

Facility: Limerick Generating Station

Date of Examination: 04/03/2000

Exam Level: SRO(II)

Operating Test No.: _____

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. SCRAM Reset	D, A, L, S	1
b. RCIC Start for Pressure Control	N, A, S	3
c. Place Reactor Feed Pump in Service During Start-up	N, L, S	2
d. Venting Primary Containment from 2" Suppression Pool Vent	M, A, S	5
e. Perform a Remote Manual Start of D12 Diesel Generator	D, S	6
f. Alternate Cooling of RECW Heat Exchanger	D, S	8
g. Manual Depressurization of RHR	N, A, S	4

B.2 Facility Walk-Through

a. Bypass Squib Valves for SLC Injection (T-212)	D, R	1
b. Bypass a Control Rod from RMCS	D, R	7
c. Defeat HPCI/RCIC High Temperature Isolations (T-249)	D, R	5

* 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: 04/03/2000

Exam Level: RO

Operating Test No.: _____

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b. RCIC Start for Pressure Control	N, A, S	3
c. Place Reactor Feed Pump in Service During Start-up	N, L, S	2
d. Venting Primary Containment from 2" Suppression Pool Vent	M, A, S	5
e. Perform a Remote Manual Start of D12 Diesel Generator	D, S	6
f. Alternate Cooling of RECW Heat Exchanger	D, S	8
g. Manual Depressurization of RHR	N, A, S	4

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Date of Examination: 04/03/2000

Exam Level: SRO(U)

Operating Test No.: _____

B.1 Control Room Systems

System / JPM Title	Type Code *	Safety Function
a. RCIC Start for Pressure Control	N, A, S	3
b. Place Reactor Feed Pump in Service During Start-up	N, L, S	2
c. Manual Depressuration of RHR	N, A, S	4
d.		
e.		
f.		
g.		

B.2 Facility Walk-Through

a. Bypass a Control Rod from RMCS	D, R	7
b. Defeat HPCI/RCIC High Temperature Isolations (T-249)	D, R	5
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: SCRAM RESET GP-11 (Alternate Path)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Transfer house loads
2. Place Reactor Mode Switch in "Shutdown"
3. Trip Main Turbine
4. Line up for startup level control
5. Insert malfunction MRP028B

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING(S):

3.8/3.8

A4.14

SYSTEM NUMBER(S):

212000

REFERENCES:

1. GP-11, Rev. 16, Reactor Protections System - SCRAM RESET

TASK STANDARD(S):

Recognize failure to reset scram and initiate reactor scram manually.

TASK CONDITIONS:

1. Unit 1 Reactor scrammed for a planned shutdown.
2. There are NO indications of fuel damage

| INITIATING CUES:

You are directed by Shift Supervisor to perform a Unit 1 Reactor Protection System - Scram reset.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain current revision of GP-11. (CUE: When Trainee demonstrates the ability to obtain current revision of procedure, provide working copy of GP-11)	Current revision of GP-11 obtained.	
2. All half scram AND full scram signals cleared, except scram discharge volume HI Level Trip (C-1 on *07 Reactor)	Verify by observation, no unbypassed scram signals, other than SDV high level, are indicated on Reactor 107, 108 annunciator panels.	
3. Reactor Mode Switch in “SHUTDOWN” OR “REFUEL”	Reactor Mode Switch in shutdown or refuel.	
4. Power available to RPS Bus A - *AY160 ckt 13 AND RPS Bus B - *BY160 ckt 13	Power available to RPS as determined by lack of RPS annunciators	
5. REQUEST Health Physics survey scram discharge volume prior to releasing fluid inventory AND EVALUATE the need for RT-6-047-600-*, FLUSH OF CRD SCRAM DISCHARGE VOLUME. (REF. 4.8) (CUE: Report that HP has surveyed the SDV and there is no need for the RT to be done.)	HP contacted to evaluate need to perform RT-6-047-600-1	
*6. PLACE Scram Discharge Volume High Level Bypass keylock switch on *OC603 to “BYPASS”	SDV High Level Bypass Switch in Bypass position.	
7. VERIFY SCRAM DISC VOLUME HI LEVEL SCRAM BYPASSED alarm on *07 REACTOR (C-2)	Verify by observation that SDV HI LEVEL SCRAM BYPASSED 107 Reactor (C-2) is lit.	
8. ENSURE RPIS INOPERATIVE clear on *08 REACTOR (E-5)	Verify by observation that RPIS INOPERATIVE 108 Reactor (E-5) is not lit.	
9. IF RDSCS INOPERATIVE alarm lit on *08 REACTOR (E-4), THEN RESET RDSCS per S73.0.F	RDSCS INOPERATIVE alarm NOT lit on *08 REACTOR (E-4)	

STEP	STANDARD	SAT/UNSAT
10. IF CRD Full Core Display OR Process Computer indicates not all control rods are fully inserted, THEN PERFORM GP-11 Appendix I using Attachment I	Verifies by observation that All rods full in.	
11. RESET Alternate Rod Insertion at *OC603 as follows:	N/A	N/A
11a. Depress ARI RESET pushbuttons (1A, 1B, 2A, 2B)	ARI Reset pushbuttons 1A, 1B, 2A, 2B depressed	
12. RESET RPS at *OC603 as follows	N/A	N/A
*12a. PLACE Scram Reset switch to "GP 1/4"	RPS Scram reset switch taken to GP 1/4 position	
*12b. PLACE Scram Reset switch to "GP 2/3"	RPS Reset switch taken to GP 2/3 position.	
*13. VERIFY the eight scram group white lights are lit for Scram System A AND Scram System B on *OC603	Recognize 1 light for RPS 'A' and 1 light for RPS 'B' did not light.	
13a. IF NOT on after initial reset, THEN VERIFY proper mode switch position AND repeat step 3.8 one time	Verify Mode switch in "shutdown".	
14. Reset RPS at *OC603 as follows:	N/A	N/A
14a. Place Scram Reset switch to "GP 1/4"	RPS Scram Reset Switch taken to "GP 1/4" position	
14b. Place Scram Reset switch to "GP 2/3"	RPS Scram Reset Switch taken to "GP 2/3" position.	
*15. IF NOT on after second reset attempt, THEN INSERT a full scram signal via manual scram pushbuttons AND PERFORM the following:	Channel CH A1 or CH A2, and CH B1 or CH B2 manual scram collars turned and pushbuttons depressed.	
15a. VERIFY scram discharge volume vent/drain valves close	Vent: Inboard (XV47-1F010), Outboard (XV47-1F180), CLOSED Drain: Inboard (XV47-1F011), Outboard (XV47-1F181), CLOSED	

STEP	STANDARD	SAT/UNSAT
<p>15b. ENTER T-100 <u>AND</u> EXIT this procedure</p> <p>(Cue: This task is terminated when the trainee determines that the procedure can not be accomplished and the SSV is informed. Then say, "You can stop here, you have met the termination criteria for this JPM".)</p>	N/A	N/A

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. Unit 1 Reactor scrammed for a planned shutdown.
2. There are NO indications of fuel damage

INITIATING CUES:

You are directed by Shift Supervisor to perform a Unit 1 Reactor Protection System - Scram reset.

