

SITE: PRAIRIE ISLAND

JPM TITLE: MANUAL MAKEUP TO THE RWST

JPM NUMBER: VC-18S REV. 7

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: X**

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

Simulator: ☒ Other: ☐

Lab: ☐

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

Alternate Path: **NO**

TASK APPLICABILITY: SRO: ☒ RO: ☒

VC-18S, MANUAL MAKEUP TO THE RWST

INITIAL CONDITIONS:

- The RWST was inadvertently drained to 85%.
- RWST Boron concentration is 3000 ppm.

INITIATING CUES:

- You have been directed by the SS to raise RWST level to 95% and maintain boron concentration per C12.5 section 5.5.

VC-18S, MANUAL MAKEUP TO THE RWST

JPM PERFORMANCE INFORMATION

Required Materials: None

General References: C12.5, T.S. 3.5.4

Task Standards: RWST level raised to 95% with boron concentration held at 3000 ppm.

Start Time:

Performance Step: Step 5.5.1 Using Boron Addition Program or Figure 1, Blended Flow Nomograph,
Critical Y estimate the setting for 1 HC-110, BORIC ACID FLOW CONT, to obtain the
desired blended flow concentration.

Standard: Candidate uses Figure 1 (~75%) or the BD_RWST screen in ERCS (71%) 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% and ERCS directs ~71%. Ensure chosen method is used
correctly.

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:

Performance Step: Step 5.5.3
Critical Y Place CS-46300, MAKEUP MODE SELECTOR, in "MANUAL."

Standard: Candidate places CS-46300 in MANUAL.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 5.5.4
Critical N Align the desired Manual Makeup flowpath:
A-D .. N/A
E. To add makeup to 11 RWST, OPEN the following valves:

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

VC-18S, MANUAL MAKEUP TO THE RWST

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: 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: _____

Performance Step: 5.5.6
Critical Y IF desired, THEN place 1HC-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/BD_RWST screen. (~11.5/~10.6 gpm).

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

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.7
Critical Y IF desired or IF greater than 4000 ppm blended flow is desired, THEN place 1HC-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/BD_RWST screen.

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

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

VC-18S, MANUAL MAKEUP TO THE RWST

Performance Step: 5.5.8
Critical Y Set the batch integrators 1YIC-110 and 1YIC-111 near their maximum settings or to calculated volumes.

Standard: Candidate sets Integrator to a number greater than that calculated by BD_RWST (~2800 gals).

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.9

Critical Y Momentarily place CS-46457 [~~CS-49585~~], BORIC ACID MAKEUP, to "START," to initiate manual makeup.

Standard: Candidate momentarily places CS-46457 to START.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.10
Critical N Using ERCS or chart recorder verify desired RMU and BA Flow Rates.

Standard: Candidate sets up an ERCS trend to monitor RMU and BA flow rates.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance 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: 5.5.12
Critical N For large quantity makeups, direct Chemist to obtain boron concentration sample of blender flow from the applicable location:
C-15-42 [~~2VC-15-42~~], BORIC ACID BLENDER TO SFP; RWST & HUT – DRAIN, when blending to CVCS HUT, SFP, or RWST

Standard: Candidate directs Chemist to perform required samples.

Evaluator Cue: When contacted as the Duty Chemist agree to perform samples as directed.

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

VC-18S, MANUAL MAKEUP TO THE RWST

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance 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 [~~CS-49585~~], BORIC ACID MAKEUP, to "STOP."
OR
Verify automatic makeup stopped as indicated by CS-46457 [~~CS-49585~~], BORIC ACID MAKEUP, green light LIT.

Standard: Candidate momentarily places CS-46457 to STOP.

Evaluator Cue: When Candidate indicates they would wait to achieve the desired level, then inform direct the Booth Operator to input Trigger 2 and inform the Candidate a time step has occurred, RWST level is 95%.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.14
Critical N IF the recirc valve for the BAST on straight recirc was adjusted to 50% OPEN in Step 5.5.11, THEN return the recirc valve for the BAST on straight recirc to 0%:

Standard: Candidate N/A's this step.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.15
Critical N IF makeup was added to the CVCS HUT...

Standard: Candidate N/A's this step.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.16
Critical N IF makeup was added to the SFP...

Standard: Candidate N/A's this step.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

VC-18S, MANUAL MAKEUP TO THE RWST

Performance Step: 5.5.17
Critical N IF makeup was added to the RWST, THEN CLOSE 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 close 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: 5.5.18
Critical N Verify CV-31201, BA BLENDER TO VCT INLET, in "AUTO," using CS-46454.

