

Facility: Limerick Generating Station		Date of Examination: 05/04/2001	
Exam Level: RO		Operating Test No.: _____	
B.1 Control Room Systems			
System / JPM Title		Type Code*	Safety Function
a. Transfer D13 from 101 to 201		DAS	6
b. Manually Initiate Standby Liquid Control (SLC)		DAS	1
c. Shutdown Cooling Flow Adjustments - RHRSW Hi Rad		LDAS	4
d. Shift HPCI Suction from CST to the Suppression Pool		DS	2
e. Main Turbine Bypass Valve Exercise Test		DS	3
f. Manually Initiate a Control Room Radiation Isolation		DS	9
g. Primary Containment N2 Make-up		NS	5
B.2 Facility Walk-Through			
a. Inadvertent Opening of a Relief Valve		DR	3
b. Remote Alignment of LPCI valves for Fire Safe Shutdown		DR	2
c. Bypass Refuel Floor HVAC isolations and Re-start Refuel Floor HVAC (T-229)		NRA	9
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA			

Facility: Limerick Generating Station		Date of Examination: 05/04/2001	
Exam Level: SRO(I)		Operating Test No.: _____	
B.1 Control Room Systems			
System / JPM Title		Type Code*	Safety Function
a. Transfer D13 from 101 to 201		DAS	6
b. Manually Initiate Standby Liquid Control (SLC)		DAS	1
c. Shutdown Cooling Flow Adjustments - RHRSW Hi Rad		LDAS	4
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Facility: Limerick Generating Station Exam Level: SRO(U)	Date of Examination: 05/04/2001 Operating Test No.: _____	
B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. Primary Containment N2 Make-up	NS	5
b. Main Turbine Bypass Valve Exercise Test	DS	3
c. Shutdown Cooling Flow Adjustments - RHRSW Hi Rad	LDAS	4
d.		
e.		
f.		
g.		
B.2 Facility Walk-Through		
a. Bypass Refuel Floor HVAC isolations and Re-start Refuel Floor HVAC (T-229)	NAR	9
b. Remote Alignment of LPCI valves for Fire Safe Shutdown	DR	2
c.		
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

TITLE: TRANSFER D13 BUS FROM 101 TO 201 SUPPLY (ALTERNATE PATH)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset the simulator to IC-17, and take out of freeze
2. Start and Load to 2000 kw D13 D/G per S92.1.0, Local And Remote Manual Startup of a Diesel Generator
3. Adjust DG speed and voltage to result in 101 feeder amps as close as possible to zero
4. Take 101-D11 sync switch to OFF
5. Prepare a copy of S92.6.A initialed up to and including Step 4.1.5

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING(S):

3.7

SYSTEM NUMBER(S):

264000 A4.04

REFERENCES:

1. S92.6.A, Rev. 13, Transfer of a 4KV Safeguard Bus from 101 Safeguard Feed to 201 Safeguard Feed and Vice Versa

TASK STANDARD(S):

Transfer D13 from the 101 to 201 without inadvertently tripping the diesel generator or interrupting power to the D13 bus per S92.6A.

TASK CONDITIONS:

1. All prerequisites for 4 KV transfer are completed
2. S92.1.N, Diesel Generator Set Up for Automatic Operations and S92.9.N Routine Inspection of the Diesel Generators have been completed for D13 Diesel Generator
3. D13 has been Started, Synchronized and Loaded to 2000 kW per S92.1.0, Local and remote manual Startup of a Diesel Generator.

INITIATING CUES:

You are directed by Shift Supervision to transfer 4KV Safeguard Bus from 101 Safeguard Bus Feed to the 201 Safeguard bus feed using D13 Diesel Generator.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain a copy of S92.6.A (CUE: Provide prepared copy of S92.6.A)	NA	
*2. MAINTAIN applicable Safeguard Transformer Feeder Ammeter as close to zero as possible without tripping Diesel Generator Output breaker by adjusting engine speed using 165A(B,C,D) G501/CS, "Diesel Generator Speed Governor Control Switch" (SPEED GOVERNOR).	Safeguard Transformer Feeder Ammeter Close to Zero	
*3. OPEN 101 Feeder Breaker (101 SAFEGUARDS) to appropriate 4kV Safeguard Bus.	101 Feeder Breaker indicates OPEN and diesel generator maintains proper Frequency and Voltage	
4. PLACE 143-AX103, "101 Safeguard Transformer Load Tap Changer" (TAP CHANGER) in "AUTO."	101 Safeguard Transformer Load Tap Changer is in AUTO	
Evaluator Note: The simulator does not model the 201 Safeguard Transformer. The next step must be cued.		
5. PLACE 143-BX103, "201 Safeguard Transformer Tap Changer" (TAP CHANGER) in "MANUAL." Cue: The U2 RO reports 143-BX103, Safeguard Transformer is in manual	201 Safeguard Transformer Tap Changer" (TAP CHANGER) in "MANUAL."	
6. INSERT Synchroscope Switch handle into synchroscope switch (SYNC) for appropriate 201 4kV Bus Feeder breaker. AND PLACE to "ON."	Synchroscope Switch (SYNC) for D13 201 4kV Bus Feeder breaker "ON."	
7. OBSERVE proper operation of appropriate synchroscope (SYSTEM) by verifying the following:	N/A	N/A
a. Synchroscope rotating.	Synchroscope rotating	
b. WHEN synchroscope is at 180 degrees, THEN both lights are fully bright.	At 180 degrees both lights are fully bright	

STEP	STANDARD	SAT/UNSAT
c. WHEN synchroscope is at 0 degrees, THEN both lights are off.	At 0 degrees both lights are off	
*8. ADJUST engine speed using 165-A(B,C,D)G501/CS, "Diesel Generator Speed Governor Control Switch" (SPEED GOVERNOR) until the synchroscope is rotating slowly in the SLOW direction).	Synchroscope is rotating slowly in the SLOW direction (counterclockwise)	
*9. ADJUST diesel generator voltage using 170-A(B,C,D)G502/CS, "Diesel Generator Voltage Regulator Switch" (VOLTAGE REGULATOR) until "Synchronizing Running Voltmeter," RUNNING is slightly higher than "Synchronizing Incoming Voltmeter," INCOMING	Synchronizing Running Voltmeter RUNNING is slightly higher (1-5 Volts) than Synchronizing Incoming Voltmeter INCOMING	
*10. WHEN synchroscope (SYSTEM is within 3 degrees before 12 O'clock, THEN CLOSE 201 Feeder Breaker (201 Safeguards) to appropriate 4kV Safeguard Bus	201 Feeder Breaker (201 Safeguards) closed to appropriate 4kV Safeguard Bus	
<p>INSTRUCTOR NOTE</p> <p>The following interventions simulate a failure of the D13 DG voltage regulator in the RAISE direction, D13 DG OVERCURRENT alarm, and failure to trip. This will require manual action to secure the DG per the ARC.</p> <ul style="list-style-type: none"> • Insert IO Override ZEDB702C "D13 DG Voltage Control SW to RAISE" 10 seconds after 201-D13 breaker is closed • Insert Annunciator Cry Wolf 121 E-5 "D13 GENERATOR OVERCURRENT" 20 seconds after 201-D13 breaker is closed 		
11. TURN synchronizing switch to "OFF"	Synchronizing switch is "OFF"	
12. Acknowledge Annunciator 121 E-5	Annunciator E-5 Acknowledged	
13. Refer to ARC 121 E-5	ARC 121 E-5 referenced	
*13. Shutdown D13 DG	D13 DG Breaker tripped or D13 DG control placed to STOP NOTE: Either one or both steps will unload the DG. This may be performed immediately or by referencing S92.2.N, Shutdown of the Diesel Generators	
Cue: You have met the termination criterion for this JPM. You may stop here		

Comment

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. All prerequisites for 4 KV transfer are completed
2. S92.1.N, Diesel Generator Set Up for Automatic Operations and S92.9.N Routine Inspection of the Diesel Generators have been completed for D13 Diesel Generator
3. D13 has been Started, Synchronized and Loaded to 2000 kW per S92.1.0, Local and remote manual Startup of a Diesel Generator.

INITIATING CUES:

You are directed by Shift Supervision to transfer 4KV Safeguard Bus from 101 Safeguard Bus Feed to the 201Safeguard bus feed using D13 Diesel Generator.

TITLE: MANUALLY INITIATE SLC (Alternate Path)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset simulator to any power IC.
2. Insert malfunction MCU195A, RWCU Isolation Valve (HV44-1F001) fails as-is
3. Insert malfunction MCU002B, RWCU Isolation Valve (HV44-1F004) fails to auto close.
4. Insert malfunction MRP029B
5. Insert malfunction MRP407C
6. Arm and depress the RPS scram and ARI push buttons
7. Place the mode switch in shutdown

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

10 MINUTES

IMPORTANCE RATING(S):

4.2/4.2
3.9/3.9

SYSTEM NUMBER(S):

211000 A4.08
211000 A4.06

REFERENCES:

S48.1.B Rev. 9.

TASK STANDARD(S):

Standby Liquid injecting into the RPV, failure of RWCU to isolate is identified, and attempt made to manually isolate RWCU.

TASK CONDITIONS:

1. ATWS in progress on Unit 1.
2. SLC injection is directed by T-101, "RPV CONTROL"
3. SLC is set up per S48.1.A, Standby Liquid Control System Setup for Normal Operation

INITIATING CUES:

You are directed by Shift Supervision to manually initiate the Unit 1 SLC System, per S48.1.B.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain a current revision of S48.1.B. Cue: Once the trainee demonstrates the ability to locate the current revision of the procedure, provide him/her a copy.	Current revision of S48.1.B obtained.	
2. SLC System set up per S48.1.A, Standby Liquid Control System Set Up For Normal Operation.	N/A	N/A
3. SLC manual initiation is directed by T-101, RPV Control.	N/A	N/A
4. ENSURE 48-1F036 "SLC Manual Injection Maintenance Valve" (INBOARD), open.	48-1F036 open.	
5. VERIFY the following SLC squib valve continuity white lights lit: XV-48-1F004A XV-48-1F004B XV-48-1F004C	Indicating lights on C603 are lit for: XV-48-1F004A XV-48-1F004B XV-48-1F004C.	
6. ENSURE the following:	N/A	N/A
6a. HV-48-1F006A "SLC Injection" (OUTBOARD A), open.	HV-48-1F006A is open.	
6b. HV-48-1F006B "SLC Injection" (OUTBOARD B), open	HV-48-1F006B is open.	
*7. START the following SLC injection pumps, by holding keylock switches in "RUN" for at least 1 second before releasing: 1AP208 "SLC Injection Pump" 1BP208 "SLC Injection Pump" 1CP208 "SLC Injection Pump"	SLC Pump A, B, and C switches to RUN for at least one second and release.	

STEP	STANDARD	SAT/UNSAT
8. VERIFY squib valves have fired by loss of the following continuity white lights: XV-48-1F004A XV-48-1F004B XV-48-1F004C	Indicating lights on C603 extinguished for: XV-48-1F004A XV-48-1F004B XV-48-1F004C.	
9. PERFORM the following to ensure operation of SLC injection pumps within parameters:	N/A	N/A
10. VERIFY PI-48-1R600A,B,C "Pump Discharge Pressure" (PX), greater than reactor pressure.	Indication on C603 for pump discharge pressure is greater than reactor pressure.	
11. VERIFY LI-48-1R601, "SLC Tank Level" (LV), lowering at a steady rate.	C603 indication SLC tank level decreasing.	
12. VERIFY lowering reactivity as observed by lowering power on nuclear instrumentation.	Available power indications show power going down.	
13. ENSURE the following at 10C602:	N/A	N/A
14a. HV-44-1F001 "RWCU Inboard Isolation" (INBOARD), closed. Cue: If asked, respond as the CRS that you understand that the HV-44-1F001 valve did not close, but you want the Operator to continue with the procedure.	Recognize HV-44-1F001 failed to isolate and try to manually close valve. Notify CRS.	
*15b. HV-44-1F004, "RWCU Outboard Isolation" (OUTBOARD), closed. Cue: You have met the termination criteria for this JPM, you may stop here.	HV-44-1F004 manually isolated	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. ATWS in progress on Unit 1.
2. SLC injection is directed by T-101, "RPV CONTROL"
3. SLC is set up per S48.1.A, Standby Liquid Control System Setup for Normal Operation

INITIATING CUES:

You are directed by Shift Supervision to manually initiate the Unit 1 SLC System, per S48.1.B.

TITLE: SHUTDOWN COOLING FLOW ADJUSTMENTS - RHRSW Hi Rad (Alternate Path)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset simulator to IC-5 (Flooded up into Rx Well).
2. Adjust HV-C-51-103A (1A RHR Heat Exchanger Outlet Bypass POS) to 100%.
3. Ensure HV-51-1F015A (Shutdown Cooling Return Valve) is full open.
4. Throttle HV-C-51-1F048A (Heat Exchanger Bypass) closed to obtain 9000 gpm flow.
5. Close HV-51-1F003A (Heat Exchanger Outlet).
6. Provide examinee with copy of S51.8.B initialed up to and including Step 4.3.16.4

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING(S):

A4.09 3.1/3.1

SYSTEM NUMBER(S):

205000

REFERENCES:

S51.8.B, Shutdown Cooling/Reactor Circulation Operation Startup and Shutdown, Rev 46

TASK STANDARD(S):

1A RHR pump tripped and 1A RHR Heat Exchanger isolated.

Tasks Conditions:

1. "1A" RHR has been placed in service for Shutdown Cooling with Reactor Coolant temperature at 85°F as read on XI-36-101 point 1.
2. "0A" RHRSW pump is in service providing flow to "1A" RHR Heat Exchanger.
3. Reactor level is being maintained at 494" as read on LI-42-1R605.
4. HV-C-51-103A, RHR Heat Exchanger Outlet Bypass (POS), is full open and additional cooling is required to maintain reactor coolant temperature within the 75°F to 85°F band.
5. The Unit 1 Reactor Operator is performing the cooldown ST.

Initiating Cues:

The SSV has directed you to utilize S51.8.B, Shutdown Cooling Operation, to provide additional cooling to reactor coolant.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain a Current revision of S51.8.B (Cue: Provide prepared copy of S51.8.B)	N/A.	
2. If additional cooling is required, then PERFORM the following: (Cue: Additional cooling is required)	N/A	N/A
2a. OPEN HV-C-51-*F048A(B), Heat Exch Bypass.	HV-C-51-1F048A handswitch to OPEN.	
2b. OPEN HV-51-*F003A(B), OUTLET	HV-51-1F003A handswitch to OPEN.	
INSTRUCTOR NOTE Insert MRM019A U1 RHR SW Return Hdr Rad Mon fails to 500 cpm.		
2c. CLOSE HV-C-51-*03A(B), POS.	Depress HV-C-51-103A controller "CLOSE" pushbutton to reduce meter output to 0%.	
3. Respond to alarm B-4 on 011 SERV WTR B (RHRSW HI RADIATION.) (Cue: "I am the CRS you have just received the RHRSW HI Rad Alarm")	Obtain ARC B-4 on 011 SERV WTR B.	
*4. Verify the high rad condition on RR12-OR615A,B.	Observe RHRSW rad recorder RR12-OR615A and determine increasing trend.	
5. If an actual high radiation condition is suspected,	Determine recorder response is due to an actual increasing radiation condition.	
*5a. Trip associated RHR pump.	RHR Pump "1A" handswitch taken to STOP.	
5b. Isolate shell side at 1F047 or 182.	HV-51-1F047A keylock switch taken to CLOSE, green light on, red light off.	
5c. and 1F003, 103 or 1F053 for the affected loop. (Cue: Tell Operator, "You can stop here, we have met the termination criteria for this JPM.")	HV-51-1F003A keylock switch taken to CLOSE, green light on, red light off.	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

Tasks Conditions:

1. "1A" RHR has been placed in service for Shutdown Cooling with Reactor Coolant temperature at 85°F as read on XI-36-101 point 1.
2. "0A" RHRSW pump is in service providing flow to "1A" RHR Heat Exchanger.
3. Reactor level is being maintained at 494" as read on LI-42-1R605.
4. HV-C-51-103A, RHR Heat Exchanger Outlet Bypass (POS), is full open and additional cooling is required to maintain reactor coolant temperature within the 75°F to 85°F band.
5. The Unit 1 Reactor Operator is performing the cooldown ST.

Initiating Cues:

The CRS has directed you to utilize S51.8.B, Shutdown Cooling Operation, to provide additional cooling to reactor coolant.

TITLE: SHIFT HPCI SUCTION FROM THE CST TO THE SUPPRESSION POOL

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset the Simulator to any 100% power IC.
2. Place HPCI in full flow test at rated flow from CST-to-CST in accordance with S55.1.D.
3. Place the mode switch to shutdown.
4. Prepare a copy of S55.1.D marked as follows: Section 4.1 initialed; Section 4.2 N/A; Section 4.3 initialed; Section 4.4 initialed up to and including Step 4.4.3

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING(S):

A4.04 3.7/3.7

SYSTEM NUMBER(S):

206000

REFERENCES:

1. S55.1.D, HPCI System Full Flow Functional Test, Rev. 26,

TASK STANDARD(S):

HPCI pump suction aligned to the suppression pool.

TASK CONDITIONS:

1. The unit has been shutdown due to decreasing hotwell and CST level.
2. HPCI is operating in the full flow test mode at rated flow from CST-to-CST per S55.1.D, Section 4.4. in preparation for closing the MSIVs.

INITIATING CUES:

You are directed by Shift Supervision to swap Unit 1 HPCI suction from the CST to the Suppression Pool per section 4.4.4 of S55.1.D.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain current revision of S55.1.D (CUE: Provide prepared copy of S55.1.D)	N/A	
2. PLACE FIC55-*R600 in "MANUAL" AND REDUCE HPCI turbine speed to nominal 2,250 rpm as indicated on SI-56-*61, "Turbine Speed".	Flow controller in MANUAL and Turbine Speed at 2200-2300 rpm.	
* 3. OPEN HV-55-*F071, "HPCI/RCIC Flush Line to Suppression Pool" (TEST OUTBOARD).	HV-55-1F071 OPEN.	
* 4. CLOSE HV-55-*F011, "HPCI/RCIC Test Return to CST" (CONDENSATE RETURN).	HV-55-1F011 CLOSED.	
5. IF flow indicated on FIC-55-*R600, "HPCI Pump Discharge Flow Controller" (FL), falls below 300 gpm. THEN VERIFY HV-55-*F012, "HPCI Min. Flow Bypass" (MIN FLOW), opens.	If Flow drops below 300, verify HV-55-1F012 indicates open.	
* 6. OPEN HV-55-*F041, "HPCI Pump Suction from Suppression Pool (SUPP POOL SUCTION).	HV-55-1F041 OPEN.	
* 7. OPEN HV-55-*F042, "HPCI Pump Suction from Suppression Pool (SUPP POOL SUCTION).	HV-55-1F042 OPEN.	
* 8. ENSURE HV-55-*F004, "HPCI Pump Suction (COND TK SUCTION), closes.	HV-55-1F004 CLOSED.	
9. RAISE HPCI Turbine flow, as required, using FIC-55-*R600, "HPCI Pump Discharge Flow Controller" (FL).	N/A	N/A
(Cue: You may stop here, you have met the termination criteria for this JPM	N/A	N/A

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. The unit has been shutdown due to decreasing hotwell and CST level.
2. HPCI is operating in the full flow test mode at rated flow from CST-to-CST per S55.1.D, Section 4.4. in preparation for closing the MSIVs.

INITIATING CUES:

You are directed by Shift Supervision to swap Unit 1 HPCI suction from the CST to the Suppression Pool per section 4.4.4 of S55.1.D.

TITLE: MAIN TURBINE BYPASS VALVE EXERCISING

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO SIMULATOR OPERATOR:

- 1. Reset to a 100% power IC and adjust recirc flow to obtain 99% power.
- 2. Prepare a yellow copy of ST-6-001-761-1 completed up to and including Step 4.3.3, BPV #7

EVALUATION METHOD:

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

20 MINUTES

IMPORTANCE RATING(S):

3.9/2.9 A4.06

SYSTEM NUMBER(S):

241000

REFERENCES:

- 1. ST-6-001-761-1, Rev. 11, Main Turbine Bypass Valve Exercising,

TASK STANDARD(S):

#8 and #9 bypass valves cycled full open then closed

TASK CONDITIONS:

- 1. Unit 1 is at 99% power.
- 2. No other testing is in progress on Unit 1.
- 3. The ST is complete up to and including step 4.3.3 BPV-7
- 4. Permission to continue the ST is obtained from the CRS and RO, and all prerequisites are met

INITIATING CUES:

You have been directed by the CRS to complete ST-6-001-761-1, Main Turbine Bypass Valve Exercising.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain ST-6-001-761-1 in progress. (CUE: Provide examinee with yellow copy of ST-6-001-761-1 completed up to and including step 4.3.3 BPV-7.)	N/A	
2. PERFORM the following for one valve at a time:	N/A	N/A
3. VERIFY READY TO SELECT light lit, at panel 10C670.	READY TO SELECT green light lit on 10C670.	
*4. POSITION BYPASS VALVE TEST selector switch to appropriate position.	BYPASS VALVE TEST selector in position 8.	
*5. DEPRESS AND HOLD TEST BYPASS VALVE pushbutton.	Depress and hold TEST Bypass Valve pushbutton.	
6. VERIFY TESTING AND DO NOT SELECT lights lit while valve is being exercised.	TESTING and DO NOT SELECT amber lights lit.	
*7. WHEN Bypass Valve is full open, THEN RELEASE TEST BYPASS VALVE pushbutton.	When #8 Bypass Valve indicates 100% on 10C670, then release TEST BYPASS VALVE pushbutton.	
8. VERIFY Bypass Valve recloses AND ENTER initials in appropriate blank in step 4.3.3.	Verify #8 Bypass Valve indicates 0%, examinee enters initials in blank for BPV-8.	
9. VERIFY BYPASS VALVE OPEN annunciator on 106 MAIN STEAM clears.	Acknowledge and reset BYPASS VALVE OPEN alarm.	
10. WHEN READY TO SELECT light lit AND plant conditions are stable, THEN REPEAT steps 4.3.2.1 through 4.3.2.7 for next valve to be tested.	READY TO SELECT green light lit.	
11. VERIFY READY TO SELECT light lit, at panel 10C670.	READY TO SELECT green light lit on 10C670.	
*12. POSITION BYPASS VALVE TEST selector switch to appropriate position.	BYPASS VALVE TEST selector in position 9.	
*13. DEPRESS AND HOLD TEST BYPASS VALVE pushbutton.	Depress and hold TEST Bypass Valve pushbutton.	

STEP	STANDARD	SAT/UNSAT
14. VERIFY TESTING AND DO NOT SELECT lights lit while valve is being exercised.	TESTING and DO NOT SELECT amber lights lit.	
*15. <u>WHEN</u> Bypass Valve is full open, <u>THEN</u> RELEASE TEST BYPASS VALVE pushbutton.	When #9 Bypass Valve indicates 100% on 10C670, then release TEST BYPASS VALVE pushbutton.	
16. VERIFY Bypass Valve recloses <u>AND</u> ENTER initials in appropriate blank in step 4.3.3.	Verify #9 Bypass Valve indicates 0%, examinee enters initials in blank for BPV-9.	
17. VERIFY BYPASS VALVE OPEN annunciator on 106 MAIN STEAM clears.	Acknowledge and reset BYPASS VALVE OPEN alarm.	
18. Verify each bypass valve completed one cycle of full travel	Step 4.3.3 marked to indicate all bypass valves completed a full cycle of travel	
19. Position BYPASS VALVE TEST selector switch to OFF	BYPASS VALVE TEST selector switch in OFF	
20. <u>IF</u> the number of Bypass Valves which are OPERABLE is less than the number required in Table 5 of the Core Operating Limits Report (COLR), <u>AND</u> action statement C of Tech Spec 3.2.3 has <u>not</u> already been satisfied as determined from the LCO Log, <u>THEN</u> REDUCE Rx power in accordance with GP-5 Appendix 2, Section 3.1, as required, to achieve a MFLCPR of less than or equal to 0.90 <u>AND</u> immediately NOTIFY Reactor Engineering. <u>Otherwise</u> ENTER N/A for this step	N/A entered for step 4.3.5.	
21. <u>IF</u> less than four (4) Bypass Valves are operable, <u>THEN CONTACT</u> Reactor Engineering immediately <u>Otherwise</u> ENTER N/A for this step.	N/A entered for step 4.3.6	

STEP	STANDARD	SAT/UNSAT
<p>23. IF the EOC-RPT trip system is inoperable per Tech Spec 3.3.4.2 AND the main turbine bypass system is inoperable per Tech Spec 3.7.8 AND reactor power is =25%, THEN MCPR is <u>UNANALYZED</u> AND the Tech Spec actions required by Tech Spec 3.2.3.b must be followed. Otherwise ENTER N/A for this step.</p> <p>(CUE: You have met the termination criteria for this JPM and can stop here.)</p>	<p>N/A entered in step 4.3.7</p>	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

INITIATING CUES:

You have been directed by the CRS to complete ST-6-001-761-1, Main Turbine Bypass Valve Exercising.

TASK CONDITIONS:

1. Unit 1 is at 99% power.
2. No other testing is in progress on Unit 1.
3. The ST is complete up to and including step 4.3.3 BPV-7
4. Permission to continue the ST is obtained from the CRS and RO, and all prerequisites are met

TITLE: MANUALLY INITIATE A CONTROL ROOM RADIATION ISOLATION

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset the simulator to IC-17, and take out of freeze.
2. Ensure the A CREFAS fan switch is in AUTO, and the B CREFAS fan switch is in STBY.
3. Ensure the A Control Room Supply and Return fans are in RUN, and the B Control Room Supply and Return fans are in AUTO.

EVALUATION METHOD:

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

10 MINUTES

IMPORTANCE RATING(S):

3.2/3.2 A4.01

SYSTEM NUMBER(S):

290003

REFERENCES:

1. S78.8.A, Manual Initiation of Control Room Radiation or Chlorine/Toxic Chemical Isolation Rev. 13

TASK STANDARD(S):

The Control Room HVAC system is operating in the Radiation Isolation Mode, with a Radiation Isolation signal present on the "A" subsystem (Channels A and C), and no Chlorine /Toxic Chemical Isolation signals present.

TASK CONDITIONS:

1. Control Room HVAC is in the normal operating mode per S78.1.A
2. The Control Room Emergency Fresh Air Supply System is lined up for automatic operation per S78.1.B.

INITIATING CUES:

You are directed by Shift Supervision to manually initiate a Control Room HVAC Radiation isolation for maintenance using the "A" subsystem only.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain current revision of S78.8.A.	Current revision of S78.8.A obtained.	
2. Control Room HVAC in normal operating mode per S78.1.A, Placing the Control Room HVAC System into Normal Operation.	N/A	N/A
3. Control Room Emergency Fresh Air System lined up for automatic operation per S78.1.B, Aligning the Control Room HVAC Isolation and Emergency Fresh Air Supply System for Automatic Operation.	N/A	N/A
4. ENSURE keys for keylock handswitches HS-78-017A,C (RESET), are available.	Two keys for keylock handswitches HS-78-017A,,C (RESET) are obtained.	
SUBSYSTEM "A" ISOLATION	N/A	
5. IF no radiation isolation has been initiated, THEN ensure alignment as follows:	N/A	
5a. HS-78-010A, "A" CONT RM EMERG FRESH AIR FAN CONT 0AV127 in AUTO	HS-78-010A, "A" CONT RM EMERG FRESH AIR FAN CONT 0AV127 in AUTO	
5b. HS-78-010B, "B" CONT RM EMERG FRESH AIR FAN CONT 0BV127 in STANDBY	HS-78-010B, "B" CONT RM EMERG FRESH AIR FAN CONT 0BV127 in STANDBY	
*6. PLACE Control Room Isolation Valve Reset Keylock switch HS-78-017C (RESET C) to "RESET".	Reset Keylock switch HS-78-017C (RESET C) is placed in "RESET" at 00C681.	
*7. PLACE Control Room Isolation Valve Reset Keylock switch HS-78-017A (RESET A) to "RESET".	Reset Keylock switch HS-78-017A (RESET A) is placed in "RESET" at 00C681.	
*8. PLACE Control Room Isolation Valve Trip Switch HSS-78-017C (TRIP C) to "RAD".	Switch HSS-78-017C (TRIP C) arming collar is rotated to "RAD" at 00C681.	
*9. PLACE Control Room Isolation Valve Trip Switch HSS-78-017A (TRIP A) to "RAD".	Switch HSS-78-017A (TRIP A) arming collar is rotated to "RAD" at 00C681.	

STEP	STANDARD	SAT/UNSAT
10. Acknowledge 002 VENT window B2.	002 VENT window B2 acknowledged.	
*11. PLACE Control Room Isolation Valve Reset Keylock switch HS-78-017C (RESET C) to "AUTO".	Reset Keylock switch HS-78-017AC (RESET C) is placed in "AUTO" at 00C681.	
*12. PLACE Control Room Isolation Valve Reset Keylock switch HS-78-017A (RESET A) to "AUTO".	Reset Keylock switch HS-78-017A (RESET A) is placed in "AUTO" at 00C681.	
*13. DEPRESS AND RELEASE pushbutton portion of Trip switch HSS-78-017C (TRIP C).	Switch HSS-78-017C (TRIP C) pushbutton is depressed and released at 00C681.	
*14. DEPRESS AND RELEASE pushbutton portion of Trip switch HSS-78-017A (TRIP A).	Switch HSS-78-017A (TRIP A) pushbutton is depressed and released at 00C681.	
15. RECORD CREFAS run time in appropriate log.	CREFAS start data is recorded in CREFAS run time log.	
16. ENSURE HI RAD ISLN Channel A,C amber lights are Lit.	HI RAD ISLN Channel A,C amber lights are Lit	
17. VERIFY CONTROL ROOM RADIATION ISOLATION INITIATED annunciator alarmed at 002 VENT A-1	CONTROL ROOM RADIATION ISOLATION INITIATED annunciator alarmed	
18. VERIFY CONTROL ROOM RADIATION ISOLATION NOT COMPLETE annunciator is not alarmed at 002 VENT A-3, after 25 seconds	CONTROL ROOM RADIATION ISOLATION NOT COMPLETE annunciator is not alarmed	
19. ENSURE OA(B)V127, Emergency Air Fan A(B), is running	OAV127, Emergency Air Fan A, is running	
20. ENSURE OA(B)V116, CONTROL ROOM AIR SUPPLY FAN A(B), running	CONTROL ROOM AIR SUPPLY FAN A OAV116, running	
21. ENSURE OA(B)V121, CONTROL ROOM AIR RETURN FAN A(B), running	OAV121, CONTROL ROOM AIR RETURN FAN A, running	
22. VERIFY PDI-78-054, CONTROL ROOM AIR INSIDE/OUTSIDE ΔPX, greater than or equal to .25 inches water.	CONTROL ROOM AIR INSIDE/ OUTSIDE ΔPX, greater than or equal to .25 inches water	

STEP	STANDARD	SAT/UNSAT
23. IF performing subsection for maintenance, then ENSURE the device positions for RAD isolations per Attachment 1. (CUE: "You have met the termination criteria for the JPM. You may stop here.")	N/A	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. Control Room HVAC is in the normal operating mode per S78.1.A
2. The Control Room Emergency Fresh Air Supply System is lined up for automatic operation per S78.1.B.

INITIATING CUES:

You are directed by Shift Supervision to manually initiate a Control Room HVAC Radiation isolation for maintenance using the "A" subsystem only.

TITLE: PRIMARY CONTAINMENT N2 MAKEUP

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset the simulator to IC-17, and take out of freeze
2. Use Malfunction "MCP473, Drywell Air Leak" to reduce drywell pressure until the DRYWELL HI/LO PRESS alarm (107 F-2) is received at 0.1 psig. Then remove the malfunction.
3. Acknowledge DRYWELL HI/LO PRESS alarm

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

10 MINUTES

IMPORTANCE RATING(S):

3.2

SYSTEM NUMBER(S):

223001 A4.10

REFERENCES:

S57.3.B, Primary Containment Pressure Control And Nitrogen Make-Up, Rev 32

TASK STANDARD(S):

Establish makeup flow to drywell and monitor drywell pressure

TASK CONDITIONS:

1. Drywell pressure is 0.1 psig due to normal losses
2. All prerequisites for S57.3.B are completed
3. Makeup N2 is available and lined up for low flow service per S57.8.A

INITIATING CUES:

You are directed by Shift Supervision to raise drywell pressure to between 0.2 and 0.7 psig per S57.3.B, Section 4.3.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain a copy of S57.3.B.	S57.3.B Obtained	
2. REFER TO S57.8.A, Placing or removing Liquid N ₂ Vaporizing System In (From) Service and Changing Flow Modes, AND ENSURE Make-up N ₂ available AND N ₂ Supply lined up for low flow service.	NA	
3. PLACE FIC-57-119, "Nitrogen Flow Controller" (FL), in "MANUAL" AND SET to zero.	FIC-57-119, "Nitrogen Flow Controller" (FL), in "MANUAL" AND SET to zero.	
4. ENSURE HSS-57-196, "H ₂ /O ₂ Analyzer 10S206," in "STANDBY."	10S206," in "STANDBY	
5. ENSURE HSS-57-126, "H ₂ /O ₂ Analyzer 10S205," in "STANDBY."	10S205," in "STANDBY	
6. PLACE HS-57-153 to "CLOSE."	HS-57-153 closed	
7. PLACE HS-57-187 to "CLOSE."	HS-57-187 closed	
INSTRUCTOR NOTE: Activate Remote Function RPC044, Manual Stop Valve 57-1088 to close 57-1088 after being requested in the next step		
*8. CLOSE 57-1088, "N ₂ Makeup & Atm Samp Return To Supp Pool Line Maint." (CUE: Report as EO "57-1088 is closed" or "S57.3.B Step 4.3.7 is complete" as appropriate)	EO directed to close 57-1088 or perform S57.3.B Step 4.3.7	
*9. Slowly throttle OPEN HV-57-116, N ₂ MAKE-UP for 5 seconds AND PLACE in "PULL TO STOP" position.	HV-57-116 throttled open and stopped after approximately 5 seconds	
10. VERIFY N ₂ flow using XR-57-119, NITROGEN PURGE, (red pen).	XR-57-119 red pen indicates flow	

STEP	STANDARD	SAT/UNSAT
11. THROTTLE HV-57-116 for desired flow rate.	HV-57-116 throttled open with flow indicating on XR-57-119	
12. RECORD start time <u>AND</u> Drywell pressure in RO's Unified Log, using term "N2" contained in entry for System Manager's search. Note: The Unified Log is not simulated. (CUE: Unified Log entry has been made)	NA	NA
13. MONITOR PI-57-121, (PX(NR)) <u>OR</u> PMS 057 DRYWELL PRESSURE <u>OR</u> PMS 075 DW/POOL PRESS VALIDATION PI-57-121 (narrow range).	Drywell pressure monitored on one or more of PI-57-121, (PX(NR)) <u>OR</u> PMS 057 DRYWELL PRESSURE <u>OR</u> PMS 075 DW/POOL PRESS VALIDATION PI-57-121 (narrow range).	
14. CUE: "You may stop here. You have met the termination criteria for the JPM"	NA	NA

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. Drywell pressure is 0.1 psig due to normal losses
2. All prerequisites for S57.3.B are completed
3. Makeup N2 is available and lined up for low flow service per S57.8.A

INITIATING CUES:

You are directed by Shift Supervision to raise drywell pressure to between 0.2 and 0.7 psig per S57.3.B, Section 4.3.

TITLE: INADVERTENT OPENING OF A RELIEF VALVE

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

None

EVALUATION METHOD :

SIMULATE

EVALUATION LOCATION:

PLANT

APPROXIMATE COMPLETION TIME:

10 MINUTES

IMPORTANCE RATING(S):

SYSTEM NUMBER(S):

4.1/4.2

A2.03

239002

REFERENCES:

1. OT-114, Inadvertent Opening of a Relief Valve Rev. 18

TASK STANDARD(S):

Appropriate Fuses are pulled in accordance with OT-114.

TASK CONDITIONS:

1. LGS Unit 1 is in OPCON 3.
2. PSV-41-1F013K has indicated open for two minutes.

INITIATING CUES:

You are directed by Shift Supervision to pull fuses for PSV-41-1F013K in accordance with OT-114.

Critical Element(s) indicated by “*” in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain current revision of OT-114.	Current revision of OT-114 obtained.	
2. Obtain Fuse Pullers. NOTE: The operator can obtain fuse puller from a variety of locations. Most likely location is the MCR PRO's desk. (CUE: Once operator demonstrates ability to obtain fuse pullers, say "You have obtained fuse pullers.")	Fuse pullers in hand.	
*3. PULL Fuse AA-F4 B21C-F3K at panel 10C628. (Cue: Fuse is pulled.)	Fuse AA-F4 B21C-F3K at panel 10C628 removed.	
*4. PULL Fuse AA-F5 B21C-F4K at panel 10C628. (Cue: Fuse is pulled.)	Fuse AA-F5 B21C-F4K at panel 10C628 removed.	
*5. PULL Fuse AA-F3 B21C-F7K at panel 10C631. (Cue: Fuse is pulled.)	Fuse AA-F3 B21C-F7K at panel 10C631 removed.	
*6. PULL Fuse AA-F4 B21C-F8K at panel 10C631. (Cue: Fuse is pulled.) (Cue: After all four fuses have been removed, tell operator "You have met the termination criteria for this JPM. You can stop here.")	Fuse AA-F4 B21C-F8K at panel 10C631 removed.	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. LGS Unit 1 is in OPCON 3.
2. PSV-41-1F013K has indicated open for two minutes.

INITIATING CUES:

You are directed by Shift Supervision to pull fuses for PSV-41-1F013K in accordance with OT-114.

TITLE: REMOTE ALIGNMENT OF LPCI VALVES FOR FIRE SAFE SHUTDOWN

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

None

EVALUATION METHOD :

SIMULATE

EVALUATION LOCATION:

IN-PLANT

APPROXIMATE COMPLETION TIME:

30 MINUTES

IMPORTANCE RATING(S):

SYSTEM NUMBER(S):

3.2/3.8	AA2.14	600000
3.0/3.5	AA2.16	600000
3.1/3.6	AA2.17	600000
3.6/3.7	K4.14	203000

REFERENCES:

1. 2FSSG-3068W, Rev 003

TASK STANDARD(S):

Simulate proper operation of 2B RHR EMERGENCY LOCAL VALVE CONTROL PANEL X1 during fire conditions.

TASK CONDITIONS:

1. LGS Unit 2 has been scrammed and safe shutdown procedures are in progress.
2. Fire is reported in Unit 2 CRD Hydraulic Equipment Area (El. 253').
3. The 2B RHR Pump is running from the Main Control Room.
4. The following valves have no position indication in the MCR, can **NOT** be positioned normally, and need to be in the **CLOSED** position:
 - HV-051-2F015B "2B RHR SHUTDOWN CLG INJECTION PCIV (OUTBOARD)"
 - HV-051-2F027B "2B RHR SUPP POOL SPRAY LINE PCIV";
 - HV-C-051-2F048B "2B RHR HTX.SHELL SIDE BYPASS VLV. (HEAT EXCH BYPASS)"

INITIATING CUES:

You are directed by Shift Supervision to perform Alignment of Equipment for Manual Initiation of LPCI per 2FSSG-3068W Section 3.3.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
<p>1. Obtain current revision of 2FSSG-3068W Procedure</p>	<p>Current revision of 2FSSG-3068W obtained</p>	
<p>*2. IF any of the following valves can NOT be positioned normally, When operator positions transfer switches on 20-C601-X1, "2B RHR EMERGENCY LOCAL VALVE CONTROL PANEL X1", provide valve position CUE indications as follows: HSS51-215BX - Green light on, Red light off HSS51-227BX - Green light on, Red light off HSS51-248BX - Green light off, Red light on</p>	<p>Operator positions transfer switches on 20-C601-X1, "2B RHR EMERGENCY LOCAL VALVE CONTROL PANEL X1" as necessary to determine HV-051-2F015B, HV-051-2F027B and HV-C-051-2F048B valve positions. Operator recognizes HV-C-051-2F048B, "2B RHR HTX. SHELL SIDE BYPASS VLV. (HEAT EXCH BYPASS)" valve is open and needs to be closed.</p>	
<p>*3. THEN position valve from 20-C601-X1, 2B RHR EMERGENCY LOCAL VALVE CONTROL PANEL X1, using applicable Transfer Switch (18-217-370) (Note: MOV Control Switch must also be operated to close the valve. Transfer switch only aligns power to the MOV) (CUE: Inform operator of indications for HV-C-051-2F048B valve closing "dual indication" and then closed "Green light on, Red light off" after appropriate time delay)</p>	<p>HSS51-248BX is operated to close HV-C-051-2F048B, "2B RHR HTX. SHELL SIDE BYPASS VLV. (HEAT EXCH BYPASS)" (Note: MOV Control Switch must also be operated to close the valve. Transfer switch only aligns power to the MOV)</p>	
<p>4. IF HV-51-2F017B, "2B RHR LPCI INJ PCIV (OUTBOARD B)" can NOT be positioned normally, THEN POSITION valve from 20-C601-X2, "2B RHR EMERGENCY LOCAL VALVE CONTROL PANEL X2", (14-283-580) using control switch. (CUE: When requested from MCR, Inform operator that "HV-051-017B valve is positioned open normally")</p>	<p>N/A</p>	<p>N/A</p>
<p>5. NOTIFY MCR that valves are aligned for LPCI operation</p>	<p>MCR personnel notified</p>	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. LGS Unit 2 has been scrammed and safe shutdown procedures are in progress.
2. Fire is reported in Unit 2 CRD Hydraulic Equipment Area (EI. 253').
3. The 2B RHR Pump is running from the Main Control Room.
4. The following valves have no position indication in the MCR, can **NOT** be positioned normally, and need to be in the **CLOSED** position:
 - HV-051-2F015B "2B RHR SHUTDOWN CLG INJECTION PCIV (OUTBOARD)"
 - HV-051-2F027B "2B RHR SUPP POOL SPRAY LINE PCIV";
 - HV-C-051-2F048B "2B RHR HTX.SHELL SIDE BYPASS VLV. (HEAT EXCH BYPASS)"

INITIATING CUES:

You are directed by Shift Supervision to perform Alignment of Equipment for Manual Initiation of LPCI per 2FSSG-3068W Section 3.3.

TITLE: BYPASS REFUEL FLOOR HVAC ISOLATIONS AND RE-START REFUEL FLOOR HVAC (ALTERNATE PATH)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

None

EVALUATION METHOD :

SIMULATE

EVALUATION LOCATION:

PLANT

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING(S):

3.7

SYSTEM NUMBER(S):

295032 EA1.03

REFERENCES:

1. T-229, Defeating Refuel HVAC Isolation Logic Rev 001

TASK STANDARD(S):

Refuel Floor HVAC started on Unit _____, with the standby exhaust fan manually started.

TASK CONDITIONS:

1. Unit ___ is in OPCON 5
2. The refuel floor has been evacuated due to lowering cavity level on Unit _____
3. TRIP procedures require refuel floor HVAC isolation signals to be bypassed and refuel floor HVAC restored to permit access to the refuel floor for emergency seal installation
4. Zone 1, 2, and 3 are not connected
5. Refuel floor HVAC is manually secured

INITIATING CUES:

You are directed by shift management to defeat refuel floor HVAC isolation signals and restore Unit _____refuel floor HVAC to service per T-229, DEFEATING REFUEL FLOOR HVAC ISOLATION LOGIC.

Critical Element(s) indicated by "*" in Performance Checklist.

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
<p>NOTE:</p> <p>IF this JPM is the first of multiple T-200 series JPMs being performed by a single candidate THEN step #1 applies.</p> <p>OTHERWISE mark step #1 N/A</p> <p>AND provide the following to the candidate :</p> <ol style="list-style-type: none"> a. INITIATING CUE(S) and Task Conditions sheet b. CUE: " You are now in possession of the T-229 equipment container. It contains all tools and equipment required by the procedure. You are to simulate their use during performance of the procedure." c. PROCEDURE COPY for the appropriate unit 		
<p>*1. The following tools/equipment obtained from Unit 1 T-200 cabinet in OSC, BL-840 key required:</p> <ul style="list-style-type: none"> • (4) Electrical jumpers • (1) Insulated screwdriver • (1) Holding screwdriver • (1) Flashlight • (8) PA2235 keys <p>(CUE: Provide the examinee with the procedure copy as soon as the candidate removes the plant copy from the tool box (this allows the candidate to check off items in his or her copy). After the examinee points out the materials he or she will take , say "You have that equipment and copy of T-229.")</p>	<p>Student obtains a copy of T-229 and the required tools and materials from the T-200 locker</p>	
<p>2. DIRECT Dose Assessment personnel to monitor offsite dose.</p> <p>(CUE: Dose Assessment has been directed to monitor offsite dose)</p>	<p>Contact Control Room and request HP be directed to monitor offsite dose, or contact HP directly.</p>	

STEP	STANDARD	SAT/UNSAT
<p>3. BYPASS REFUEL FLOOR HVAC ISOLATIONS</p>	<p>NA</p>	<p>NA</p>
<p>*3a. INSTALL a jumper from EEE6-2 to EEE6-3 at 10C606 (Aux Equip Room) (CUE: Jumper is installed)</p>	<p>Jacks for jumper located and jumper installed</p>	
<p>*3b. INSTALL a jumper from FFF8-3 to FFF8-4 at 10C606 (Aux Equip Room) (CUE: Jumper is installed)</p>	<p>Jacks for jumper located and jumper installed</p>	
<p>*3c. INSTALL a jumper from EEE6-2 to EEE6-3 at 20C606 (Aux Equip Room) (CUE: Jumper is installed)</p>	<p>Jacks for jumper located and jumper installed</p>	
<p>*3d. INSTALL a jumper from FFF8-3 to FFF8-4 at 20C606 (Aux Equip Room) (CUE: Jumper is installed)</p>	<p>Jacks for jumper located and jumper installed</p>	
<p>IF Zones I AND III are connected, THEN PLACE the following handswitches in "NORMAL":</p> <ul style="list-style-type: none"> • HS-76-151A, RF/Rx Encl Cntmt Iso Interlock, at 10C622 (Aux Equip Room). • HS-76-152A, Rx Encl/RF Floor Cntmt Iso Interlock, at 10C622 (Aux Equip Room). • HS-76-151B, RF/Rx Encl Cntmt Iso Interlock, at 10C623 (Aux Equip Room). • HS-76-152B, Rx Encl/RF Cntmt Iso Interlock, at 10C623 (Aux Equip Room). <p>(CUE: Zone I and II are not connected) (If the examinee verifies switches in the Aux Equip. Room, the cue for each switch is "The switch is in NORMAL")</p>	<p>NA</p>	<p>NA</p>

STEP	STANDARD	SAT/UNSAT
<p>IF Zones II AND III are connected, THEN PLACE the following handswitches in "NORMAL":</p> <ul style="list-style-type: none"> • HS-76-251A, RF/Rx Encl Cntmt Iso Interlock, at 20C622 (Aux Equip Room). • HS-76-252A, Rx Encl/RF Floor Cntmt Iso Interlock, at 20C622 (Aux Equip Room). • HS-76-251B, RF/Rx Encl Cntmt Iso Interlock, at 20C623 (Aux Equip Room). • HS-76-252B, Rx Encl/RF Cntmt Iso Interlock, at 20C623 (Aux Equip Room). <p>(CUE: Zone II and III are not connected) (If the examinee verifies switches in the Aux Equip. Room, the cue for each switch is "The switch is in NORMAL")</p>	<p>NA</p>	<p>NA</p>
<p>4. BYPASS Low Refuel Floor Enclosure Delta P Isolation to prevent auto start of SBGTS by placing the following Refuel Floor HVAC Isolation Valve Reset Switches to "RESET":</p> <p>(Note: the MCR Plant Reactor Operator (PRO) performs the next four steps. Role play as the PRO when communicating)</p>	<p>NA</p>	<p>NA</p>

STEP	STANDARD	SAT/UNSAT
<p align="center">EVALUATOR NOTE</p> <p>The examinee may request the next 4 steps individually, or he or she may direct the MCR Operator to "Perform T-229 Step 4.5. In the case of the latter, mark JPM steps 4a through 4d SAT, and cue the examinee "T-229 Step 4.5 is complete."</p>		
<p>4a. HS-76-181A, HVAC RESET A, at 10C681 (Main Control Room) (CUE: HS-76-181A is in RESET)</p>	<p>Switch in RESET</p>	
<p>4b. HS-76-181B, HVAC RESET B, at 10C681 (Main Control Room) (CUE: HS-76-181B is in RESET)</p>	<p>Switch in RESET</p>	
<p>4c. HS-76-281A, HVAC RESET A, at 20C681 (Main Control Room) (CUE: HS-76-281A is in RESET)</p>	<p>Switch in RESET</p>	
<p>4d. HS-76-281B, HVAC RESET B, at 20C681 (Main Control Room) (CUE: HS-76-281B is in RESET)</p>	<p>Switch in RESET</p>	
<p>CAUTION</p> <p><u>WHEN</u> starting fans, <u>THEN</u> care must be taken <u>not</u> to exceed load center capacity which would result in a feeder breaker trip. Prior to starting a fan, the existing load should be verified to assure that the added load will remain within limits.</p> <p>An effort should be made to distribute the loads equally among the load centers.</p> <p>At <u>no</u> time shall the resulting load exceed 50 amps on any load center as measured at 10C654.</p> <p>(CUE: The load from the fans has been verified to be within the limits by the PRO)</p>	<p align="center">NA</p>	<p align="center">NA</p>

STEP	STANDARD	SAT/UNSAT
<p><u>NOTE</u></p> <p>The Refuel Floor HVAC System on the affected unit should be operated <u>IF</u> the Refuel Floor HVAC System on the affected unit is not available, the Refuel Floor HVAC System on the unaffected unit may be operated. However, <u>only</u> the Unit 1 <u>OR</u> Unit 2 Refuel Floor HVAC System may operate, <u>not</u> both.</p> <p>(CUE: If requested, then provide cue "You are directed to start Unit 1 Refuel Floor HVAC, and Unit 1 Refuel Floor HVAC is available")</p>	<p>NA</p>	<p>NA</p>
<p>*5. PLACE any two of the following Refueling Floor Air Supply Fan handswitches to "RUN" at *0C206:</p> <ul style="list-style-type: none"> • HS-76-*15A • HS-76-*15B • HS-76-*15C <p>(CUE: Switch is in RUN)</p> <p>(Note: Supply fans by design will not start at this point. They will start when two exhaust fans are sensed as running)</p>	<p>Any two switches are in RUN</p>	
<p>6. ANNOUNCE on Public Address System requiring all personnel to stand clear of Refuel Floor Air Locks to prevent any personnel injury while starting fans.</p> <p>(CUE: Communicate as the PRO, and when requested to make the announcement, say "I will make the plant announcement for starting refuel floor HVAC." Several seconds later cue the examinee "You have just heard the announcement made for starting refuel floor HVAC.")</p>	<p>MCR Operator requested to make announcement</p>	

STEP	STANDARD	SAT/UNSAT
<p>*7. PLACE any two of the following Refueling Floor Air Exhaust Fan handswitches to "RUN" at *0C206:</p> <ul style="list-style-type: none"> ● HS-76-*65A ● HS-76-*65B ● HS-76-*65C <p>CUES:</p> <ul style="list-style-type: none"> ● 1st fan: "Switch is in RUN. Red lamp lit, green lamp off". ● 2nd fan: "Switch is in RUN. Green lamp lit, red lamp off". ● 3rd fan: "Switch is in RUN. Red lamp lit, green lamp off" ● "Red lamps are now lit for the supply fans selected to RUN". ● "Refuel floor DP indication is approaching negative 0.3 inches" 	<p>Two switches placed to run</p> <p>Third fan placed to run after start failure of second fan</p>	
<p>CUE: You may stop here. You have met the termination criteria for the JPM.</p>		

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. Unit ___ is in OPCON 5
2. The refuel floor has been evacuated due to lowering cavity level on Unit ____
3. TRIP procedures require refuel floor HVAC isolation signals to be bypassed and refuel floor HVAC restored to permit access to the refuel floor for emergency seal installation
4. Zone 1, 2, and 3 are not connected
5. Refuel floor HVAC is manually secured

INITIATING CUES:

You are directed by shift management to defeat refuel floor HVAC isolation signals and restore Unit ___refuel floor HVAC to service per T-229, DEFEATING REFUEL FLOOR HVAC ISOLATION LOGIC