TITLE: RCIC MANUAL QUICK START WITH HV-49-F022 FAILING CLOSED (ALT. PATH)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset the simulator to any IC with reactor pressure greater than 500 psi.
2. Ensure RCIC is lined-up for automatic operation per S49.1.A
3. Insert Override, HS49-F022 to FAIL AS-IS
4. When RCIC Pump speed is <2800 RPM, Remove Override HS49-F022

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING:

3.1/3.1

A2.08

SYSTEM NUMBER:

217000

REFERENCES:

1. S49.1.D, Rev. 27, RCIC SYSTEM FULL FLOW FUNCTIONAL TEST AND TURBINE OIL PRIMING

TASK STANDARD(S):

RCIC placed in full flow test by reducing RCIC Turbine Speed and opening the HV-49-1F022

TASK CONDITIONS:

1. ST-6-060-390-1 is currently being performed.
2. S49.9.A, Routine inspection of RCIC system has been performed.
3. Vibration Monitoring System is in service.
4. Steam leak detection is not known to be inoperable.
5. S49.1.A normal RCIC line-up for Automatic Operation is complete.

INITIATING CUE:

You are directed by Shift Supervision to place Unit 1 RCIC in full flow test per S49.1.D by the manual quick start method using FIC-49-1R600 for a 15 minute PMT following vacuum pump repairs. You are to obtain a discharge pressure at least 70 psig greater than reactor pressure, and a pump flow rate of 600 gpm with the controller in AUTO.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain a Current revision of S49.1.D. (CUE: When trainee demonstrates the ability to obtain a current rev. of the procedure, state "you have the procedure" and give him / her a copy of the procedure)	Current revision of S49.1.D obtained	
2. Suppression Pool level normal (22' to 24.25')	Suppression pool level is between 22' and 24.25' on LI-52-140A(B) at panel 10C626 or LR55-115 at panel 10C648.	
3. AND below 95°F.	Verified by observation that TI-41-101(103) indicates <95 degrees F.	
4. RCIC Pump suction is lined up to the CST	Verified by observation that HV-49-1F010 is open.	
5. Steam Leak Detection System available (CUE: If asked, report that Steam Leak Detection is not known to be inop)	Steam Leak Detection System is available as indicated in alarm indications.	
6. Suppression Pool Cooling available.	Verified by observation that Suppression pool cooling is not tagged out.	
7. IF RCIC to be run for a normally scheduled test, THEN RCIC inspection has been performed per S49.9.A, Routine Inspection of RCIC System.	N/A	N/A
8. RCIC System available for auto initiation per S49.1.A, Normal RCIC Line-up for Automatic Operation. (CUE: If asked, report S49.1.A has been completed)	RCIC is available by observing 116 RCIC alarm panel or as provided by SSVN.	
9. IF RCIC is expected to run for more than 1 hour, THEN Suppression Pool oxygen level verified to be less than 3% WHEN Tech Spec 3.6.6.3 applies. (CUE: RCIC is <u>not</u> expected to be run for more than 1 hr)	N/A	N/A

10. IF performing this procedure to prime the Turbine Oil System, THEN personnel are stationed to monitor oil level AND to add oil as required. (CUE: If asked, reply RCIC will run for a 15 minute PMT following vacuum pump repairs)	N/A	N/A
11. IF Vibration Monitoring System is available, THEN VERIFY in service	N/A	N/A
12. PERFORM the following: ENSURE HV-55-*F071, "HPCI/RCIC Flush Line to Suppression Pool" (TEST OUTBOARD), closed	HV-55-1F071, "HPCI/RCIC Flush Line to Suppression Pool" (TEST OUTBOARD), closed	
13. ENSURE HV-55-*F008, "Test Loop Shutoff" (TEST ISOL), closed.	HV-55-1F008, "Test Loop Shutoff" (TEST ISOL) closed	
14. ENSURE HV-49-*F022, "RCIC Test Loop Isolation" (TEST ISOL), is closed.	HV-49-1F022, "RCIC Test Loop Isolation" (TEST ISOL) closed.	
*15. OPEN HV-55-*F011, "HPCI/RCIC Test Return to CST" (CONDENSATE RETURN).	HV-55-1F011, "HPCI/RCIC Test Return to CST" (CONDENSATE RETURN) open.	
*16. START *OP219, "Barometric Condenser Vacuum Pump" (VACUUM PUMP).	1OP219, "Barometric Condenser Vacuum Pump" (VACUUM PUMP) running	
*17. OPEN HV-50-*F046, "RCIC Lube Oil Cooling Water Supply" (COOLING WATER).	HV-50-1F046, "RCIC Lube Oil Cooling Water Supply" (COOLING WATER) open	
18. MONITOR Suppression Pool temperature per ST-6-060-390-*, Suppression Pool Temperature Check. (CUE: If asked, report the RO is performing the ST	N/A	N/A
19. IF required to limit Suppression Pool temperature any time during this procedure,	N/A	N/A
20. THEN PLACE Suppression Pool Cooling Mode of RHR System in service per S51.8.A, Suppression Pool Cooling Operation (Startup and Shutdown) and Level Control. (CUE: The RO will place S/P Cooling in service if needed.)	N/A	N/A

21. INFORM HP of changing radiological conditions due to RCIC system start.	HP contacted and informed of changing radiological condition	
22. IF a manual quick start is desired, THEN PERFORM the following:	N/A	N/A
23. VERIFY FIC-49-*R600, "RCIC Pump Discharge Flow Controller" (FL), set to 600 gpm in "AUTO."	FIC-49-1R600, "RCIC Pump Discharge Flow Controller" (FL), set to 600 gpm in "AUTO."	
*23. OPEN HV-50-*F045, "RCIC Steam Supply" (INLET), at *0C648	HV-50-1F045, "RCIC Steam Supply" (INLET), at *0C648 open	
24. WHEN RCIC turbine speed starts rising as indicated on SI-50-*01-1, "Turbine Speed" (S),	N/A	N/A
*25. THEN THROTTLE HV-49-*F022, "RCIC Full Flow Test" (TEST ISOL), open.	Identify HV-49-1F022, "RCIC Full Flow Test" (TEST ISOL), does not open.	
26. IF HV-49-*F022, TEST ISOL, will not open,	N/A	N/A
*27. THEN place FIC-49-*R600 in "MANUAL,"	FIC-49-1R600 in "MANUAL,"	
28. PERFORM the following:	N/A	N/A
EVALUATOR NOTE: When RCIC Turbine Speed drops less than 2800 RPM remove Override HV49-F022		
*29. LOWER output of FIC-49-*R600 to approximately 2500 rpm.	FIC-49-1R600 output lowered to approximately 2500 rpm	
*30. THROTTLE OPEN HV-49-*F022, TEST ISOL.	HV-49-1F022, TEST ISOL Throttled open	
*31. Slowly RAISE output of FIC-49-*R600	Output of FIC-49-1R600 increased	
32. AND MATCH setpoint to actual flow.	Setpoint matched to actual flow	
*33. PLACE FIC-49-*R600 in "AUTO."	FIC-49-1R600 in "AUTO."	
*34. ADJUST HV-49-*F022, "RCIC Full Flow Test" (TEST ISOL), as necessary to maintain pump discharge pressure at least 70 psig over reactor pressure	HV-49-1F022, "RCIC Full Flow Test" (TEST ISOL), throttled to adjust pump discharge pressure at least 70 psig over reactor pressure	
*35. AND pump flow rate of 600 gpm.	Pump flow rate of 600 gpm	