Standard: Candidate verifies CS-46454 is in AUTO.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.19
Critical N Verify CV-31200, BA BLENDER TO VCT OUTLET, in "AUTO," using CS-46302.

Standard: Candidate verifies CS-46302 is in AUTO.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.20
Critical Y Verify 1[2] HC-111, RX MU WTR TO BLENDER FLOW CONTROL STATION, is in "AUTO."

Standard: Candidate verifies 1HC-111 is in AUTO.

Evaluator Note: Step is only critical if the hand controller was previously placed in MANUAL.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

VC-18S, MANUAL MAKEUP TO THE RWST

Performance Step: 5.5.21
Critical Y Verify 1HC-110, BORIC ACID FLOW CONT, is in "AUTO".

Standard: Candidate verifies 1HC-110 is in AUTO.

Evaluator Note: Step is only critical if the hand controller was previously placed in MANUAL.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.22
Critical Y Return RCS makeup to automatic control as follows:
A. Place CS-46300, MAKEUP MODE SELECTOR, in "AUTO".

Standard: Candidate places CS-46300 in AUTO.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.22
Critical Y Return RCS makeup to automatic control as follows:
B. Momentarily place CS-46457, BORIC ACID MAKEUP CONTROL, to "START".

Standard: Candidate momentarily places CS-46457 to START.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.22
Critical N Return RCS makeup to automatic control as follows:
C. Reset the Boric Acid integrator.

Standard: Candidate resets the Boric Acid Integrator.

Evaluator Note: Step is only critical if the integrator was set to roughly the required amount of Boric Acid.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Performance Step: 5.5.22
Critical N Return RCS makeup to automatic control as follows:
D. Reset THE RMU INTEGRATOR.

Standard: Candidate resets the RMU Integrator.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

VC-18S, MANUAL MAKEUP TO THE RWST

Comments: _____

Performance Step: 5.5.23
Critical N IF manual makeup was to a CVCS HUT...

Standard: Candidate N/A's this step.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

Terminating Cues: When RWST level raised to 95% with boron concentration held at 3000 ppm, then this JPM is complete.

Stop Time:

Retention: Life of Plant

Retain in: Training Record

Form retained in accordance with record retention schedule identified in FP-G-RM-01.

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

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

K/A NUMBERS: 006 A4.05

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: ☒

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

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: Annunciator 47014-0504 on; Annunciator 47014-0604 off

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 3

Critical N Reset containment spray

Standard: CS-46001 and CS-46065 depressed, annunciator 47019-0103 off

Evaluator Note: CS not actuated.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 4

Critical N Check both trains of safeguards pumps available for recirculation

Standard: 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: CS-46184 to stop position

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 5 – Cont.
Critical N 11 SI pump

Standard: CS-46178 to stop position

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 5 – Cont.
Critical N 11 CS pump and place in Pullout

Standard: CS-46008 placed in Pullout

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 6
Critical N Close RWST to 11 RHR pump suction MV-32084.

Standard: CS-46202 to close

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 7
Critical Y Close SI test line to RWST: MV-32202; MV-32203

Standard: CS-46204 and CS-46205 to close position

Evaluator Note: Closure of one of the two valves completes the critical step requirement. This step is not critical if performed in 1ES-1.3, but a comment should be made concerning procedure use.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 8

Critical N

Verify RHR To Reactor Vessel Injection Valve Alignment:

MV-32064 - OPEN

MV-32065 - OPEN

Standard: CS-46223 and CS-46224 red indicating light verified on.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 9

Critical N

Align CC to RHR Heat Exchanger for Idle RHR Train: - Open MV-32093

Standard: CS-46023 placed in open

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 10

Critical N

Check Containment Level GREATER THAN 2.0 FEET

Standard: Checks Sump B levels on indicators 1LI725 and 1LI726 OR Containment levels on indicators 1LI727 and 1LI728

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 11

Critical N

Check if RHR Suction Can Be Aligned To Containment Sump:

a. Verify RWST to RHR isolation valve for idle RHR pump – CLOSED
MV32084

Standard: CS-46202 red indicating light verified on

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

Performance Step: 11b.
Critical N Check Sump B to RHR MV Bonnets vented per ATTACHMENT K

Standard: 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: 11c.
Critical N Open sump B to RHR isolation valves 11 RHR pump MV-32075 and MV-32077.

Standard: CS-46208 to the open position

Evaluator Note: MV-32075 will not open. The Examinee may transition to 1ES-1.3 at this time. If the examinee asks for guidance from the SS, tell him to take actions as directed by procedure.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 12
Critical N Check If Second containment Spray Pump Can Be Stopped:
Containment Spray Pumps - ANY RUNNING
Containment pressure – LESS THAN 20 PSIG
Stop CS Pump and place in “PULLOUT”

Standard: Examinee determines no Containment Spray pumps are running

Evaluator Note: Step may be NA'd since containment pressure did not reach CS actuation setpoint.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 13
Critical Y Place Idle RHR Train In Recirculation Operation
a. Verify Sump B to RHR isolation valves for idle RHR pump are - FULL OPEN:
MV-32075 AND MV-32077.

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

Standard: Examinee determines MV-32075 does not open

Evaluator Note: Transition to 1ES-1.3 may be performed at step 11, but comment on EOP usage.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 1ES-1.3-1
Critical N Check RWST level less than 28%

Standard: Stay in Step 1 until RWST level is less than 28%

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 2
Critical Y Stop 12 RHR pump

Standard: CS-46185 to stop position

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 3
Critical Y Close RWST to RHR Isolation Valve for Operable RHR Pump:
MV-32085

Standard: CS-46203 to close

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 4
Critical Y Close SI test line to RWST:
MV-32202
MV-32203

Standard: CS-46204 and CS-46205 to close position; green indicating light on, red light off.

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

Evaluator Note: This step is non critical if performed in 1ES-1.2.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 5

Critical N

Check if containment spray pumps can be stopped:
Containment spray pumps – ANY RUNNING
Containment pressure – LESS THAN 20 PSIG
Stop both CS pumps and Place in “PULLOUT”

Standard: Verifies both pumps stopped

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 6

Critical N

Verify RHR To Reactor Vessel Injection Valves:
MV-32064 - OPEN
MV-32065 - OPEN

Standard: CS-46223 and CS-46224 red indicating light on

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 7

Critical Y

Align CC to RHR Heat Exchanger for Operable RHR Train:
Open MV-32093
-OR-
Open MV-32094

Standard: CS-46027 red indicating light verified on.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

Performance Step: 8

Critical N Check Containment Level – GREATER THAN 2.0 FEET

Standard: Checks Sump B levels on indicators 1LI725 and 1LI726 OR Containment levels on indicators 1LI727 and 1LI728

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 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: Examinee checks red light off, green light on for CS-46203

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 9b

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

Standard: 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: 9c.

Critical Y Open Sump B to RHR isolation valves operable RHR pump:
MV-32076 and MV-32078

Standard: CS-46209 and CS-46211 to the open position

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

Performance Step: 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: Examinee checks Red light on, green light off for CS-44209 and CS-46211

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 10b.

Critical Y

Start operable RHR pump

Standard: CS-46185 to start

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 10c.

Critical N

Check for low head recirculation:

1) RCS pressure – LESS THAN 250 PSIG [550 PSIG]

Standard: Pressure check on 1PI-709, 1PI-710, ERCS, or 1PR-420 pressure greater than 550 psig. 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: 11

Critical Y

Align Operable SI Pump for Recirculation:

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

Standard: CS-46179 to stop

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

SI-11F-1, TRANSFER TO RECIRCULATION WITH FAILURE OF ONE SAFEGUARD TRAIN

Performance Step: 11c.
Critical Y Close SI pump suction isolation valve for operable SI Pump:
MV-32163

Standard: CS-46194 to close

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 11d.
Critical Y Open RHR pump supply to operable SI pump:
MV-32207

Standard: CS-46207 to open

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 11e.
Critical Y Start operable SI pump

Standard: CS-46179 to start

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 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:

PERFORM AN RCP EMERGENCY STARTUP

SITE: PRAIRIE ISLAND

JPM TITLE: ESTABLISH SUPPORT CONDITIONS AND START A RCP

**RELATED PRA
INFORMATION:** NONE

TASK TITLE(S): 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:** ☒

PERFORM AN EMERGENCY RCP STARTUP

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:

PERFORM AN EMERGENCY RCP STARTUP

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.**

RC-13S, ESTABLISH SUPPORT CONDITIONS AND START A RCP

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: 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: 2.4.3
Critical N Check the associated RCP #1 seal $\Delta P > 210$ psid. IF ΔP cannot be established, THEN do NOT start the RCP.

Standard: Candidate checks RCP #1 seal $\Delta P > 210$ psid.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 2.4.4
Critical N Check the associated RCP seal leakoff to be between 0.8 gpm and 6 gpm. IF proper seal leakoff cannot be established, THEN do NOT start the RCP.

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

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

RC-13S, ESTABLISH SUPPORT CONDITIONS AND START A RCP

Performance Step: 2.4.5

Critical N Check the associated RCP motor temperatures:

Stator temperature <250°F.

AND

Motor bearing temperature <200°F

IF these temperatures cannot be established by increased ventilation OR increased CC cooling, THEN do NOT start the RCP.

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

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance 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

IF the radial bearing temperature is above 225°F, THEN check CC flow and reduce bearing temperature at a maximum of 1°F/min. Do NOT start the RCP until temperature is <225°F.

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

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance 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.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 2.4.8

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

RC-13S, ESTABLISH SUPPORT CONDITIONS AND START A RCP

Standard: Candidate starts the 12 RCP oil lift pump using CS-46258.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 2.4.9
Critical Y Start the RCP.

Standard: Candidate starts 12 RCP using CS-46256.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 2.4.10
Critical N 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: 2.4.11
Critical Y 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.

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

JPM NUMBER: E0-31SF-1 REV. 5

**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:

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:

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

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:

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.

PERFORM ATTACHMENT L, CONTAINMENT ISOLATION ACTUATION FAILURE

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

JPM NUMBER: EG-16

RELATED PRA NONE
INFORMATION: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: X RO: X NLO

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.

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 Y 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 100 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.

TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093

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

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.

TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093

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".

TAKE D1 DIESEL GENERATOR OFFLINE PER SP 1093

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:

PRESSURE INSTRUMENT PT-485 FAILS LOW

SITE: PRAIRIE ISLAND

JPM TITLE: PRESSURE INSTRUMENT PT-485 FAILS LOW

JPM NUMBER: RD-5S

RELATED PRA NONE
INFORMATION: PRA Identified Task

TASK TITLE: RESPONSE TO FIRST STAGE PRESSURE INSTRUMENT FAILURE

K/A NUMBER: 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: ☒

PRESSURE INSTRUMENT PT-485 FAILS LOW

INITIAL CONDITIONS:

- You are the Reactor Operator.

INITIATING CUES:

- PT-485, Turbine First Stage Pressure, is about to fail.
- Respond to plant conditions.

PRESSURE INSTRUMENT PT-485 FAILS LOW

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

PRESSURE INSTRUMENT PT-485 FAILS LOW

**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 Step 1
Critical Y 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 $\pm 1^{\circ}\text{F}$ 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 Step 2
Critical Y 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.

PRESSURE INSTRUMENT PT-485 FAILS LOW

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low Step 3
Critical Y 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 Step 4
Critical N 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 Step 5
Critical Y 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 Step 6
Critical N Verify SG level control operating properly in automatic.

Standard: Candidate verifies SGWLC continues to operate in automatic.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

PRESSURE INSTRUMENT PT-485 FAILS LOW

Comments:

Performance Step: 1C51.2 Turbine 1st Stage Pressure 1P-485 – Low Step 7
Critical N 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 Step 8
Critical N 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 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 NUMBER: 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 PUMPS

INITIAL CONDITIONS:

- Unit 1 is at 100% power.
- 12 CC Pump needs to be removed from service for corrective maintenance.

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 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: 1C14 Step 5.2.1

Critical N 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: 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: Step 5.2.2

Critical Y Start 11 CC Water Pump CS-46036, 11 CC WTR PUMP

Standard: 11 CC Water Pump is started.

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: MV-32145 is verified to be open.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments: _____

SWAP COMPONENT COOLING PUMPS

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: 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: Determines that dual pump operation is not required.

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

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

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: 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:

SWAP COMPONENT COOLING PUMPS

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: Proceeds to Section 5.3.

Performance: SATISFACTORY ☐ UNSATISFACTORY ☐

Comments:

Performance Step: Step 5.3.1
Critical Y Stop one CC Pump; CS-46037, 12 CC WTR PUMP

Standard: 12 CC Pump is stopped.

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: MV-32146 is closed.

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: ☒

RESPONSE TO HIGH RADIATION ALARM DURING WASTE GAS RELEASE

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 plant conditions.

RESPONSE TO HIGH RADIATION ALARM DURING WASTE GAS RELEASE

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 1. 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:
2. 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:

RESPONSE TO HIGH RADIATION ALARM DURING WASTE GAS RELEASE

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

1. 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**

2. 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: