PERFORM MANUAL MAKEUP TO THE RWST

SITE: **PRAIRIE ISLAND**

JPM TITLE: **MANUAL MAKEUP TO THE RWST**

RELATED PRA INFORMATION: **NONE**

TASK TITLE: **PERFORM MANUAL MAKEUP TO RWST/SFP/CVCS HOLDUP TANKS**

K/A NUMBERS: **004 A2.13**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

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

Simulator: ☒ Other:☐

Lab: ☐

Time for Completion: **15** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: ☒ RO: ☒

PERFORM MANUAL MAKEUP TO THE RWST

INITIAL CONDITIONS:

- The RWST level is 95%
- RWST Boron concentration is 2610 ppm.

INITIATING CUES:

- You have been directed by the SS to add 400 gallons of makeup to the RWST at a blended flow concentration of 3000 ppm for chemistry control per C12.5 section 5.5.
- ERCS is NOT available.

PERFORM MANUAL MAKEUP TO THE RWST

JPM PERFORMANCE INFORMATION

Required Materials: None

General References: C12.5

Task Standards: 400 gallons of 3000 ppm blended flow added to the RWST.

Start Time:

Performance Step: Step 5.5.1
Critical Y

sing Boron Addition Program or Figure 1, Blended Flow omograph, estimate the setting for 1[2] HC-110, BORIC ACID FLOW CONT, to obtain the desired blended flow concentration.

Standard: Candidate uses Figure 1 to determine HC-110 setting to obtain 3000 ppm

Evaluator Note: Assuming the candidate keeps HC-111 at 45% (67 gpm) the nomograph directs a HC-110 setting of ~75%.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 5.5.2
Critical N

Verify the boric acid and reactor makeup flow controllers are in "AUTO."

1 HC-110, BORIC ACID FLOW CONTROLLER
1 HC-111, RMW FLOW CONTROLLER

Standard: Candidate verifies HC-110 and HC-111 are in AUTO.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

PERFORM MANUAL MAKEUP TO THE RWST

Performance Step: **Step 5.5.3**
Critical Y

Place CS-46300 [~~CS-49570~~], MAKEUP MODE SELECTOR, in "MANUAL."

Standard: **Candidate places CS-46300 in MANUAL.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 5.5.4**
Critical N

Align the desired Manual Makeup flowpath:

A-D .. N/A
E. To add makeup to 11 [~~21~~] RWST, OPEN the following valves:
VC-11-59, BA BLENDER TO SIS; SPENT FUEL PIT & HOLD-UP TANK.
SI-17-1, BLENDER TO RWST.

Standard: **Candidate directs outplant operator to open VC-11-59 and SI-17-1.**

Evaluator Cue: **When contacted as an Outplant Operator agree to perform directed valve alignments. Inform the Candidate a time step has occurred and the valves are in the required positions.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 5.5.5**
Critical Y

Set 1 HC-110, BORIC ACID FLOW CONT, auto setpoint dial to the setting determined in Step 5.5.1.

Standard: **Candidate sets HC-110 to setting determined in Step 5.5.1.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

PERFORM MANUAL MAKEUP TO THE RWST

Performance Step: **Step 5.5.6**
Critical Y*

IF desired, THEN place 1 HC-110, BORIC ACID FLOW CONT, in "MANUAL" and adjust output for the desired flow rate.

Standard: **Candidate leaves HC-110 in AUTO or adjusts Boric Acid flow to match output dictated by the nomograph.**

Evaluator Note: ***This step is only critical if the Candidate places HC-110 in MANUAL.**

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

Comments: _____

Performance Step: **Step 5.5.7**
Critical Y*

IF desired or IF greater than 4000 ppm blended flow is desired, THEN place 1 HC-111, RX MU WTR TO BLENDER FLOW CONTROL STATION, to "MANUAL" and adjust for desired output.

Standard: **Candidate leaves HC-111 in AUTO or adjusts RMW flow to match output dictated by the nomograph.**

Evaluator Note: ***This step is only critical if the Candidate places HC-111 in MANUAL.**

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

Comments: _____

Performance Step: **Step 5.5.8**
Critical Y

Set the batch integrators 1 YIC-110 and 1 YIC-111 near their maximum settings or to calculated volumes.

Standard: **Candidate sets Integrator to a number greater than calculated volume.**

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

Comments: _____

PERFORM MANUAL MAKEUP TO THE RWST

Performance Step: **Step 5.5.9**
Critical Y

Momentarily place CS-46457, BORIC ACID MAKEUP, to "START," to initiate manual makeup.

Standard: **Candidate momentarily places CS-46457 to START.**

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

Comments: _____

Performance Step: **Step 5.5.10**
Critical N

Using chart recorder, verify desired RMU and BA Flow Rates.