36. ENSURE the following valves aligned as indicated:		
37. HV-50-*F004 "RCIC Barometric Condenser Drain to Isolation" (DRAIN OUTBOARD) CLOSED	HV-50-1F004 "RCIC Barometric Condenser Drain to Isolation" DRAIN OUTBOARD CLOSED	
38. HV-50-*F005 "RCIC Barometric Condenser Drain Isolation"(INBOARD TO RADWASTE) CLOSED	HV-50-1F005 "RCIC Barometric Condenser Drain Isolation" (INBOARD TO RADWASTE) CLOSED	
39. HV-49-*F026 "RCIC Steam Drain Line Isolation" (OUTBOARD TO COND) CLOSED	HV-49-1F026 "RCIC Steam Drain Line Isolation" (OUTBOARD TO COND) CLOSED	
40. HV-49-*F025"RCIC Steam Drain Line Isolation Valve to Main Cond" (TRAP INBOARD) CLOSED	HV-49-1F025 "RCIC Steam Drain Line Isolation Valve to Main Cond" (TRAP INBOARD) CLOSED	
(CUE: You can stop here. You have met the termination criterion for this JPM)	N/A	N/A

Comments:

NOTE: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT / UNSAT

TASK CONDITIONS:

1. ST-6-060-390-1 is currently being performed.
2. S49.9.A, Routine inspection of RCIC system has been performed.
3. Vibration Monitoring System is in service.
4. Steam leak detection is not known to be inoperable.
5. S49.1.A normal RCIC line-up for Automatic Operation is complete.

INITIATING CUE:

You are directed by Shift Supervision to place Unit 1 RCIC in full flow test per S49.1.D by the manual quick start method using FIC-49-1R600 for a 15 minute PMT following vacuum pump repairs. You are to obtain a discharge pressure at least 70 psig greater than reactor pressure, and a pump flow rate of 600 gpm with the controller in AUTO.

TITLE: PLACE REACTOR FEED PUMP IN SERVICE DURING START-UP

TASK PERFORMED BY: _____ EVALUTOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

Initialize Simulator to IC-7
Place "1A" RFP in standby per S06.1.A

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING:

3.9/3.7

A4.02

SYSTEM NUMBER:

259001

REFERENCES:

1. S06.1.C, Rev. 22, Placing a Standby Reactor Feed Pump in Service

TASK STANDARD(S):

"1A" RFP in service and controlling RPV Level

TASK CONDITIONS:

1. Plant Startup is in progress
2. Reactor Power 4%
3. Reactor Pressure 446 psig
4. 1A RFP is in standby per S06.1.A
5. 1A RFP has been on the MGU low speed stop for 1 hour

INITIATING CUES:

Shift Supervision directs you to place the "1A" RFP in service to support reactor plant startup.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain copy of current revision of S06.1.C (CUE: When Candidate demonstrates the ability to obtain current revision of procedure provide a working copy of S06.1.C)	S06.1.C current revision obtained.	
2. <u>IF</u> Startup Level Control <u>OR</u> RFP "A" are <u>not</u> available, <u>THEN GO TO</u> Section 4.6.	N/A	N/A
3. ENSURE RFPT "A" has been warmed up at MGU low speed stop for at least 1 hour following turbine roll.	N/A	N/A
*4. OPEN HV-06-*38A, "RFP 'A' Bypass" (BYPASS), at *0C651	HV-06-138A "RFP 'A' Bypass" (BYPASS), at *0C651 is open	
*5. PLACE LIC-06-*38, "Startup Bypass" (LV), in "AUTO"	LIC-06-138, "Startup Bypass" (LV), in "AUTO"	
6. AND ADJUST to 55% (35 inches).	LIC-06-138, "Startup Bypass" (LV) is set to 55%	
*7. Slowly RAISE RFPT speed with MGU until pump discharge pressure is at least 50 psig greater than RPV pressure	Pump discharge pressure is at least 50 psig greater than RPV pressure	
*8. AND ADJUST RPV Min Flow Valve as required to remain on the safe side of Attachment 1.	RPV Min Flow is on the safe side of Attachment 1. (Controller Set to 20-60%)	
9. <u>WHEN</u> HV-C-06-*20, "RFP Bypass Control Valve," can <u>not</u> pass enough flow to maintain RPV level, (CUE:HV-C-06-*20 cannot pass enough flow to maintain RPV level)	N/A	N/A
*10. THEN PLACE LIC-06-*20, PUMP BYPASS, in "MANUAL"	LIC-06-120, PUMP BYPASS, is in "MANUAL"	
*11. AND slowly CLOSE HV-06-*20.	HV-06-120 CLOSED	

12. VERIFY LV-C-06-*38A, "RFP A Discharge Level Bypass Valve," opens to maintain RPV level.	LV-C-06-138A, OPENED, RPV Level is being maintained 20-50"	
13. WHEN LV-C-06-*38A opens 80% nominal,	N/A	N/A
14. THEN INCREASE RFPT speed until LV-C-06-*38A closes to 10% nominal. (CUE: You can stop here. You have met the termination criterion for this JPM.)	N/A	N/A

Comments:

NOTE: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT / UNSAT

TASK CONDITIONS:

1. Plant Startup is in progress
2. Reactor Power 4%
3. Reactor Pressure 446 psig
4. 1A RFP is in standby per S06.0.A
5. 1A RFP has been on the MGU low speed stop for 1 hour

INITIATING CUES:

Shift Supervision directs you to place the 1A RFP in service to support reactor plant startup.

TITLE: VENTING PRIMARY CONTAINMENT USING 2" SUPPRESSION POOL VENT

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

Directions to the Simulator Operator/Evaluator:

1. Insert MAD151,A,100, SRV "K" Downcomer Leaks 100%
2. Insert MRE 303, 100, Reactor Enclosure Air Leak at 100%
3. Perform a GP-4 W/O transferring HOUSE LOADS
4. Insert NI's and align Feedwater for Post Scram Level Control
5. Open K SRV to achieve about 60 psig in Drywell.
6. Open SMEH SRV's
7. Isolate HPCI
8. On LOCA, reset instrument busses, shunt trips, and secure LP ECCS
9. Perform Step 4.1.2 of T-200
10. When HV-57-105 is opened, insert Annunciators 103 RAD F-1 and F-2, South Stack HI and HI HI RAD Alarm

Evaluation Method:

PERFORM

Evaluation Location:

SIMULATOR

Approximate Completion Time:

15 Minutes

Importance Rating(s):

System Number(s):

3.1/3.4

AA1.05

295024

References:

1. Unit 1, T-200, Rev.14, Primary Containment Emergency Vent Procedure

Task Standard(s):

Suppression Pool Venting in progress.

TASK CONDITIONS:

1. Primary Containment pressure is elevated and rising.
2. Attempts to spray the Drywell have failed
3. SP/G-1 leg of T-102 has been entered
4. Section 4.1 "Preparation to Vent" has been completed.

INITIATING CUES:

Shift Supervision directs you to vent the Suppression Pool using the 2" vent per T-200.

Critical Element(s) (Indicated by * in Performance Checklist)

Performance Check List:

STEP	STANDARD	SAT/UNSAT
*1. Obtain current revision of T-200. (CUE: When Candidate demonstrates the ability to obtain current revision of procedure provide a working copy of T-200)	Current revision of T-200 obtained.	
2. Direct dose assessment personnel to monitor offsite dose.	HP called or SSV directed to request offsite dose assessment.	
3. Place control switches for the following valves to close on 10C601 to enable NSSSS bypass permissive signal (Main Control Room).	N/A	N/A
*3a. SV57-183,191 "1A Contain Atmosphere Sampling System isolation" (ISOL A).	SV57-183,191 switch in close	
*3b. SV57-133 "1A Contain Atmosphere Sampling System Isolation"(ISOL A).	SV57-133 switch in close	
3c. HV57-117 "Equipment Compartment Outboard Isolation Valve" (TO RX ENCL FILTER).	SV57-117 switch in close	
3d. HV57-118 "Suppression Pool Exhaust to Equipment Compartment Outboard Isolation Valve: (TO RX ENCL FILTER).	SV57-118 switch in close	
3e. HV51-1F079A "1A RHR Sample Line Upstream isolation Valve" (SAMPLE INBOARD).	HV51-1F079A switch in close	
3f. HV51-1F079B "1B RHR Sample Line Upstream Isolation Valve" (SAMPLE INBOARD).	HV51-1F079B switch in close	
4. PLACE the following key switches to "bypass" on 10C601 to inhibit NSSSS isolation signal (Main Control Room)	N/A	N/A

STEP	STANDARD	SAT/UNSAT
*4a. HSS57-191A "Containment Isolation Signal Bypass"(A)	HSS57-191A switch in bypass	
*4b. HSS57-191B "Containment Isolation Signal Bypass" (B)	HSS57-191B switch in bypass	
5. Acknowledge annunciators 111 RECIRC Windows F-4 and F-5.	111 Recirc F-4 and F-5 acknowledged	
*6. Open HV57-118 "Suppression Pool Purge to Equipment Compartment Outboard Isolation Valve" (TO RX ENCL FILTER).	HV57-118 is open	
7. Notify HP of changing radiological conditions in the Reactor Enclosure.	HP notified	
*8. Throttle Open HV57-105 "Suppression Pool Purge to Equipment Compartment Inboard Isolation Valve" (SUPP POOL EXH BYPASS).	HV57-105 is open	
EVALUATOR NOTE: Insert Annunciators 103 RAD F-1 and F-2, South Stack HI and HI HI RAD Alarm		
9. <u>IF</u> performing Section 4.2 per T-102/SAMP-2, SP/G-1 leg <u>AND</u> the South Stack Hi Hi rad alarm is reached <u>THEN PERFORM</u> the following:	N/A	N/A
*10. CLOSE HV-57-105, "Suppression Pool Purge to Equipment Compartment Inboard Isolation Valve" (SUPP POOL EXH BYPASS), on 10C601 (Main Control Room).	HV-57-105, "Suppression Pool Purge to Equipment Compartment Inboard Isolation Valve" Closed	
11. CLOSE HV-57-118, "Suppression Pool Purge to Equipment Compartment Outboard Isolation Valve" (TO RX ENCL. FILTER), on 10C601 (Main Control Room).	HV-57-118, "Suppression Pool Purge to Equipment Compartment Outboard Isolation Valve" Closed	
(CUE: You can stop here. You have met the termination criterion for this JPM		

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. Primary Containment pressure is elevated and rising.
2. Attempts to spray the Drywell have failed.
3. SP/G-1 leg of T-102 has been entered
4. Section 4.1 "Preparation to Vent" has been completed.

INITIATING CUES:

Shift Supervision directs you to vent the Suppression Pool using the 2" vent per T-200.

TITLE: PERFORM A REMOTE MANUAL START OF THE D12 DIESEL GENERATOR AND LOAD IT TO 2000 KW

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. The simulator can be set up to any IC that the plant is stable.
2. Remote function RDG315 toggled to SLOW START.
3. An EO is stationed locally at the diesel generator, many steps require local operation or verification of automatic function

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

25 MINUTES

IMPORTANCE RATING(S):

3.7 / 3.7

A4.04

SYSTEM NUMBER(S):

264000

REFERENCES:

1. S92.1.0, Local and Remote Manual Startup of a Diesel Generator, Rev. 22

TASK STANDARD(S):

D12 running, supplying 2000 KW to the D12 Safeguard Bus

TASK CONDITIONS:

1. All prerequisites have been satisfied.
2. Procedure S92.1.0 completed up to and including step 4.3.4.
3. D12 Safeguard Bus supplied from 201 Safeguard Transformer.
4. EO stationed at D12 D/G.
5. Technical Specifications have been referenced due to the DG being INOP during this test.

INITIATING CUES:

You are directed by Shift Supervision to start and load D12 to 2000 KW from the control room per S92.1.0, the procedure has been performed up to and including step 4.3.4.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain current revision of S92.1.0. (CUE: Provide current revision of S92.1.0 to the candidate.)	N/A	N/A
2. Make PA announcement of impending D12 diesel generator start.	Plant announcement made.	
* 3. PLACE selected 101-A(B,C,D)G501/CS MCR, "Diesel Generator Control," to "START."	Switch 101-BG501B/CS MCR red flagged	
4. Verify prelube pump in operation. (CUE: If requested, report prelube pump is running.)	Contact EO to verify prelube pump in operation.	
NOTE: WITHIN 20 SECONDS of receipt of the "DG RUNNING" annunciator, report as the EO the CUES from steps 6, 7, and 8 below and that you are SLOWLY RAISING DG Speed.		
5. WHEN 3 minute time delay for prelube pump operation is completed, THEN OBSERVE diesel generator starts.	D12 Diesel running, annunciator illuminated,	
6. VERIFY diesel accelerates to between 300 to 400 rpm by observing engine tachometer at engine gauge panel OR local control panel. (CUE: EO reports diesel speed is 370 rpm.)	Contact EO to verify Diesel speed verified between 300 and 400 rpm.	
7. VERIFY lube oil pressure greater than or equal to 12 psi on red pointer at local PI-GA-*01A(B,C,D) (CUE: EO reports lube oil pressure is 18 psig.)	Contact EO to verify Lube oil pressure verified ≥ 12 psi at PIGA-101B on red pointer.	
8. VERIFY jacket water pressure greater than or equal to 10 psi on red pointer at local PI-GA-*20A(B,C,D). (CUE: EO reports jacket water pressure is 15 psig.)	Contact EO to verify Jacket water pressure verified ≥ 10 psig at PIGA-120B on red pointer.	

STEP	STANDARD	SAT/UNSAT
9. Gradually RAISE engine speed to 900 rpm within 1 to 2 minutes using speed control knob. (CUE: EO reports that the diesel is now at 900 rpm.)	Diesel speed verified at 900 rpm within 1 to 2 minutes.	
10. PLACE EXCITER SHUTDOWN/RESET switch to "RESET". (CUE: EO reports the exciter shutdown/reset switch is in RESET.)	Direct EO to place EXCITER SHUTDOWN / RESET Switch in RESET.	
11. AFTER 10 seconds, THEN TURN speed control knob fully clockwise to full high speed stop. (CUE: EO reports the knob is fully clockwise.)	Direct EO to place Speed Control knob verified fully clockwise.	
12. VERIFY frequency meter reads from 59 to 61 Hz.	Frequency between 59-61 Hz on Frequency Meter.	
13. IF ESW pump not already running, THEN VERIFY ESW pump starts 50 to 60 seconds after diesel start.	OB ESW pump running.	
14. VERIFY cooling water is available to diesel generator by observing PI-11-*07A(B,C,D), "ESW Supply", indicates higher pressure than PI-11-*08A(B,C,D), "ESW Return". (CUE: EO reports cooling water available.)	Direct EO to verify Cooling water D/P.	
15. IF diesel was started locally, THEN RETURN diesel control to Control Room: PLACE LOCAL-REMOTE switch to REMOTE. INFORM Control Room Operator diesel control has been returned to MCR. PLACE 101-A(B,C,D)G501, "Diesel Generator Control", to START to convert governor to droop mode.	N/A	N/A

STEP	STANDARD	SAT/UNSAT
16. PLACE appropriate 143-A(B)X103, "01 Safeguard Transformer Tap Changer Selector," to "MANUAL." (CUE: The handswitch, 143-BX103, "201 Safeguard Transformer Tap Changer Selector is in MANUAL.)	Switch 143-BX103 in MANUAL.	
*17. INSERT synchroscope switch handle into Synchroscope Switch for appropriate Diesel Generator Breaker AND PLACE to "ON".	Switch 125-11607/SS in the "ON" position.	
18. OBSERVE appropriate Synchroscope operates properly: Synchroscope rotating WHEN synchroscope is at 180°, THEN both lights are lit AND fully bright WHEN synchroscope is at 0°, THEN both lights are not LIT	Synchroscope operation verified.	
19. VERIFY speed controls operate properly as follows: OBSERVE diesel generator frequency as indicated by synchroscope. PLACE 165-A(B,C,D)G501/CS, "Diesel Generator Speed Governor Control," to RAISE" AND to LOWER VERIFY change in synchroscope rotation rate or direction of rotation.	Frequency increased and decreased by observing response to switch 165-BG501/CS.	
20. VERIFY voltage controls operating properly as follows: OBSERVE diesel generator voltage as indicated on Incoming Voltmeter. PLACE 170-A(B,C,D)G502/CS VOLTAGE REGULATOR to "Raise" AND to "LOWER" VERIFY change on Incoming Voltage meter.	Voltage increased and decreased by observing response to switch 170-BG502/CS	
*21. ADJUST engine speed using appropriate 165-A(B,C,D)G501/CS, "Diesel Generator Speed Governor Control", until synchroscope is	Synchroscope rotating slowly in FAST direction.	

STEP	STANDARD	SAT/UNSAT
rotating slowly in FAST direction (clockwise).		
*22. ADJUST diesel generator voltage using 170-A(B,C,D)G502/CS "Diesel Generator Voltage Regulator" until Synchronizing Incoming Voltmeter is slightly higher than Synchronizing Running Voltmeter.	Incoming Voltage meter reads 0.5 to 5 volts higher than Running Voltage meter.	
*23. WHEN Synchroscope is within 3 degrees before 12 o'clock, THEN CLOSE Diesel Generator Breaker.	D12 output breaker 152-11607/CS red flagged, D12 output breaker 152-11607 shuts and remains closed.	
24. Immediately RAISE load to between 200 to 300 KW by turning 165-A(B,C,D)G501/CS "Diesel Generator Speed Governor Control", to "RAISE."	Load raised to between 200 to 300 kW on W/BG501-2.	
25. Immediately LOAD 100 KVAR by turning 170-A(B,C,D)G502/CS, "Diesel Generator Voltage Regulator" to "RAISE."	KVAR meter (VAR/BG501-2) indicating between 100 and 200 kVARs.	
26. TURN Synchroscope Switch to "OFF".	Synchroscope switch (125-11607/SS) in the OFF position.	
*27. Gradually RAISE diesel generator load at rate of less than or equal to 350 KW/min to desired value. (CUE: You have met the termination criteria for this JPM. You may stop here.)	AC kilowatt meter (W/BG501-2) indicates 2000 KW (+/- 100 KW) with KVARs less than 1500 KVARs.	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. All prerequisites have been satisfied.
2. Procedure S92.1.0 completed up to and including step 4.3.4.
3. D12 Safeguard Bus supplied from 201 Safeguard Transformer.
4. EO stationed at D12 D/G.
5. Technical Specifications have been referenced due to the DG being INOP during this test.

INITIATING CUES:

You are directed by Shift Supervision to start and load D12 to 2000 KW from the control room per S92.1.0, the procedure has been performed up to and including step 4.3.4.

TITLE: ALTERNATE COOLING OF RECW HEAT EXCHANGERS

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. Reset the Simulator to any power IC.
2. Insert a Loss of Offsite Power (MED261).
3. Stabilize the Plant.
4. Acknowledge and reset annunciators.
5. Ensure all ESW Pumps are running.

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

10 MINUTES

IMPORTANCE RATING(S):

3.3/3.4
4.3/4.2

A1.01
2.1.20

SYSTEM NUMBER(S):

295018
Generic

REFERENCES:

1. E10/20 Rev. 28, Loss of Offsite Power

TASK STANDARD(S):

RECW Heat Exchangers are being cooled by the ESW System.

TASK CONDITIONS:

1. A total loss of off-site power has occurred.
2. E10/E20 Initial Actions 2.1 through 2.12 have been completed.
3. Unit 1 and Unit 2 Reactors are scrammed.
4. No evidence of a seismic event exists.
5. 1A and 2A RECW Heat Exchangers are in service.

INITIATING CUES:

You are directed by Shift Supervision to establish ESW to the in-service RECW Heat Exchangers for Units 1 and 2 using procedure E10/20.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain current revision of E10/20. (CUE: When Trainee demonstrates the ability to obtain current revision of procedure, provide working copy of E10/20.)	Current Revision of E10/20 obtained.	
2. Obtain four GE75 keys.	Four GE75 keys obtained.	
NOTE: Section 2.13 for Unit 2 or 2.15 for Unit 1 may be performed in any order.		
3. CLOSE 10-2004A(B), "A(B) RECW Hx SW Supply," (284-R17-201) to isolate flow to the out of service RECW Heat Exchanger. (CUE: EO reports 10-2004B is closed.)	EO directed to close 10-2004B (2B RECW Hx O.O.S.)	
*4. OPEN HV-11-227 "RECW Heat Exchangers U/2 Return to ESW A" (UNIT 2 RET LOOP A).	HV-11-227 open.	
*5. OPEN HV-11-228 "ESW A to U/2 RECW Heat Exchanger" (UNIT 2 SUPPLY), via key lock hand switch.	HV-11-228 open.	
*6. OPEN HV-11-224, "ESW A to U/2 RECW Heat Exchanger" (UNIT 2 SUPPLY), via key lock hand switch.	HV-11-224 open.	
7. CLOSE 10-2407 "SW Supply to RECW HTX Block Valve" (284-R17-201). (CUE: EO reports 10-2407 is closed.)	EO directed to close 10-2407.	
*8. CLOSE HV-10-215 "RECW Heat Exchangers U/2 shutoff". (UNIT 2 RET U/2 SW).	HV-10-215 closed.	
9. CLOSE 10-1004A(B) "A(B) RECW Hx SW Supply" (207-R12-201) to isolate flow to the out of service RECW Heat Exchanger. (CUE: EO reports 10-1004AB is closed.)	EO directed to close 10-1004B. (1B RECW Hx O.O.S.)	
*10. OPEN HV-11-127 "RECW Hx U/1 Return to ESW B" (UNIT 1 RET LOOP B).	HV-11-127 open.	

*11.	OPEN HV-11-128 "ESW B to U/1 RECW Hx" (UNIT 1 SUPPLY) via key lock hand switch.	HV-11-128 open.	
*12.	OPEN HV-11-124 "ESW B to U/1 RECW Hx" (UNIT 1 SUPPLY) via key lock hand switch.	HV-11-124 open	
13.	CLOSE 10-1407 "SW Supply to RECW HTX Block valve," (207-R12-201). (CUE: EO reports 10-1407 is closed.)	EO directed to close 10-1407.	
*14.	CLOSE HV-10-115 "RECW Heat Exchangers U/1 Shutoff" (UNIT 1 RET U/1 SW).	HV-10-115 closed.	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. A total loss of off-site power has occurred.
2. E10/20 Initial Actions 2.1 through 2.12 have been completed.
3. Unit 1 and Unit 2 Reactors are scrammed.
4. No evidence of a seismic event exists.
5. 1A and 2A RECW Heat Exchangers are in service.

INITIATING CUES:

You are directed by Shift Supervision to establish ESW to the in-service RECW Heat Exchangers for Units 1 and 2 using procedure E10/20.

TITLE: MANUAL DEPRESSURIZATION OF RHR (Alternate Path)

TASK PERFORMED BY: _____ EVALUTOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

Reset Simulator to any 100% Power IC

Insert Annunciator 113 COOL A F-3, 1A RHR PUMP DISCH HI/LO PRESS

After HV-51-1F024A is opened a second time insert Malfunction MRH573A, HV-51-1F024A Fails due to Thermal Overload

After HV-51-1F024A has failed to close Insert Annunciator 113 COOL A F-5, Division 1 LPCI HIGH POINT VENT

EVALUATION METHOD :

PERFORM

EVALUATION LOCATION:

SIMULATOR

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING:

3.9/3.7

A4.02

SYSTEM NUMBER:

259001

REFERENCES:

1. S51.4.A, Rev. 5, Manual Depressurization of RHR

TASK STANDARD(S):

"1A" RHR Loop Depressurized to Safeguard fill pressure and draining of RHR to the Suppression Pool terminated by closing HV-51-125A

TASK CONDITIONS:

1. Unit 1 is at 100% power
2. "A" Loop of RHR aligned for Automatic Operation On LPCI Mode per S51.1.A
3. Annunciator 113 F-3 "1A RHR PUMP DISCH HI/LO PRESS" has annunciated

INITIATING CUES:

Shift Supervision directs you to depressurize the "A" Loop of RHR

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
<p>1. Obtain copy of current revision of S51.4.A</p> <p>(CUE: When Candidate demonstrates the ability to obtain current revision of procedure provide a working copy of S51.4.A)</p>	S51.4.A current revision obtained.	
<p>*2. For affected RHR Loop, crack OPEN, pull-to-stop, <u>AND</u> WAIT 10 seconds, CLOSE the following "Full Flow Test Return Valve," to depressurize loop to Suppression Pool:</p> <p>HV-51-*F024A, "A RHR"</p> <p>HV-51-*F024B, "B RHR"</p> <p>HV-51-*F010A, "C RHR"</p> <p>HV-51-*F010B, "D RHR"</p> <p>(CUE: If asked, the EO reports PISH-1N653A, "1A RHR" indicates 280 psig")</p>	HV-51-1F024A, "A RHR" cracked opened for 10 seconds then closed	
<p>Evaluator NOTE: HV-51-1F024A will fail to close. The candidate must close HV-51-1F125A to terminate draining the RHR Loop to the Suppression Pool (per precaution 3.4).</p> <p>Upon second opening of HV-51-1F024A insert MALF MRH573A - HV-51-1F024A Fails due to Thermal Overload and Annunciator 113 COOL A F-5, Division 1 LPCI HIGH POINT VENT</p>		
<p>*3. REPEAT step 4.1 as necessary to depressurize loop to stayfill system pressure.</p>	N/A	N/A

<p>*4. For affected RHR Loop, crack OPEN, pull-to-stop, <u>AND</u> WAIT 10 seconds, CLOSE the following "Full Flow Test Return Valve," to depressurize loop to Suppression Pool:</p> <p>HV-51-*F024A, "A RHR"</p> <p>HV-51-*F024B, "B RHR"</p> <p>HV-51-*F010A, "C RHR"</p> <p>HV-51-*F010B, "D RHR"</p> <p>(CUE: If asked, the EO reports PISH-1N653A, "1A RHR" indicates 120 psig")</p>	<p>HV-51-1F024A, "A RHR" cracked opened for 10 seconds then attempts made to close valve</p>	
<p>*5. Close HV-51-1F25A to terminate leakage until HV-51-1F024A breaker can be reset</p>	<p>HV-51-1F125A Closed</p>	
<p>6. ENSURE "RHR Min Flow Valve", HV-51-*F007A(B,C,D), is open.</p>	<p>HV-51-1F007A, "RHR Min Flow Valve" , is open.</p>	
<p>7. ENTER action in log book.</p> <p>(CUE:The RO will make the log entry for you)</p>	<p>Log entry made</p>	
<p>8. IF Loop A(B,C,D) RHR LINE HIGH POINT VENT LO LEVEL annunciator alarms, <u>THEN</u> PERFORM direction provided in applicable Alarm Response Card.</p> <p>(CUE: You can stop here. You have met the termination criterion for this JPM.</p>	<p>N/A</p>	<p>N/A</p>

Comments:

NOTE: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT / UNSAT

TASK CONDITIONS:

1. Unit 1 is at 100% power
2. "A" Loop of RHR aligned for Automatic Operation On LPCI Mode per S51.1.A
3. Annunciator 113 F-3 "1A RHR PUMP DISCH HI/LO PRESS" has annunciated

INITIATING CUES:

Shift Supervision directs you to depressurize the "A" Loop of RHR

TITLE: BYPASSING SQUIB VALVES FOR SLC INJECTION

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

NONE

EVALUATION METHOD:

SIMULATE

EVALUATION LOCATION:

PLANT

APPROXIMATE COMPLETION TIME:

20 MINUTES

IMPORTANCE RATING(S):

3.7/3.9

EA 1.10

SYSTEM NUMBER(S):

295037

REFERENCES:

1. Unit 1, T-212, Rev. 17, Bypassing Squib Valves for SLC Injection
2. Unit 2, T-212, Rev. 13, Bypassing Squib Valves for SLC Injection

TASK STANDARD(S):

Establish a flowpath from the discharge of the SLC pumps to the vessel in accordance with T-212.

TASK CONDITIONS:

1. Unit ____ is in an ATWS.
2. SLC was manually initiated from the control room but the Squib valves failed to fire. All three SLC Injection Pumps are shutdown.

INITIATING CUES:

You are directed by Shift Supervision to perform T-212 on Unit ____ to inject SLC to the vessel.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
<p>1. NOTE:</p> <p><u>IF</u> this JPM is the first of multiple T-200 series JPMs being performed by a single candidate <u>THEN</u> step #1 applies.</p> <p><u>OTHERWISE</u> mark step #1 N/A</p> <p><u>AND</u> provide the following to the candidate :</p> <p>a. INITIATING CUE(S)</p> <p>b. CUE: " You are now in possession of the T-212 equipment container. It contains all tools and equipment required by the procedure. You are to simulate their use during performance of the procedure."</p> <p>c. PROCEDURE COPY</p>		
<p>*2. Obtain the following equipment from the Unit * T-200 Hose Storage cabinet (506-R16-283/580-R17-283) (Attachment 1). BL-840 key required:</p> <ul style="list-style-type: none"> - (1) 20 (U1)/ 15 (U2) foot Hydraulic hose with female Parker fittings - (1) LV-*00 Key <p>(CUE: You have obtained the equipment.)</p>	<p>The following equipment obtained from Unit * T-200 cabinet:</p> <ul style="list-style-type: none"> - (1) 20 (U1)/15 (U2) foot Hydraulic hose with female Parker fittings - (1) LV-*00 Key 	
<p>3. ENSURE the following at *0C603 (Main Control Room)</p>	N/A	N/A
<p>4. 48-*F036, "SLC Manual Injection Maintenance Valve" (INBOARD), open.</p> <p>(CUE: If Unit * RO is contacted, report "48-*F036 indicates open.")</p>	48-*F036 open.	
<p>5. HV-48-*F006A, "SLC Injection" (OUTBOARD A), open.</p> <p>(CUE: If Unit * RO is contacted, report "HV-48-*F006A indicates open.")</p>	HV-48-*F006A open.	

STEP	STANDARD	SAT/UNSAT
6. HV-48-*F006B, "SLC Injection" (OUTBOARD B), open. (CUE: If Unit * RO contacted, report "HV-48-*F006B indicates open.")	HV-48-*F006B open.	
7. 48-*F016, "SBLC Test Return Line Valve" (RECIRC VLV TEST) (500-R16-283/574-R17-283) closed. (CUE: If Unit * RO contacted, report "48-*F016 indicates closed.")	48-*F016 closed.	
8. ENSURE the following at *0C603 (Main Control Room)	N/A	N/A
9. Place the following keylock switches at panel *0C603 (MCR) for SLC Injection Pumps to "STOP" <ul style="list-style-type: none"> . *AP208 "SLC Injection Pump" . *BP208 "SLC Injection Pump" . *CP208 "SLC Injection Pump" 	Keylock switches checked in "STOP"	
10. CONNECT hose between the following:	N/A	N/A
*11. Parker fitting at 48-*001 "SBLC Test Return Line Vent Vlv" (500-R16-283/574-R17-283) (CUE: Hose fitting is connected)	One end of 20 (U1)/15 (U2) foot hose is connected at 48-*001	
*12. Parker fitting at 48-*015 "SBLC Pps Disch Hdr Test Vlv" (500-R16-283/574-R17-283) (CUE: Hose fitting is connected)	The free end of the 20 (U1)/ 15 (U2) foot hose is connected at 48-*015	
*13. UNLOCK AND OPEN 48-*F021, "SBLC Test Return Line Vent Vlv" (500-R16-283/574-R17-283). (CUE: Lock is removed, handwheel rotates counter clockwise and then comes to a stop.)	48-*F021 unlocked and open.	

STEP	STANDARD	SAT/UNSAT
<p>*14. OPEN 48-*001, "SBLC Test Return Line Vent Vlv" (500-R16-283/574-R17-283)</p> <p>(CUE: Valve handwheel rotates counter clockwise and then comes to a stop.)</p>	48-*001 open.	
<p>*15. UNLOCK AND OPEN 48-*014, "SBLC Pps Disch Hdr Test Vlv" (500-R16-283/574-R17-283)</p> <p>(CUE: Lock is removed, handwheel rotates counter clockwise and then comes to a stop.)</p>	48-*014 unlocked and open.	
<p>*16. OPEN 48-*015, "SBLC Pps Disch Hdr Test Vlv" (500-R16-283/574-R17-283)</p> <p>(CUE: Valve handwheel rotates counter clockwise and then comes to a stop.)</p>	48-*015 open.	
17. OPEN the following:	N/A	N/A
<p>*18. 48-*F017A, "A SBLC Pp Recirc Vlv" (500-R16-283/574-R17-283)</p> <p>(CUE: Valve handwheel rotates counter clockwise and then comes to a stop.)</p>	48-*F017A open.	
<p>*19. 48-*F017B, "B SBLC Pp Recirc Vlv" (500-R16-283/574-R17-283)</p> <p>(CUE: Valve handwheel rotates counter clockwise and then comes to a stop.)</p>	48-*F017B open.	
<p>*20. 48-*F017C, "C SBLC Pp Recirc Vlv" (500-R16-283/574-R17-283)</p> <p>(CUE: Valve handwheel rotates counter clockwise and then comes to a stop.)</p>	48-*F017C open.	

STEP	STANDARD	SAT/UNSAT
<p>*21. START one of the following SLC Injection Pumps, by holding keylock switch at panel *0C603 (Main Control Room) in "RUN" for at least 1 second before releasing:</p> <ul style="list-style-type: none">• *AP208, "SLC Injection Pump"• *BP208, "SLC Injection Pump"• *CP208, "SLC Injection Pump" <p>(CUE: When the candidate notifies the MCR to start a SLC pump then say: "You can stop here, you have met the termination criteria for this JPM."</p>	<p>Recognize the need to start a SLC pump and notify control room operators that SLC is aligned per T-212 and that they need to start a SLC pump.</p>	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. Unit ____ is in an ATWS.
2. SLC was manually initiated from the control room but the Squib valves failed to fire. All three SLC Injection Pumps are shut down.

INITIATING CUES:

You are directed by Shift Supervision to perform T-212 on Unit ____ to inject SLC to the vessel.

TITLE: BYPASSING A CONTROL ROD FROM THE REACTOR MANUAL CONTROL SYSTEM

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

NONE

EVALUATION METHOD :

SIMULATE

EVALUATION LOCATION:

PLANT

APPROXIMATE COMPLETION TIME:

15 MINUTES

IMPORTANCE RATING:

3.2/3.1

A2.04

SYSTEM NUMBER:

201002

REFERENCES:

1. S73.0.E, Rev. 10, Bypassing/Unbypassing a Control Rod from RMCS

TASK STANDARD(S):

Control Rod 18-31 bypassed from RMCS, and RDCS is reset

TASK CONDITIONS:

1. Control Rod 18-31 is declared inoperable.
2. RDCS is tripped inop due to the fault on rod 18-31.

INITIATING CUES:

You are directed by Shift Supervision to bypass Control Rod 18-31 from the Unit __ RMCS, and reset RDCS

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
1. Obtain copy of current revision of S73.0.E. (CUE: When Candidate demonstrates the ability to obtain current revision of procedure, proved a working copy of S73.0.E)	S73.0.E current revision obtained.	
2. Reactor Manual Control System in operation. (CUE: If asked say: "RMCS is operable.")	Ask the SSV or RO if RMCS is operable.	
3. Permission to bypass rod obtained from Shift Supervision. (CUE: If asked say: "You have permission to bypass control rod 18-31.")	Ask SSV for permission to bypass control rod 18-31.	
4. Refer to Attachment 1 and determine binary coordinated of control rod to be bypassed. (CUE: None)	Determine binary coordinates referring to Attachment 1: X = 00110 Y = 01001	
*5. Placed Bypassed Rod Identity Switches in position corresponding to binary coordinates of the control rod to be bypassed at *0C616. (CUE: Switches X2, X1, Y3 and Y0 are in the up position.)	Switches aligned: X4, down Y4, down X3, down Y3, up X2, up Y2, down X1, up Y1, down X0, down Y0, up	
*6. Place Bypassed Switch in up position at *0C616. (CUE: Bypassed switch is in the up position.)	Bypassed switch in the up position *0C616.	
7a. IF RDCS is INOPERABLE, as indicted by INOPERABLE LED Lit, on the RDCS STATUS section at *0C616 ... (CUE: The INOP LED is lit.)	Look at the "INOPERATIVE" LED and determined if it is lit and *0C616.	

<p>*7b. <u>THEN</u> depress "RESET" pushbutton located in RDSC STATUS section of analyzer card for several seconds at *0C616 <u>AND</u> RELEASE.</p> <p>(CUE: The "RESET" pushbutton depressed <u>AND</u> released.)</p>	<p>Depress the "RESET" pushbutton located in RDSC STATUS section of analyzer card for several seconds at *0C616 <u>AND</u> release.</p>	
<p>8a. VERIFY ROD BYPASS light lit on RDSC STATUS section of the ROD SELECT MODULE at *0C603, "Reactor Control Console"</p> <p>(CUE: The RO reports, "The ROD BYPASS light is lit on *0C603 "Reactor Control Console.")</p>	<p>Ask the RO if the ROD BYPASS light is lit on the RDSC STATUS section of the ROD SELECT MODULE at *0C603, or verify in the MCR.</p>	
<p>8b. <u>AND</u> verify RDSC INOPERATIVE annunciator clear on the *08 REACTOR (E-4)</p> <p>(CUE: The RO reports, "The RDSC INOPERATIVE annunciator is clear on *08 REACTOR (E-4)".</p>	<p>Ask the RO if the RDSC INOP annunciator is clear on *08 REACTOR, window E-4, or verify in the MCR.</p>	
<p>9. Document bypassed rod in Unified Narrative Log.</p> <p>(CUE: If asked say: "I understand you want me to note, control rod 18-31 bypassed.")</p>	<p>Notify CRS to make log entry saying control rod 18-31 is bypassed.</p>	

Comments:

NOTE: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT / UNSAT

TASK CONDITIONS:

1. Control Rod 18-31 is declared inoperable.
2. RDCS is tripped inop due to the fault on rod 18-31.

INITIATING CUES:

You are directed by Shift Supervision to bypass Control Rod 18-31 from the Unit __ RMCS, and reset RDCS

TITLE: HPCI/RCIC HIGH AREA TEMPERATURE ISOLATION BYPASS (T-249)

TASK PERFORMED BY: _____ EVALUATOR: _____

EVALUATOR SIGNATURE: _____ DATE: _____

DIRECTIONS TO EVALUATOR:

1. NONE

EVALUATION METHOD :

SIMULATE

EVALUATION LOCATION:

PLANT

APPROXIMATE COMPLETION TIME:

10 MINUTES

IMPORTANCE RATING(S):

SYSTEM NUMBER(S):

3.8/3.6
3.3/3.7

2.4.34
K.408

Generic
223002

REFERENCES:

1. Unit 1 T-249, Rev. 0, HPCI/RCIC HIGH AREA TEMPERATURE ISOLATION BYPASS
2. Unit 2 T-249, Rev. 1, HPCI/RCIC HIGH AREA TEMPERATURE ISOLATION BYPASS

TASK STANDARD(S):

HPCI/RCIC High area temperature isolations bypassed.

TASK CONDITIONS:

1. A LOCA has occurred on Unit ____.
2. RPV level is -180 inches.
3. T-111 has been entered.
4. A steam line break is not known to exist in HPCI/RCIC rooms.

INITIATING CUES:

You are directed by shift supervision to Bypass the HPCI and RCIC area high temperature isolations per T-249.

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

PERFORMANCE CHECKLIST:

STEP	STANDARD	SAT/UNSAT
<p>NOTE:</p> <p><u>IF</u> this JPM is the first of multiple T-200 series JPMs being performed by a single candidate <u>THEN</u> step #1 applies.</p> <p><u>OTHERWISE</u> mark step #1 N/A</p> <p><u>AND</u> provide the following to the candidate :</p> <ol style="list-style-type: none"> INITIATING CUE(S) CUE: " You are now in possession of the T-249 equipment container. It contains all tools and equipment required by the procedure. You are to simulate their use during performance of the procedure." PROCEDURE COPY 		
<p>*1. The following is OBTAINED from Unit ___ T-200 locker.</p> <ul style="list-style-type: none"> copy of T-249 (4) PA2235 keys <p>(CUE: After the operator tells you what equipment he/she will take, inform them: "You have that equipment and procedure" and provide copy of T-249.)</p>	A copy of T-249 and four (4) PA2235 keys OBTAINED.	
2. HPCI high area temperature isolation bypass.	N/A	N/A
3. PLACE the following keylock switches in "BYPASS":	N/A	N/A
<p>*3a. B21B-S6B "HPCI Steam Line OBV Steam Leak" at *0C620 (Aux Equip Room)</p> <p>(CUE: Switch is in bypass)</p>	B21B-S6B "HPCI Steam Line OBV Steam Leak" at *0C620 keylock switch in "BYPASS":	
<p>*3b. B21B-S6D "HPCI Steam Line IBV Steam Leak" at *0C641 (Aux Equip Room)</p> <p>(CUE: Switch is in bypass)</p>	B21B-S6D "HPCI Steam Line IBV Steam Leak" at *0C641 keylock switch in "BYPASS":	
4. RCIC HIGH AREA TEMPERATURE ISOLATION BYPASS	N/A	N/A

STEP	STANDARD	SAT/UNSAT
5. PLACE the following keylock switches in "BYPASS"	N/A	N/A
*5a. B21B-S5A "RCIC Steam Line OBV Steam Leak" at *0C621 (Aux Equip Room) (CUE: Switch is in bypass)	B21B-S5A "RCIC Steam Line OBV Steam Leak" at *0C621 keylock switch in "BYPASS":	
*5b. B21B-S5C "RCIC Steam Line IBV Steam Leak" at *0C640 (Aux Equip Room) (CUE: Switch is in bypass)	B21B-S5C "RCIC Steam Line IBV Steam Leak" at *0C640 keylock switch in "BYPASS":	

Comments:

Note: Any grade of UNSAT requires a comment.

JPM Overall Rating: _____
SAT/UNSAT

TASK CONDITIONS:

1. A LOCA has occurred on Unit ____.
2. RPV level is -180 inches.
3. T-111 has been entered.
4. A steam line break is not known to exist in HPCI/RCIC rooms.

INITIATING CUES:

You are directed by shift supervision to Bypass the HPCI and RCIC area high temperature isolations per T-249.