time)
2	CH-700, Attachment 3 (2nd Bullet)	Required assessment to complete answer correctly (R-18 OOS)

JPM CUE SHEET

Initial Conditions:

- The plant is at 100% power.
- The A Monitor Tank release was not authorized by the Shift Manager due to discrepancies with the CH-700 Liquid Waste Release Form, Attachment 3.
- No additional actions have been taken

Initiating Cue:

- Review the CH-700 Liquid Release form, Attachment 3, for the A Monitor Tank and document ALL discrepancies on the JPM CUE SHEET

Document ALL discrepancies with the CH-700 Liquid Release form, Attachment 3 form here:

Facility:	Ginna	Task No.:	340-001-05-02
Task Title:	Event Classification	JPM No.:	2012 Retake N-SA-5
K/A Reference:	K/A 2.4.41 (2.9 / 4.6) Knowledge of the emergency action level thresholds and classifications	Alternate Path	Yes No X
		Time Critical	Yes X No
		Category:	SRO Only

Examinee: _____ NRC Examiner: _____

Facility Evaluator: _____ Date: _____

Method of testing:

Simulated Performance: _____ Actual Performance: X

Classroom X Simulator _____ Plant _____

READ TO THE EXAMINEE

I will explain the initial conditions, which steps 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:

- 30 minutes ago, a large steamline break occurred inside containment
- Prior to the accident, the plant had been at full power for 185 days
- Automatic SI actuated
- Coincident with the automatic SI, both CKT 7T and 767 were lost
- EDG 1A started and immediately energized Bus 14
- EDG 1B failed to start automatically but was started locally and Bus 16 was energized within 8 minutes of the SI actuation
- Containment Pressure peaked at 31 PSIG and is lowering slowly
- Containment radiation levels are normal (none elevated or in alarm)
- RCS cold leg temperatures have stabilized at 265°F

Task Standard: Determine the proper EAL classification within 15 minutes

Required Materials: Pencil and dry-erase marker

General References:

- EPIP-1-0, GINNA STATION EVENT EVALUATION AND CLASSIFICATION, Rev 04800
- EAL wall chart, Rev 04800
- EAL Technical Basis Document, Rev 04800

Handouts:
- EPIP-1-0, GINNA STATION EVENT EVALUATION AND CLASSIFICATION, *or*
- EAL Wall Chart

Initiating Cue:
- Using EPIP-1-0 or the EAL wall chart, classify this event
- Provide both the classification level and EAL number on this Cue Sheet
- This is a time-critical JPM – the time will start when you tell me you understand the initial conditions

Validation Time: 5 Minutes (4/04/13)

CONSEQUENCES OF INADEQUATE PERFORMANCE:

Misclassification of event could hinder timely activation of support functions and notification of offsite organizations.

SAFETY CONSIDERATIONS:

None

INSTRUCTOR NOTES:

- Indicate reason for unsatisfactory performance in the comment section below each step.
- This is a time critical (15 minute) JPM.
- Make available a copy of EPIP-1-0 (or the EAL wall chart) to the Operator at the appropriate cue
- **Provide the candidate with the EAL Technical Basis document, if requested.**

DIRECTIONS TO PERFORMER:

1. To complete the task successfully, you must perform each critical element correctly.
2. Where necessary, consider the examiner to be the CRS.
3. Verbalize all your actions and observations while performing the JPM.
4. Where necessary, consider the examiner for peer checks as appropriate.
5. When you have indicated you understand the Initial Conditions and Initiating Cues the JPM will commence.
6. Verbalize when you consider your performance of the JPM complete.
7. Are there any questions before beginning this JPM?

SIMULATOR SETUP

N/A

(Denote Critical Steps with a √)

Start Time: _____

Performance Step: 1 _____	Operator reviews initial conditions and procedures to determine plant conditions
Procedure Step:	N/A
Standard:	None
Evaluator CUE:	**Provide Operator a copy of EPIP-1-0 and the EAL Wallchart**
Comment:	

Performance Step: 2 _____	Reviews Sections 1-5 of the procedure
Procedure Step:	**EPIP-1-0, Sections 1-5**
Standard:	Verbalizes understanding of each Precaution in Section 4.0
Evaluator CUE:	None
Comment:	

Performance Step: 3 _____	Identify the initiating conditions using either the guidelines of the EAL wall chart or Attachment 1 of EPIP-1-0
Procedure Step:	**6.1.2**
Standard:	Determines which method to use for EAL classification
Evaluator CUE	None
Comment:	

√ _____	**Performance Step: 4**	Assess given plant conditions and determine event classification using either Attachment 1 or EAL wall chart
	Procedure Step:	**6.1.2**
	Standard:	√ Determines event classification is ALERT due to a RED path on RCS Integrity CSFST, EAL 1.4.1
	Evaluator CUE:	None
	Evaluator NOTE:	• Since the accident occurred 30 minutes ago, and cold leg temperatures have been reduced by >100°F within 60 minutes to <284°F, this meets the RED path entry condition for the Integrity CSFST and FR-P.1 should be entered. • The loss of both offsite power circuits satisfies the UE conditions of EAL 6.1.1, but this is a lower classification level. • Candidate may consider an ALERT condition on EAL 6.1.3, Available safeguard train AC power reduced to a single EDG for > 15 min, but the 'B' EDG was started and energized Bus 16 in 8 minutes.
	Comment:	

√ _____	**Performance Step: 5**	Complete time-critical classification within 15 minutes
	Procedure Step:	N/A
	Standard:	√ Completes assessment of conditions and classifies the event within 15 minutes from the start of the JPM
	Evaluator CUE:	None
	Comment:	

Terminating Cue:	Once the EAL classification is made: **No further actions are required.**

Stop Time: _____ Classification Time (Stop time – Start time): _____ minutes

JPM VERIFICATION OF COMPLETION

2012 SROI NRC Retake JPM SA-5

LICENSED OPERATOR NAME: _____

JOB PERFORMANCE MEASURE: **Event Classification**

TASK: 340-001-05-02, Event Classification

Time to Complete: _____

Document below any instances of failure to comply with industrial safety practices, radiation safety practices and use of HU Tools.

NOTES:

DID A NEAR MISS OCCUR DUE TO INAPPROPRIATE PERSONNEL ACTIONS/INACTIONS OR PROCEDURAL QUALITY? ☐ YES ☐ NO (If yes, provide comments below)

COMMENTS:

START TIME: _____ FINISH TIME: _____ DURATION: _____

The operator's performance was evaluated against the standards contained in this JPM and determined to be:

☐ * SATISFACTORY ☐ UNSATISFACTORY

EVALUATOR'S SIGNATURE: _____ DATE: _____

* In addition to the correct EAL classification, JPM duration must be < 15 minutes

CRITICAL STEP BASES		
CRITICAL STEP: "Those steps that, when not **performed correctly**, in the **proper sequence**, and/or **at the proper time**, will **prevent the system from functioning properly** or **preclude successful completion of the task**." (ES-603, pp 2-3)		
Performance Step	Procedure Step	Basis for Critical Step
4	EPIP-1.0, step 6.1.2	Correct classification required for satisfactory performance
5	N/A	Event declaration must be made within 15 minutes of the conditions being apparent in the control room (or in the case of this JPM, from the time the candidate states the he/she understands the Initial Conditions and Cue)

INITIAL CONDITIONS:

- 30 minutes ago, a large steamline break occurred inside containment
- Prior to the accident, the plant had been at full power for 185 days
- Automatic SI actuated
- Coincident with the automatic SI, both CKT 7T and 767 were lost
- EDG 1A started and immediately energized Bus 14
- EDG 1B failed to start automatically but was started locally and Bus 16 was energized within 8 minutes of the SI actuation
- Containment Pressure peaked at 31 PSIG and is lowering slowly
- Containment radiation levels are normal (none elevated or in alarm)
- RCS cold leg temperatures have stabilized at 265°F

INITIATING CUE:

- Using EPIP-1-0 or the EAL wall chart, classify this event
- Provide both the classification level and EAL number on this Cue Sheet
- This is a time-critical JPM – the time will start when you tell me you understand the initial conditions

EAL Classification Level: _____

EAL Classification Number: _____