Standard: **Candidate monitors RMU and BA flow rates.**

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

Comments: _____

Performance Step: **Step 5.5.11**
Critical N

For large quantity makeups, IF the pump for the BAST on straight recirc also switches to FAST speed, THEN adjust the recirc valve for the BAST on straight recirc to 50% OPEN:

Standard: **Candidate N/A's this step.**

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

Comments: _____

Performance Step: **Step 5.5.12**
Critical N

For large quantity makeups, direct Chemist to obtain boron concentration sample of blender flow from the applicable location:

Standard: **Candidate N/A's this step.**

Evaluator Cue: **If contacted as the Duty Chemist, inform the candidate samples are not required for this makeup.**

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

Comments: _____

PERFORM MANUAL MAKEUP TO THE RWST

Performance Step: **Step 5.5.13**
Critical Y

WHEN the desired quantity of makeup has been added, THEN perform one of the following:
Manually stop the makeup by placing CS-46457, BORIC ACID MAKEUP, to "STOP."
OR
Verify automatic makeup stopped as indicated by CS-46457, BORIC ACID MAKEUP, green light LIT.

Standard: **Candidate momentarily places CS-46457 to STOP.**

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

Comments: _____

Terminating Cues: **When 400 gallons of 3000 ppm blended flow is added to the RWST, then this JPM is complete.**

Stop Time:

TRANSFER TO RECIRC WITH ONE SAFEGUARDS TRAIN OOS

SITE:	**PRAIRIE ISLAND**
JPM TITLE:	**TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN**
RELATED PRA INFORMATION:	**NONE**
TASK TITLE:	**TRANSFER TO RECIRC WITH ONE SAFEGUARDS TRAIN OOS**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

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

Simulator: ☒ Other: ☐

Lab: ☐

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

Alternate Path: **YES**

TASK APPLICABILITY: SRO: ☒ RO: ☒

TRANSFER TO RECIRC WITH ONE SAFEGUARDS TRAIN OOS

INITIAL CONDITIONS:

- A LOCA has occurred on Unit 1.
- All actions in 1E-1 completed through and including Step 5.
- RWST level has decreased to approximately 32%.
- Attachment K is completed.
- 1ES-1.2, step 1 has been completed.

INITIATING CUES:

- The Unit 1 SS directs you to continue with 1ES-1.2 starting at step 2, and place 11 SI pump in the recirculation mode via 11 RHR pump.

JPM PERFORMANCE INFORMATION

Required Materials: None

General References: 1ES-1.2 and 1ES-1.3

Task Standards: Train B safeguard equipment in recirculation mode.

Start Time:

Performance Step: 2
Critical Y

Reset SI

Standard: Candidate depresses CS-46182 and CS46183. Annunciator 47014-0504 turns ON and 47014-0604 turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 3
Critical N

Reset containment spray

Standard: Candidate depresses CS-46001 and CS-46065 and annunciator 47019-0103 turns OFF.

Evaluator Note: Containment Spray is NOT actuated.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 4
Critical N

Check both trains of safeguards pumps available for recirculation

Standard: Candidate verifies both trains of safeguards pumps are running.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5
Critical N

Stop One Train of safeguards pumps:

11 RHR pump

Standard: Candidate places CS-46184 to the stop position. Green indicating light turns ON and red indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5 Cont.
Critical N

11 SI pump

Standard: Candidate places CS-46178 to the stop position. Green indicating light turns ON and red indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5 Cont.
Critical N

11 CS pump and place in Pullout

Standard: Candidate places CS-46008 in pullout. Both green and red indicating lights are OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 6
Critical N

Close RWST to 11 RHR pump suction

MV-32084

Standard: Candidate places CS-46202 to close and recognizes MV-32084 fails to close. Red indicating light stays ON and green indicating light stays OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: **6 RNO**
Critical Y

IF valve motion by switch or status lights can NOT be confirmed, THEN go to 1ES-1.3, TRANSFER TO RECIRCULATION WITH ONE SAFEGUARD TRAIN OUT OF SERVICE, Step 1.

Standard: **Candidate transitions to 1ES-1.3.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **1ES-1.3.1**
Critical N

Check RWST level less than 28%

Standard: **Candidate stays in Step 1 until RWST level is less than 28%.**

Evaluator Note: **When candidate indicates waiting for RWST level to lower less than 28%, then insert Trigger 2 to cause RWST level to go to 27%.**

Evaluator Cue: **After inserting Trigger 2, inform candidate a time step has occurred and RWST level is 27%.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **1ES-1.3.2**
Critical Y

Stop 12 RHR pump

Standard: **Candidate places CS-46185 to stop position. Green indicating light turns ON and red indicating light turns OFF.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: 1ES-1.3.3
Critical Y

Close RWST to RHR Isolation Valve for Operable RHR Pump:

MV-32085

Standard: Candidate places CS-46203 to close. Green indicating light turns ON and red indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3..4
Critical Y

Close SI test line to RWST

MV-32202
MV-32203

Standard: Candidate places CS-46204 and CS-46205 to close position. Green indicating lights turn ON and red indicating lights turn OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.5
Critical N

Check if containment spray pumps can be stopped:

Containment spray pumps – ANY RUNNING

Standard: Candidate verifies both pumps stopped.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.5aRNO
Critical N

Go to Step 6.

Standard: Candidate proceeds to step 6 of 1ES-1.3.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.6
Critical N

Verify RHR To Reactor Vessel Injection Valves

MV-32064 - OPEN
MV-32065 - OPEN

Standard: Candidate verifies CS-46223 and CS-46224 red indicating lights are ON and green indicating lights are OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.7
Critical Y

Align CC to RHR Heat Exchanger for Operable RHR Train:

Open MV-32093
-OR-
Open MV-32094

Standard: Candidate places CS-46027 to the open position. Red indicating light turns ON and green indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.8
Critical N

Check Containment Level – GREATER THAN 2.0 FEET

Standard: Candidate checks Sump B levels on indicators 1LI725 and 1LI726 OR Containment levels on indicators 1LI727 and 1LI728.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.9
Critical N

Check If RHR Suction Can Be Aligned To Containment Sump:

Verify RWST to RHR isolation valve for operable RHR pump – CLOSED:
MV-32085

Standard: Candidate checks CS-46203 red indicating light is OFF and green indicating light is ON.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.9b.
Critical N

Check Sump B to RHR MV bonnets vented per 1ES-1.2, TRANSFER TO RECIRCULATION, ATTACHMENT K

Standard: Candidate checks turn over conditions or contacts Aux Building operator.

Evaluator Cue: If contacted as Aux Building Operator state MV-32077 and MV-32078 bonnets are vented and Attachment K is complete.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.9c
Critical Y

Open Sump B to RHR isolation valves operable RHR pump:

MV-32076 and MV-32078

Standard: Candidate places CS-46209 and CS-46211 to the open position. Green indicating lights turn OFF and red indicating lights turn ON.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.10
Critical N

Place Operable RHR Train In Recirculation Operation

Verify Sump B to RHR isolation valves for operable RHR pump full open: MV-32076 AND MV-32078

Standard: Candidate checks CS-44209 and CS-46211 red indicating lights are ON and green indicating lights are OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.10b
Critical Y

Start operable RHR pump

Standard: Candidate places CS-46185 to start. Red indicating light turn ON and green indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step:1ES-1.3.10c
Critical N

Check for low head recirculation:
RCS pressure – LESS THAN 250 PSIG [550 PSIG]

Standard: **Candidate checks pressure on 1PI-709, 1PI-710, ERCS, or 1PR-420 is greater than 550 psig. Candidate transitions to step 11.**

Evaluator Note: **If indicated RCS pressure is less than 550 psig, inform the candidate RCS pressure is greater than 600 psig.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **1ES-1.3.10c RNO**
Critical N

Go to Step 11.

Standard: **Candidate proceeds to step 11.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **1ES-1.3.11**
Critical Y

Align Operable SI Pump for Recirculation:

Check RWST Level – LESS THAN 20%
Stop 12 SI pump

Standard: **Candidate places CS-46179 to the stop position. Green indicating light turns ON and red indicating light turns OFF.**

Evaluator Note: **When candidate indicates waiting for RWST level to lower to less than 20%, then insert Trigger 3 to cause RWST level to go to 19%.**

Evaluator Cue: **After inserting Trigger 3, inform candidate a time step has occurred and RWST level is 19%.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: 1ES-1.3.11c
Critical Y

Close SI pump suction isolation valve for operable SI Pump:

MV-32163

Standard: Candidate places CS-46194 to close. Red indicating light turns OFF and green indicating light turns ON.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.11d
Critical Y

Open RHR pump supply to operable SI pump:

MV-32207

Standard: Candidate places CS-46207 to open. Red indicating light turns ON and green indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.11e
Critical Y

Start operable SI pump

Standard: Candidate places CS-46179 to start. Red indicating light turns ON and green indicating light turns OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1ES-1.3.11f
Critical N

Check SI flow – FLOW INCREASE (1FI-925)

Standard: SI flow increase indicated on 1FI-925.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Terminating Cues: **When Train B safeguard equipment in high head recirculation mode, this JPM is complete.**

Stop Time:

ESTABLISH SUPPORT CONDITIONS AND START AN RCP

SITE: **PRAIRIE ISLAND**

JPM TITLE: **ESTABLISH SUPPORT CONDITIONS AND START A RCP**

RELATED PRA INFORMATION: **NONE**

TASK TITLE: **PERFORM A RCP EMERGENCY STARTUP**

K/A NUMBERS: **074 EA1.06**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

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

Simulator: ☒ Other: ☐

Lab: ☐

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

Alternate Path: **NO**

TASK APPLICABILITY: SRO: ☒ RO: ☒

ESTABLISH SUPPORT CONDITIONS AND START AN RCP

INITIAL CONDITIONS:

- 1FR-P.1, Response to Imminent Pressurized Thermal Shock Condition, has been entered due to plant conditions.

INITIATING CUES:

- The SS has directed you to perform 1C3 AOP1, Post Accident Emergency Start of a Reactor Coolant Pump, to start 12 RCP.

ESTABLISH SUPPORT CONDITIONS AND START AN RCP

JPM PERFORMANCE INFORMATION

Required Materials: None

General References: 1C3 AOP1, Post Accident Emergency Start of a Reactor Coolant Pump

Task Standards: 12 RCP support conditions are established and 12 RCP is running.

Start Time:

Performance Step: Step 2.4.1
Critical Y

Establish greater than 6 gpm seal injection flowrate to the RCP to be started.

Standard: Candidate establishes 12 RCP Seal Injection between 6 and 10 gpm.

Evaluator Cue: If the candidate asks if a dilution was in progress, inform the candidate NO dilution was in progress when the RCPs were tripped.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.2
Critical N

Verify the thermal barrier HX outlet valve is OPEN for the RCP to be started:

CV-31246, 12 RC PMP THERM BARR CC OUTL CV

Standard: Candidate verifies CV-31246 is open.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.3
Critical N

Check the associated RCP #1 seal ΔP >210 psid.

Standard: Candidate checks RCP #1 seal ΔP >210 psid.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.4
Critical N

Check the associated RCP seal leakoff to be between 0.8 gpm and 6 gpm.

Standard: Candidate checks 12 RCP Seal leakoff to be between 0.8 and 6 gpm.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.5
Critical N

Check the associated RCP motor temperatures:
Stator temperature <250°F.
AND
Motor bearing temperature <200°F

Standard: Candidate checks 12 RCP Motor/Stator temps to be satisfactory.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.6
Critical N

Check the associated RCP radial bearing temperature <225°F:

1T0125A, 12 RC PMP LWR BRG SEAL WTR T
1TI-125, 12 RCP LWR BRG SL WTR TI

Standard: Candidate checks 12 RCP Radial Bearing temperatures to be satisfactory.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.7
Critical N

CLOSE the pressurizer spray valves:

CV-31224, A PRZR SPRAY, using 1HC-431C.
CV-31225, B PRZR SPRAY, using 1HC-431H.

Standard: Candidate verifies A and B Pressurizer Spray valves are closed.

Evaluator Note: Candidate may place Pressurizer Master controller to manual. This enables spray valve operation by the given hand controllers, but the valves will not open under the given conditions.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.8
Critical Y

Start the oil lift pump for the RCP to be started.

Standard: Candidate starts the 12 RCP oil lift pump using CS-46258. CS-46528 red light and amber light will illuminate.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 2.4.9
Critical Y

Start the RCP.

Standard: Candidate starts 12 RCP using CS-46256.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: **Critical N**	**Step 2.4.10** **Stop the oil lift pump 1 minute after RCP start.**
Standard:	**Candidate stops 12 RCP oil lift pump using CS-46258 after 1 minute of 12 RCP operation.**
Evaluator Cue:	**When the candidate indicates they would wait one minute, inform the candidate one minute has elapsed.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: **Critical N**	**Step 2.4.11** **Realign FCUs to the gap position to provide RCP cooling.**
Standard:	**Candidate aligns 13 or 14 CFCU to the gap position.**
Evaluator Cue:	**If candidate asks SS for direction on aligning Fan Coil Units, then direct the candidate to align 13 CFCU to the gap in fast.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Terminating Cues:	**When 12 RCP support conditions are established and 12 RCP is running, then this JPM is complete.**
Stop Time:	

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

SITE:	**PRAIRIE ISLAND**
JPM TITLE:	**PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE**
RELATED PRA INFORMATION:	**NONE**
TASK TITLE:	**REACTOR TRIP OR SAFETY INJECTION**
K/A NUMBERS:	**011 EA1.07**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ **Simulate/walkthrough:** ☐ **Perform:** ☒

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

Simulator: ☒ **Other:** ☐

Lab: ☐

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

Alternate Path: YES

TASK APPLICABILITY: **SRO:** ☒ **RO:** ☒

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

INITIAL CONDITIONS:

- **Unit 1 has just experienced a large break LOCA.**
- **Read through of immediate actions of 1E-0 have been completed.**
- **You are an extra operator in the control room.**

INITIATING CUES:

- **The Unit 1 SS has directed you to perform Attachment L.**

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

JPM PERFORMANCE INFORMATION

Required Materials:

None

General References:

1E-0 Attachment L

Task Standards:

Containment Isolation is established.

Start Time:

Performance Step: **Step 1**
Critical N

Verify Safeguards component Alignment:
Both trains of SI actuated:
Both RHR pumps - RUNNING
-OR-
Both SI pumps - RUNNING

Standard: **Examinee determines both RHR and both SI pumps are running.**

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

Comments: _____

Performance Step: **Step 1**
Critical N

Verify Safeguards component Alignment:
"SI NOT READY" lights - NOT LIT

Standard: **Examinee determines SI NOT READY lights are not lit.**

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

Comments: _____

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

Performance Step: **Step 1**
Critical N

Verify Safeguards component Alignment:
"SI ACTIVE" lights - LIT FOR PLANT CONDITIONS

Standard: **Examinee determines SI ACTIVE lights are appropriate for plant conditions.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 1**
Critical N

Verify Safeguards component Alignment:
"CONTAINMENT ISOLATION" lights - LIT FOR PLANT CONDITIONS

Standard: **Examinee determines CONTAINMENT ISOLATION lights are appropriate for plant conditions**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 1.d RNO**
Critical Y

Verify Safeguards component Alignment:
Manually align components as necessary. Note any exceptions.

Standard: **Examinee actuates Containment Isolation using either CS-46085 or CS-46113.**

Evaluator Note: **If examinee decides to manually align each component individually then this step is satisfied by all CONTAINMENT ISOLATION lights being lit with the exception of those covered under other critical steps of this JPM.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

Performance Step: **Step 1.d RNO**
Critical Y

Verify Safeguards component Alignment:
Manually align components as necessary. Note any exceptions.

Standard: **Examinee manually closes CV-31319, PRT to GA (8026), using CS-46262.**

Evaluator Note: **This will cause Containment Isolation light B1 to light.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 1.d RNO**
Critical Y

Verify Safeguards component Alignment:
Manually align components as necessary. Note any exceptions.

Standard: **Examinee manually closes MV-32199, 1 EXCESS LTDN/RCP Seal RTRN TRN B (8100B), using CS-46173.**

Evaluator Note: **This will cause Containment Isolation light B3 to light**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 1.d RNO**
Critical Y

Verify Safeguards component Alignment:
Manually align components as necessary. Note any exceptions.

Standard: **Examinee manually closes MV-32024, FW to 12 SG, using CS-46414.**

Evaluator Note: **This will cause Containment Isolation light D7 to light**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Terminating Cues: **When Containment Isolation is established, this JPM is complete.**

Stop Time:

TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093

SITE: **PRAIRIE ISLAND**

JPM TITLE: **TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093**

RELATED PRA INFORMATION: **NONE**
PRA Identified Task

TASK TITLE: **PERFORM D1/D2 DIESEL GENERATOR TESTS**

K/A NUMBERS: **064 A4.06**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

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

Simulator: ☒ Other: ☐

Lab: ☐

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

Alternate Path: **NO**

TASK APPLICABILITY: SRO: ☒ RO: ☒

TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093

INITIAL CONDITIONS:

- SP 1093, D1 Diesel Generator Monthly Slow Start Test, is in progress.
- Step 7.76 has just been completed.
- NO other Surveillance Procedures are in progress.

INITIATING CUES:

- Perform steps 7.77 through 7.88 of SP1093.

TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093

JPM PERFORMANCE INFORMATION

Required Materials: Consumable copy of SP 1093 with steps completed through 7.76.

General References: SP 1093, D1 Diesel Generator Monthly Slow Start Test.

Task Standards: Candidate unloads D1, opens D1 source breaker, and stops D1 Diesel Generator.

Start Time:

Performance Step: 7.77
Critical N

Lower the VAR load to zero (0) using CS-46933, D1 DSL GEN EXCITER CONTROL.

Standard: Candidate lowers VARs to zero.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 7.78
Critical Y

Lower D1 load to 100 KW (slightly more than 650 KW if SP 1334 is performed) using CS-46934, D1 DSL GEN GOVERNOR SPEED CONTROL.

Standard: Candidate lowers D1 load to less than 650 KW.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 7.79
Critical Y

OPEN BKR 15-2 using CS-46950, BUS 15 SOURCE FROM D1 DSL GEN.

Standard: Candidate opens BKR 15-2.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 7.80

Critical N

Set the Governor SPEED DROOP at zero.

Standard: **Candidate directs outplant operator to set governor speed droop to zero.**

Evaluator Cue: **Inform the candidate speed droop is at zero.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **7.81**
Critical Y

Place CS-46906, BUS 15 SYNCHROSCOPE SEL SW, in "D1."

Standard: **Candidate places CS-46906 in D1.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **7.82**
Critical N

Adjust CS-46934 until the indicator on 41911, SYNCHROSCOPE, stops or is turning slowly in the fast direction.

Standard: **Candidate adjusts CS-46934 until indicator 41911 is turning slowly in the fast direction, such that D1 Governor Ready Lights are LIT.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **7.83**
Critical N

Place CS-46906, BUS 15 SYNCHROSCOPE SEL SW, in "OFF."

Standard: **Candidate places CS-46906 in OFF.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **7.84**
Critical N

Verify the two amber lights on 44901, D1 DSL GEN GOV READY LIGHTS, are LIT.

Standard: **Candidate verifies two amber lights on 44901 are lit.**

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

Comments: _____

Performance Step: **7.85**
Critical **Y**

Stop D1 using CS-46935, D1 DIESEL GENERATOR.

Standard: **Candidate stops D1 Diesel Generator.**

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

Comments: _____

Performance Step: **7.86**
Critical **N**

Verify the following on CS-46935:
Control switch green indicating light is LIT.
Control switch red indicating light is NOT LIT.

Standard: **Candidate verifies green light is LIT and red light is NOT LIT on CS-46935.**

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

Comments: _____

Performance Step: 7.87
Critical N

Verify exciter shutdown by observing the following:
Zero (0) volts on meter 41902-01, D1 EMERG GENERATOR PHASE A VOLTS.
Bus 15 Status Panel indicating light 44325-0201, D1 UP TO SPEED & VOLTAGE, is NOT LIT.

Standard: Candidate verifies exciter is shutdown.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 7.88
Critical Y

Place CS-46902, D1 DSL GEN EXCITER CONTROL SEL SW, in "AUTO."

Standard: Candidate places CS-46902 in AUTO.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Terminating Cues: After candidate has unloaded, opened D1 source breaker, and stopped D1, this JPM is complete.

Stop Time:

RESPOND TO FIRST STAGE PRESSURE INSTRUMENT FAILURE – PT-485

SITE: **PRAIRIE ISLAND**

JPM TITLE: **PRESSURE INSTRUMENT PT-485 FAILS LOW**

RELATED PRA INFORMATION: **NONE**
PRA Identified Task

TASK TITLE: **RESPONSE TO FIRST STAGE PRESSURE INSTRUMENT FAILURE**

K/A NUMBERS: **001 A4.03**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

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

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: **6** Minutes Time Critical: **NO**

Alternate Path: **NO**

TASK APPLICABILITY: SRO: ☒ RO: ☒

INITIAL CONDITIONS:

- You are the Reactor Operator.

INITIATING CUES:

- The following annunciators are about to come in:
  - 47011-0405, FW Control System Trouble.
  - 47013-0405, Auctioneered Tave-Tref Deviation.
- Respond to plant conditions.

JPM PERFORMANCE INFORMATION

Required Materials: None

General References: 1C5 AOP1, 1C51.2, C47

Task Standards: Rod Control is in manual and Steam Dumps are controlling in the Steam Pressure Mode.

Start Time:

Performance Step: 1C5 AOP1 Step 1
Critical N

Check Generator Electrical Load - STABLE

Standard: Candidate determines that Generator MWs are stable.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C5 AOP1 Step 2
Critical Y

Place Rod Bank Selector Switch To "MANUAL"

Standard: Candidate places CS-46280, Rod Control Selector Switch, in Manual.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C5 AOP1 Step 3
Critical N

Check Rod Motion - STOPPED

Standard: Candidate checks that rod motion has ceased.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C5 AOP1 Step 4
Critical N

Check For Failed Instrument:
- NIS power range channels - ALL IN AGREEMENT
- RCS loop Tavg channels - ALL IN AGREEMENT
- Turbine impulse pressure 1PT-485 -NORMAL FOR POWER

Standard: Candidate recognizes 1PT-485 is not reading normal for the current power.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C5 AOP1 Step 4 RNO
Critical N

Go to the appropriate procedure:
- 1C51, Instrument Failure Guide
- -OR-
- 1C20.8 AOP1, Abnormal Operation, Instrument AC Inverters

Standard: Candidate transitions to 1C51.2 for PT-485 failed low.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical Y

Step 1: Place rod control in "MANUAL" AND control Tave at value appropriate for power level.

Standard: Candidate places CS-46280, Rod Control Selector Switch, in Manual, if not already done, and verifies Tave is within ±1°F of Tref.

Evaluator Note: This step is only critical if this action has not been performed previously.

Evaluator Cue: If the candidate indicates they wish to restore Tave to Tref then, as the Shift Supervisor, direct the candidate to continue with 1C51.2 and restore Tave to Tref upon completion of other actions.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical Y

Step 2: Place one steam dump interlock bypass switch to "OFF".

Standard: Candidate places CS-46460, Steam Dump Cdsr Vlv Lo-Lo Tavg Intlk B-P Train A, OR places CS-46460, Steam Dump Cdsr Vlv Lo-Lo Tavg Intlk B-P Train B, to OFF.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical Y

Step 3: Place steam dump in steam pressure mode AND verify valves CLOSED.

Standard: Candidate places CS-46338, Steam Dump Mode, in Steam Pressure and verifies Steam Dump valves are closed.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical N

Step 4: Verify zero output on steam dump controller.

Standard: Candidate verifies steam dump controller has a zero output.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical Y

Step 5: Return steam dump interlock bypass switch to "ON."

Standard: Candidate places CS-46460, Steam Dump Cdsr Vlv Lo-Lo Tavg Intlk B-P Train A, OR places CS-46460, Steam Dump Cdsr Vlv Lo-Lo Tavg Intlk B-P Train B, to ON.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical N

Step 6: Verify SG level control operating properly in automatic.

Standard: Candidate verifies SGWLC continues to operate in automatic.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical N

Step 7: Refer to T.S. LCO 3.3.1 Condition A and Table 3.3.1-1 Function 16.b.2.

Standard: Candidate informs the SS of appropriate T.S. for evaluation.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low
Critical N

Step 8: Refer to TRM TLCO 3.3.4 Condition A and TRM Table 3.3.4-1 Function 3.

Standard: Candidate informs the SS of appropriate TRM TLCO for evaluation.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Terminating Cues: When Rod Control is in manual and Steam Dumps are controlling in the Steam Pressure Mode, then this JPM is complete.

Stop Time:

SWAP COMPONENT COOLING WATER PUMPS

SITE: **PRAIRIE ISLAND**

JPM TITLE: **SWAP COMPONENT COOLING PUMPS**

RELATED PRA INFORMATION: **NONE**

TASK TITLE: **START THE STANDBY CC WATER PUMP**
RETURN A CC PUMP TO STANDBY

K/A NUMBERS: **008 A4.08**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ **Simulate/walkthrough:** ☐ **Perform:** ☒

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

Simulator: ☒ **Other:** ☐

Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path: NO

TASK APPLICABILITY: **SRO:** ☒ **RO:** ☒

SWAP COMPONENT COOLING WATER PUMPS

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- 12 CC Pump needs to be removed from service for corrective maintenance.
- The CC System is NOT cross-connected.
- 122 SFP HX CC Flow is approximately 1800 gpm.

INITIATING CUES:

- The SS directs you start 11 CC Pump THEN stop 12 CC Pump using 1C14, Section 5.2 and Section 5.3.

SWAP COMPONENT COOLING WATER PUMPS

JPM PERFORMANCE INFORMATION

Required Materials:	**None**
General References:	**1C14**
Task Standards:	**11 CC Pump is running, 12 CC Pump is secured, and MV-32146, 12 CC HX CLG WTR INLET, is closed.**
Start Time:	
Performance Step: **Critical N**	**1C14 Step 5.2.1** **Notify the Aux Building Operator to check the following, on the pump to be started:** **Bearing oil level in sight glass.** **No seal leakage (evaluate starting if seal leakage exists)**
Standard:	**Candidate notifies Aux Building Operator to perform Step 5.2.1.**
Evaluator Cue:	**If asked as the Auxiliary Building Operator, report that Step 5.2.1 is complete.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____
Performance Step: **Critical Y**	**Step 5.2.2** **Start 11 CC Water Pump** **CS-46036, 11 CC WTR PUMP**
Standard:	**Candidate starts 11 CC Water Pump.**
Evaluator Note:	**If asked as the Auxiliary Building Operator, 11 CC Pump is running satisfactorily.**
Performance:	**SATISFACTORY ☐ UNSATISFACTORY ☐**
Comments:	_____

Performance Step: Step 5.2.3
Critical N

Verify the associated CC HX cooling water inlet valve OPENS:
MV-32145, 11 CC HX CLG WTR INLET

Standard: Candidate opens MV-32145.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 5.2.4
Critical N

Locally check the following for proper pump operation:
Bearing oil levels in sight glass.
No seal leakage (evaluate continued pump operation if leakage is present)
Motor slinger rings are turning.
No abnormal noise.
No vibration alarms.

Standard: Candidate notifies Aux Building Operator to perform Step 5.2.4

Evaluator Cue: When asked as the Auxiliary Building Operator, reply that Step 5.2.4 is satisfactorily completed, all indications are normal.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: Step 5.2.5
Critical N

If dual pump operation is desired, then check CC flow to components, starting with the RCP's and adjust as necessary.

Standard: Candidate determines that dual pump operation is not required.

Evaluator Cue: If asked, direct the trainee to establish single pump operation.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

SWAP COMPONENT COOLING WATER PUMPS

Performance Step: **Step 5.2.6**
Critical N

If single pump operation is desired and plant conditions permit, then operate both CC pumps for at least ten minutes to allow CC temperatures to stabilize.

Standard: **Candidate operates both CC pumps for ten minutes (time compression)**

Evaluator Cue: **IF the candidate indicates they would wait ten minutes, THEN inform the candidate a 10 minute time step has occurred.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 5.2.7**
Critical N

If single pump operation is desired and total Component Cooling Water flow is less than 4000 gpm, then perform Section 5.3.

Standard: **Candidate proceeds to Section 5.3.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 5.3.1**
Critical N

Check the associated train of RHR is NOT being used for shutdown cooling.

Standard: **Candidate checks RHR is not being used for shutdown cooling.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

SWAP COMPONENT COOLING WATER PUMPS

Performance Step: **Step 5.3.2**
Critical N

IF CC flow though a RHR heat exchanger is being used to meet Limitation 4.4, THEN perform the following:

Standard: **Candidate N/As step 5.3.2.**

Evaluator Cue: **IF candidate asks for 122 SFP HX CC Flow, THEN inform candidate flow is approximately 1800 gpm.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 5.3.1**
Critical Y

Stop one CC Pump
CS-46037, 12 CC WTR PUMP

Standard: **Candidate stops 12 CC Pump.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Performance Step: **Step 5.3.2**
Critical N

Close the associated CC HX cooling water inlet valve:
MV-32146, 12 CC HX CLG WTR INLET, using CS-46047

Standard: **Candidate closes MV-32146.**

Performance: **SATISFACTORY ☐ UNSATISFACTORY ☐**

Comments: _____

Terminating Cues: **When 11 CC Pump is running, 12 CC Pump is secured, and MV-32146, 12 CC HX CLG WTR INLET, is closed, inform the examinee that this JPM is complete.**

Stop Time:

RESPONSE TO HIGH RADIATION ALARM DURING WASTE GAS RELEASE

SITE: **PRAIRIE ISLAND**

JPM TITLE: **RESPONSE TO HIGH RADIATION ALARM DURING WASTE GAS RELEASE**

RELATED PRA INFORMATION: **NONE**

TASK TITLE: **CONDUCT AUTHORIZED WASTE GAS RELEASE**

K/A NUMBERS: **071 A4.26**

APPLICABLE METHOD OF TESTING:

Discussion: ☐ Simulate/walkthrough: ☐ Perform: ☒

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

Simulator: ☒ Other: ☐

Lab: ☐

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

Alternate Path: **YES**

TASK APPLICABILITY: SRO: ☒ RO: ☒

INITIAL CONDITIONS:

- A release of 121 Low Level Gas Decay Tank was just initiated per C21.3-10.1, Releasing Radioactive Gas from 121 Low Level Gas Decay Tank.
- OPWIND_U1 is being monitored on ERCS.
- You are the Unit 1 Lead.

INITIATING CUES:

- Respond to High Radiation Alarms.

JPM PERFORMANCE INFORMATION

Required Materials: None

General References:

C47022-0108, Hi Radiation Train B Panel Alarm
C47022-0109, Hi Radiation Train A Panel Alarm
C47047 2R-37, Aux Bldg Vent Gas Monitor A High Radiation Level Alarm.
C47048 2R-30, Aux Bldg Vent Gas Monitor B High Radiation Level Alarm.

Task Standards: Candidate starts 121 and/or 122 Auxiliary Building Special Exhaust Fan(s) and stops 21 Aux. Bldg. General Exhaust Fan.

Start Time:

Performance Step: C47022-0109 (0108), Hi Radiation Train A (Train B) Panel Alarm
Critical N

Determine the initiating alarm AND respond to the alarm as specified in C47047 (C47048).

Standard: Candidate determines initiating alarm and proceeds to C47047 for 2R-37 or C47048 for 2R-30.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: C47047 2R-37 (C47048 2R-30)
Critical N

INITIAL ACTIONS
IF meter deflection is above OR near CPM setpoint, OR the Hi Rad Level Alarm cannot be reset in Step 1, THEN verify AUTOMATIC ACTIONS have occurred.

Standard: Candidate determines meter deflection is above CPM setpoint and proceeds to verifying automatic actions have occurred.

Evaluator Note: Step 1 of C47047 2R-37 (C47048 2R-30) is not applicable because CPM meter deflection for 2R-37 and 2R-30 is NOT at or near background level.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

_____

Performance Step: C47047 2R-37 (C47048 2R-30)
Critical Y

AUTOMATIC ACTIONS
Starts 121 (122) Auxiliary Building Special Exhaust Fan.

Standard: Candidate manually starts 121 or 122 Auxiliary Building Special Exhaust Fan.

Evaluator Note: 121 and 122 Auxiliary Building Special Exhaust Fans will FAIL to automatically start.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

_____

Performance Step: C47047 2R-37 (C47048 2R-30)
Critical Y

AUTOMATIC ACTIONS
WHEN 121 (122) Special Exhaust Fan breaker closes, THEN equipment aligns as follows:
D. 11 and 21 Aux. Bldg. General Exhaust Fans stopped and associated discharge dampers CLOSE.

Standard: Candidate manually stops 21 Aux. Bldg General Exhaust Fan.

Evaluator Note: 21 Aux. Bldg General Exhaust fan will FAIL to automatically stop.

Evaluator Cue: IF candidate asks for the status of equipment with NO indications in the Control Room, THEN inform the candidate the equipment is "as expected".

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

_____

Terminating Cues: When candidate starts 121 and/or 122 Auxiliary Building Special Exhaust Fan(s) and stops 21 Aux. Bldg. General Exhaust Fan, THEN this JPM is complete.

Stop Time: