QUESTIONS REPORT

for rotest

1. 001AK1.05 001

The following conditions exist:

- Reactor power ≈ 100%
- Control Bank D is at 137 steps withdrawn
- Rod control is in AUTO

If PT-505 fails LOW, how will the rods in Control Bank D respond?

A. Move inward at 48 steps per minute.

B.✓ Move inward at 72 steps per minute.

C. Move outward at 72 steps per minute.

D. Move outward at 48 steps per minute.

2. 001K1.05 001

Given the following:

- 75% power
- Channel N-41 - 74%
- Channel N-42 - 73%
- Channel N-43 - 75%
- Channel N-44 - 74%
- Rod control is in Automatic

Which of the following describes Rod Control system response to channel N-41 failing low?

A. Control Rods drive in at a maximum rate until C-5 blocks rod motion or a reactor trip on low prz press occurs.

B. Control Rods drive in until the temperature mismatch equals the power mismatch and Tavg stablizes at a lower temperature.

C.✓ Control Rods remain in present position until power mismatch causes a signal to move.

D. Control Rods drive out until the temperature mismatch equals the power mismatch and Tavg stablizes at a lower temperature.

3. 002K5.10 002

Given the following conditions:

- Tavg is on program
- Unit 1 is at 94% power and ramping up.
- Rods are in automatic with Bank D at 200 steps
- Turbine load set is raised to 1220 MWe using the increase pushbutton
- Turbine control valves are opening and megawatts are increasing

Which ONE of the following describes Tavg behavior assuming no operator action?

A. Tavg and Tref will increase and continue to be matched until the turbine reaches set load.

B. Tref will increase until the turbine reaches set load, but Tavg will remain constant.

C. Tavg and Tref will remain constant and matched as the turbine load increases.

D. Tavg will decrease and Tref will increase until the turbine reaches set load.

4. 003A2.02R 002

Given the following:

- Unit 1 is at 39% power
- Annunciator ALB08 A05 "RCP 1 Controlled LKG HI/LO FLOW" is illuminated
- RCP 1 Seal Inlet Temperature is at 240°F and increasing.

Which ONE of the following describes the correct sequence of actions for the control room crew?

A. Trip RCP 1, close #1 Seal Return valve, trip the Rx and initiate 19000-C, "E-0, Rx Trip or Safety Injection"

B. Trip the Rx and initiate 19000-C, "E-0, Rx Trip or Safety Injection," trip RCP 1, and close #1 Seal Return Valve

C. Trip RCP 1, close #1 Seal Return valve and continue in 12004-C, "Power Operation (MODE 1)"

D. Trip RCP 1, close #1 Seal Return valve and initiate 18005-C, "Partial Loss of Flow"

5. 003G2.4.49 002

At 11:00 you are notified that RCP #1 ACCW inlet line is leaking badly. Maintenance was notified and is in the process of determining what type of repairs are needed. At 11:05 via plant computer and other control room indications, you determine that the following conditions exist:

- Motor bearing temperature is 195 °F and rising at 1 °F / min
- Motor stator winding temperature is 315 °F and steady
- Seal water Inlet temperature is 190 °F and steady

Based on the above conditions, what action(s) should be taken?

A. Immediately trip the RCP

B. Trip the RCP if ACCW to the pump is not re-established by 11:16 with total #1 seal flow greater than 5 gpm

C. Trip the RCP if ACCW flow is not re-established by 11:10

D. Trip the RCP, then the reactor if seal water temperature is not returned to 230 °F by 11:16

6. 004A2.12 001

Given the following:

- Unit 2 is at 100% power
- CCP "A" is in service, providing normal charging flow
- An inadvertent "B" train SI was generated by I&C
- SI "A" train is NOT present
- No operator action takes place

Which of the following is correct?

A. Normal mini-flow paths for both CCPs are isolated, alternate flow-paths for both CCPs are available.

B. Normal mini-flow paths for both CCPs are isolated, CCP "A" alternate miniflow path is isolated, CCP "B" alternate mini-flow path is available.

C. CCP "A" normal mini-flow path is available, CCP "A" alternate miniflow path is isolated, CCP "B" alternate mini-flow path is available.

D. Normal mini-flow paths for both CCPs are isolated, alternate flow-paths for both CCPs are isolated.

7. 004A4.07 001

Which of the following describes the proper reactor makeup control system valve positions after the Makeup Control Switch is placed to the START position with the Mode selector switch in DILUTE?

A. Boric Acid to Blender Valve (FV-0110A) - CLOSED
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- CLOSED
Blender Outlet to VCT Valve (FV-0111B)- OPEN
RX MU WTR to BA Blender Valve (FV-0111A)- MODULATED

B. Boric Acid to Blender Valve (FV-0110A) - CLOSED
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- OPEN
Blender Outlet to VCT Valve (FV-0111B)- MODULATED
RX MU WTR to BA Blender Valve (FV-0111A)- CLOSED

C. Boric Acid to Blender Valve (FV-0110A) - OPEN
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- OPEN
Blender Outlet to VCT Valve (FV-0111B)- CLOSED
RX MU WTR to BA Blender Valve (FV-0111A)- MODULATED

D. Boric Acid to Blender Valve (FV-0110A) - MODULATED
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- MODULATED
Blender Outlet to VCT Valve (FV-0111B)- OPEN
RX MU WTR to BA Blender Valve (FV-0111A)- OPEN

8. 004K4.04 002

Unit 1 is recovering from a remote shutdown outside the control room. The Auxiliary Building SO is currently locally controlling CVCS charging flow using 1FHC-0121 outside the charging pump rooms.

Which of the following is the correct method of transfering charging flow control back to the control room?

A. Place both the local (FHC-0121) and control room (FIC-0121) controllers at 0% demand, then place the charging pump transfer switch in the control room position.

B. Match the control room demand (on FIC-0121) with the local controller (FHC-0121), then place transfer switch in the control room position.

C. Place the local controller in "REMOTE", the control room demand automatically tracks the local demand.

D. Place the control room controller (FIC-0121) in "AUTO", no local action is required.

9. 004K5.04 001

Which one of the following is the basis for maintaining a hydrogen cover gas in the VCT during normal at power operations?

A. To assure N-16 concentrations are ALARA

B. To maintain RCS pH within limits

C. To maintain conductivity below .017 micro Mhos

D. ✓ To maintain oxygen concentration within limits

10. 005AK2.02R 001

Unit 1 was at 25% power and ramping up when the RO noticed that one of the Control Bank C control rods is 13 steps below the other rods in Control Bank C which were at 215 steps and moving as designed.

Power accension was halted. The rod had an electrical problem which was repaired and the operations management staff has concurred with realignment of the misaligned rod in accordance with 18003-C, Rod Control System Malfunction.

Which ONE of the following outlines the method of realigment in accordance with AOP 18003-C?

A. Record information from Bank Overlap Unit, step counters, and P/A converter. Disconnect lift coil for the affected rod, reset step counters, select Bank C and insert Bank C control rods. Log the final rod position.

B. Reset Master Cycler, record information from Bank Overlap Unit, step counters, and P/A converter. Disconnect lift coil of the affected rod, select Bank C and insert Bank C. Log final position of affected rod.

C. ✓ Position Rod Bank Selector Switch to affected bank, disconnect all lift coils in Bank C except the affected rod, and withdraw affected control rod, reset the affected group step counter to recorded position. Log the final rod position.

D. Reset master cycler, record information for P/A converter, and step counters. Disconnect all lift coils in Bank C except the affected rod, select Bank C and withdraw the affected rod.

11. 005K5.03R 001

Unit 1 is in Mode 4 with #1 Reactor Coolant Pump running. "A" train RHR has JUST been placed in service when the Reactor Operator notes source range counts suddenly increasing on both channels. ALB10 C01 "SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN" is illuminated.

Which ONE of the following describes the correct action?

A. Commence an emergency boration per 13009-1, CVCS Reactor Makeup Control System.

B. Start the #2 Reactor Coolant Pump and secure the #1 Reactor Coolant Pump.

C. Start "B" Train RHR and secure "A" train RHR per 13011-1, Residual Heat Remaoval System.

D. Commence a normal boration until the source range counts begin to decrease.

12. 006A1.11 002

Given the following plant conditions:

- SGTR has occurred on SG #1.
- 19031, "Post-SGTR Cooldown Using Backfill", is in progress.
- Ruptured SG level is 25% NR.
- Crew is cooling down using steam dumps to condenser.
- RCP #4 in service.

19031, "Post-SGTR Cooldown Using Backfill"
- Step 14 requires a return to step 3 if RCS temperature is greater than 200°F.
- Step 3 requires the operator to ensure adequate shutdown margin.

Why is it necessary to re-verify shutdown margin at this point in the procedure?

A. The RCS temperature change during cooldown will cause significant boron concentration changes due to PZR outsurge.

B. Charging to maintain PZR level during cooldown will cause significant boron concentration changes.

C. The secondary fluid in the ruptured SG will cause a significant decrease in RCS boron concentration.

D. Using auxiliary spray will cause a significant decrease in RCS boron concentration changes.

13. 006K1.07 002

Given the following sequence of events:

- The plant is operating at 100% power.
- Safety Injection actuated
- Reactor tripped due to the SI signal
- Controlling #1 SG level transmitter fails low after the trip
- #4 SG ARV opened momentarily and developed a large packing leak.

Which ONE of the following would cause the INITIAL main feedwater isolation during this transient?

A. The #1 SG level reached 86%.

B. ✓ The safety injection actuation signal.

C. Tavg dropping to 564°F following the reactor trip.

D. Main Steam Valve Room level had risen due to the ARV packing leak.

14. 008AK1.01 001

Given the following:

- Unit 1 is stable at 100% power
- A pressurizer safety valve opens and fails to reseat, remaining 25% open and the Unit trips
- RCS pressure stabilizes at 1600 psig
- SI acuates

Which of the following indications would the operator expect to see as a result of this event in the next 30 minutes?

A. Safety tailpipe temperature would increase to greater than 600 °F and then decrease to 450 °F.

B. Safety tailpipe temperature would increase to greater than 600 °F and then slowly increase.

C. ✓ Safety tailpipe temperature would increase to between 220 and 340 °F and then decrease and stablize.

D. Safety tailpipe temperature would increase to between 220 and 340 °F and then slowly increase and stablize at 600 °F.

15. 008K1.02R 001

Which ONE of the following correctly describes the uses of ACCW in the containment building.

A. RCP motor coolers, Seal Water HX and RCP thermal barriers.

B. RCP motor coolers, RCP thermal barriers and CVCS Letdown Regen HX.

C. RCP motor coolers, RCP thermal barriers and Normal Letdown HX.

D. RCP motor coolers, RCP thermal barriers and CVCS Excess Letdown HX.

16. 009EA2.39R 002

Given the following conditions:

- Small break LOCA in progress
- RCS pressure is at 1100 psig
- No SI pumps
- No Charging pumps

Which one of the following explains why RCPs are NOT tripped under these conditions?

A. To provide heat removal via the Steam Generators.

B. To maintain two phase mixture level above the break longer.

C. To limit single phase inventory loss out of the break.

D. To prevent boron stratification in the core.

17. 010K3.01 001

Given the following:

- Pressurizer pressure is 2230 psig and increasing.
- The proportional heaters are energized.
- The spray valves are closed.
- The Master Pressure Controller fails to a constant output equivilent to 2219 psig.

Which ONE of the following describes the response of the pressure control system if the operator takes no further action?

A. Pressure will rise until the spray valves open to control pressure.

B. Pressure will rise until PORV 456 opens to control pressure.

C. Pressure will rise until PORV 455 opens to control pressure.

D. Pressure will cycle on the variable heaters at a higher setpoint.

18. 011A3.03 001

Given the following:

- Unit is at 50% power.
- All automatic control systems are in their normal lineup.
- Pressurizer program level sticks at constant output for 50% power.
- Assume no operator action is taken.

Which of the following describes the effect on charging flow and PZR level as the plant load is increased to 100%?

A. Actual PZR level remains constant and charging flow increases.

B. Actual PZR level decreases and charging flow decreases.

C. ✓ Actual PZR level increases and charging flow decreases.

D. Actual PZR level increases and charging flow remains constant.

19. 011EK2.02 001

Given the following conditions:

- A large break LOCA occurred
- Operators have just completed 19013-C, "Transfer to Cold Leg Recirculation"
- A loss of offsite power occurs

Which ONE of the following describes the actions required for this condition?

A. Pull to lock SIPs and CCPs until the RHR pumps are started by the blackout sequencer after the diesel generators start and load the 4160 vital buses.

B. ✓ Ensure the RHR pumps are manually started after the diesel generators start and load the 4160 vital buses, then manually start SIPs as needed.

C. Ensure both RHR pumps are started by the blackout sequencer after the diesel generators start and load, then manually start CCPs and SIPs as needed

D. Ensure all ECCS pumps are started by the blackout sequencer when the diesel generators reenergize 4160 vital buses.

20. 012K6.10 001

Given the following conditions

- Unit shutdown in progress
- Power at 9%
- Permissive "P-7 LO POWER TRIPS BLOCKED" illuminates

Which ONE of the following describes the effects on RPS?

A. The reactor will not trip on Pressurizer High Pressure.

B. The reactor will not trip on high positive rate.

C. ✓ The reactor will not trip on Pressurizer Low Pressure.

D. The reactor will not trip on low steam generator level.

21. 013K2.01 002

Given the following:

- SIP 1A & 1B are in Auto
- Control power is lost to SIP 1A
- Safety injection (SI) occurs

Which of the following describes the response of the SI pumps to the Safety Injection signal?

A. ✓ SIP 1B will start, but SIP 1A will not auto start or manually start from the QMCB handswitch.

B. SIP 1B will start, but SIP 1A will not auto start and must be started from QMCB handswitch.

C. Both SI pumps will auto start, but the SIP 1A can not be stopped from the QMCB.

D. Both SI pumps will auto start, but the SIP 1A can not be stopped except mechanically at the breaker.

22. 013K6.01R 002

An upscale failure of which one of the following will directly result in an automatic ESFAS actuation?

A. Containment pressure instrument, PT-936.

B. Control Room Area monitor, RE-0001.

C. Pressurizer Pressure instrument, PT-455.

D. ✓ Control Room Air Intake monitor, RE-12116.

23. 014A4.01 002

Given the following:

- Operators are conducting a reactor startup
- ALL shutdown banks are withdrawn
- Control banks are being withdrawn in 50 step increments
- The SS notices that Control Bank A is at 200 steps and Control Bank B is at 0 steps

Which of the following explains these indications?

A. Rod bank selector switch is in the manual position.

B.✓ Rod bank selector switch is in the Control Bank A postion.

C. The rod control startup switch is stuck in the reset postion.

D. DRPI Data B failure has occurred.

24. 015G2.2.12R 002

NIS channel check surveillance is required every 12 hours by technical specfications. The last channel check was completed at 0615 on 10/31/02. Outage activities are hindering completion of this surveillance.

The NIS channel would be declared INOPERABLE if the next channel check is not completed by:

A.✓ 2115 on 10/31/02

B. 2215 on 10/31/02

C. 0615 on 11/01/02

D. 1215 on 11/01/02

25. 015K4.06 002

Given the following conditions:

- Reactor power is at 18% with a startup in progress
- N41 was placed in bypass (BTI) following a failed surveillance

How does this affect the coincidence for a power range High Flux Reactor Trip?

A. 2 out of 4 power range channels at 25% reactor power will generate a reactor trip

B. 2 out 3 power range channels at 25% reactor power will generate a reactor trip

C.✓ 2 out 3 power range channels at 109% reactor power will generate a reactor trip

D. 2 out of 4 power range channels at 109% reactor power will generate a reactor trip

26. 015K5.04 001

Manual calibration of the NIS is being performed in accordance with procedure 14030-2, "Nuclear Instrument Calorimetric Calibration." Feedwater average temperature is incorrectly calculated to a value 17 degrees less than actual. For these conditions, which of the following is correct?

Calculated reactor thermal power will be.....

A. lower than actual and a gain adjustment of the NI channels using the calculated value would be non-conservative such that the indicated power is farther from the setpoints.

B. higher than actual and a gain adjustment of the NI channels using the calculated value would be non-conservative such that the indicated power is farther from the setpoints.

C. lower than actual and a gain adjustment of the NI channels using the calculated value would be non-conservative such that the indicated power is closer to the setpoints.

D.✓ higher than actual and a gain adjustment of the NI channels using the calculated value would be conservative such that the indicated power is closer to the setpoints.

27. 016K3.02 001

With Pressurizer Level Control Selector Switch LS-459D selected to 459/460, the following SEQUENTIAL plant events occur due to a failure without operator action.

- Charging flow increases to maximum
- Pressurizer level begins to rise
- Letdown isolates and heaters turn off
- Pressurizer level eventually rises to the high level reactor trip

Which ONE of the following failures occurred?

A. Level channel LT-459 failed high.

B. Level channel LT-460 failed high.

C.✓ Level channel LT-459 failed low.

D. Level channel LT-460 failed low.

28. 017AK1.02 002

IF RCP #1 trips when the plant is at 10% power during a load increase to 100%, which one of the following statements is correct?

A. A reactor trip will occur and operators should implement 19000-C.

B. ✓ The affected pressurizer spray valve should be shut to prevent spray flow from bypassing the pressurizer.

C. The affected S/G blowdown rate may be isolated to facilitate level control.

D. Reactor trip breakers should be immediately opened to comply with the action statement for LCO 3.4.4, "RCS Loops-Modes 1 and 2".

29. 017K3.01 002

Given the following conditions:

- Reactor trip
- All RCPs are tripped
- All core-exit thermocouples are inoperable
- 19001-C is in progress

Which one of the following describes the indication that could be used to verify that natural circulation cooling is in progress

A. RCS loop Tave's stable or lowering.

B. RCS loop loop Tave's increasing to full power values.

C. ✓ Steam Generator Pressures Stable or lowering.

D. Steam Generator Levels Stable or lowering.

30. 022AG2.1.32 001

During water solid operations with letdown from RHR, procedure 13011-1, "Residual Heat Removal System" requires that 1-HV-0128, Letdown From RHR, be full open.

Which ONE of the following describes the basis for this precaution?

A. To ensure maximum letdown flow rate for purification.

B. To ensure VCT level can be maintained under all charging flow conditions.

C. ✓ To ensure 1-PIC-0131, Low Pressure Letdown Controller can control pressure transients.

D. To ensure RCS to RHR Supply Line Relief Valves PSV-8708B and PSV-8708A are not challenged.

31. 024AK2.01 002

Given the following conditions:

- 2 rods stick out on a reactor trip
- The RO initiates emergency boration using HV-8104
- Boric flow on FI-0183A is 23 gpm and charging flow is 42 gpm

Which of the following is the correct response to this condition?

The RO can correct this condition by.....

A. Placing charging flow controller FIC-0121 in manual and increasing the set point to >42 gpm, ensuring charging flow increases and FI-0183A indicates >30 gpm.

B. Opening FV-110A, closing FV-110B, and ensuring FI-0183A indicates >30 gpm.

C.✓ Opening HV-112D and HV-112E, then closing HV-112B and HV112C, ensuring charging flow is >87.5 gpm.

D. Opening HV-112B and HV-112C, then closing HV-112D and HV112E, ensuring charging flow is >87.5 gpm.

32. 025AK2.02 001

Given the following:

- RCS temperature is 118 ^{o}F
- Reactor Vessel head is removed
- Reactor Upper Internals are installed in the reactor vessel
- Refueling Level is 187.9 ft
- RCS draining is in process at 10 gpm
- RHR pump A is running with indicated flow of 3800 gpm
- RHR pump A is exhibiting indications of cavitation

The cavitation and resulting loss of RHR is occurring due to .....

A. draining with the upper internals in place, which reduced the RHR suction pressure.

B. steam binding of the RHR pump, caused by low recirculation flow.

C.✓ air entrapment at the RHR suction inlet, caused by the high flow conditions.

D. draining with the upper internals in place, which reduced the RHR discharge pressure.

33. 026A1.01 002

Given the following conditions on Unit 2:

- Following a LOCA, containment pressure is rising.
- Containment pressure has reached 20 psig on three channels and 22 psig on one channel.

Which one of the following are the MINIMUM actions that would result in containment spray actuation?

A. When 1 more containment pressure channel indicates 22 psig, or when 1 manual handswitch is actuated.

B.✓ When 1 more containment pressure channel indicates 22 psig, or when 2 manual handswitches are actuated.

C. When 2 more containment pressure channels indicate 22 psig, or when 1 manual handswitch is actuated.

D. When 2 more containment pressure channels indicate 22 psig, or when 2 manual handswitches are actuated.

34. 026AK3.01 002

Given the following plant conditions:

- Unit 2 is in Mode 3
- ALB 04, window A2, "ACCW LO HDR PRESS" is illuminated
- ALB 07, window D3, "LTDN HX OUT HI TEMP" is illuminated

Which one of the following events would cause both of these alarms?

A. Letdown Hx Tube Rupture

B.✓ ACCW Supply Header Rupture

C. Loss of Seal Injection

D. Loss of Charging Flow

35. 027AK3.03 002

Given the following conditions:

- Unit 1 is at 100% power.
- ALB12 E01 "PRZR RELIEF DISCH HI TEMP" illuminates
- Both PORVs indicate closed.
- PORV-455 tailpipe temperature is reading 220 degrees F.
- PORV-456 tailpipe temperature is reading 187 degrees F.
- Pressurizer pressure is lowering.

Which one of the following is the correct action in accordance to ARP 17012-1?

A. Close the associated block valve for PORV-456 because a vapor-space leak causes PZR level to increase.

B. Close both block valves because a vapor-space leak causes PZR level to increase.

C.✓ Close the associated block valve for PORV-455 to stop leakage to the PRT.

D. Close both block valves to stop leakage to the PRT.

36. 029EA1.13 001

Which ONE of the following is the NEXT action the operator is required to take if the main turbine does NOT trip automatically and CANNOT be tripped from the QMCB per 19211-C, FR-S.1, "RESPONSE TO NUCLEAR POWER GENERATION/ATWT"?

A. Place both EHC pumps control switches in P-T-L.

B. Trip the turbine locally at the front standard.

C.✓ Manually Runback the turbine.

D. Shut the MSIV's.

37. 029K1.02 001

RE-2565 samples the _____ and initiates a Containment _____ _____ upon alarm.

A. Cntmt Purge Exhaust; Purge trip

B.✓ Cntmt Purge Exhaust; Vent Isolation

C. Cntmt Purge Supply; Vent Isolation

D. Cntmt Purge Supply; Purge trip

38. 032AK1.01 002

Given the following conditions:

- Reactor Startup in progress
- Startup is on hold due to a problem with SR N-31
- SR N-32 indicates 1000 cps
- SR N-31 is in bypass

Which ONE of the following will occur if the control power fuse for SR N-31 blows?

A. Lose indication for SR N-31 on Main Control Board and NIS cabinets.

B. Both SR drawers deenergize and the "non-operate" alarm acuates.

C.✓ Reactor will trip.

D. Rod withdrawal is blocked.

39. 033G.2.4.18R 002

Given that CCW has been lost on Unit 1. Actions in 18030-C "Loss of SFP Cooling" direct the operators to feed & bleed the SFP.

Which of the following is the correct action to take?

A. Feed the SFP with RWST and bleed with SFP pump "A" simultaneously.

B.✓ Feed the SFP with RWST and bleed with SFP pump "B" simultaneously.

C. Feed the SFP with RMWST and then bleed with SFP pump "A"

D. Feed the SFP with RMWST and then bleed with SFP pump "B"

40. 034K4.01 001

Which one of the following describes a feature of the Refueling Machine designed to prevent the accidental release of a fuel assembly?

A. The Gripper is mechanically engaged and disengaged by a remote operating handle on the bridge and requires no power or air to operate.

B.✓ The gripper requires air to disengage, however, a mechanical latch prevents gripper release under load even if air is supplied.

C. The gripper will disengage upon loss of air, however, a mechanical latch prevents gripper release under load even if air is removed.

D. When the gripper is engaged, fuel handlers mechanically lock gripper in place with extension shaft which must be unlocked before the gripper can release.

41. 035K1.09 002

Given the following plant conditions:

- The reactor is operating at 50% power.
- Rod control is in MANUAL.
- Turbine control is at set load.
- #3 S/G ARV fails OPEN.

Which ONE of the following describes the resulting steady-state conditions?
(Assume no reactor trip, no operator action and turbine power remains constant)

A. Final Tavg < initial Tavg and final power > initial power.

B. Final Tavg < initial Tavg and final power = initial power.

C. Final Tavg = initial Tavg and final power > initial power.

D. Final Tavg = initial Tavg and final power = initial power.

42. 037AK3.07 001

Given the following:

- A SG #3 has a 30 gpm leak.
- AOP 18009-C, Steam Generator Tube Leak is being implemented.
- S/G #3 is maintained greater than 10%.

Which ONE of the following is a bases for ensuring the affected SG level greater than 10%?

A. To ensure that the pressure and temperature limits of the SG shell are maintained.

B. To prevent RCS cooldown from causing depressurization of the affected SG.

C. To prevent SG overfill.

D. To prevent thermal shock to the tubes during RCS cooldown.

43. 039A1.03 002

Given the following:

- Unit 2 is in mode 3 at NOPT for a post refueling start up
- MSIVs are shut and the main steamlines need to warmed
- SG ARVs are in manual, controlling loop Taves at 557 °F

Which of the following correctly describes the method used and the indications observed while warming the main steamlines?

A. Slowly open MSIVs one at a time. RCS pressure will remain constant while temperature decreases.

B. Open steam dumps to 1% to 2% after placing both bypass switches in the bypass position. RCS temperature and pressure will decrease.

C. Open MSIV bypass valve(s) and maintain MSIVs shut. RCS temperature and pressure will decrease.

D. Open MSIV bypass valve(s) after placing both steam dump bypass switches in the bypass position. RCS temperature and pressure will decrease.

44. 040AG2.4.4 002

Given the following plant conditions:

- Unit was at 100% power
- A main steam line break occurred in the Turbine Building
- Operators were unable to close the MSIVs and transitioned to procedure 19121-C, ECA-2.1, "Uncontrolled Depressurization of All Steam Generators."
- SI termination steps of ECA-2.1 are in progress
- Loop 3 MSIV is closed locally
- The CRO observes the # 3 S/G pressure rising slowly

Which of the following actions should be performed?

A. Immediately transition to E-2, "Faulted S/G Isolation"

B. Immediately transition to ES-1.1, "SI Termination"

C. Remain in ECA-2.1 until RHR is in service

D. Remain in ECA-2.1 until SI is terminated

45. 041K3.04 001

Given the following conditions:

- Unit at 100% power, EOL conditions.
- Turbine operating at set point
- A steam dump valve inadvertently comes full open.
- All other control systems normal.

Which ONE of the following correctly describes the plant conditions, when the plant stabilizes, assuming NO reactor trip and NO operator action?

A. Megawatts electrical same as initial; reactor power increases.

B. Megawatts electrical same as initial; reactor power decreases.

C.✓ Megawatts electrical decreases; reactor power increases.

D. Megawatts electrical decreases; reactor power decreases.

46. 045A3.05 001

The following plant conditions exist:

- Unit 1 is at 90% power
- Main Turbine is in STANDBY to repair a failed speed sensor

Which ONE of the following correctly describes the status of the Turbine Control System?

A. All overspeed protection has been defeated except for the Mechanical Trip and the Backup Overspeed Trip.

B. Overspeed protection from the speed control circuits and PLU has been defeated. IV Fast Closure, Mechanical Trip, and Backup Overspeed Trip are still operable.

C.✓ The Power Load Unbalance circuit is still active and will allow fast closure of the Control Valves and the Intercept Valves if a sudden load rejection of more than 40% occurs.

D. The Power Load Unbalance circuit is defeated and the Backup Overspeed Trip setpoint is reduced to 105%.

47. 051AA2.02R 001

Given the following:

- Condenser pressure rising; operators dropping turbine load in attempt to maintain vacuum.
- Condenser vacuum is decreasing, currently reading 25.20 inches Hg

Which ONE of the following would be the FIRST to automatically occur or be procedurally required if condenser pressure continues to rise?

A. Auto main turbine trip on low vacuum.

B. Manual reactor trip.

C. ✓ Loss of steam dump capability.

D. Manual turbine trip.

48. 054EG2.4.48 002

Given the following:

- Unit 1 is at 100% power.
- Annunciator ALB13-D01 STM GEN 1 HI/LO LVL DEVIATION alarm is illuminated
- Only S/G #1 level is rising
- Both MFPs speed are rising

Which ONE of the follow describes the (1) cause, (2) required action and (3) direct consequence of an operator failing to take action?

A. (1) #1 S/G FRV is opening, (2) stabailize #1 S/G level at new level, (3) Turbine Runback Initiated

B. ✓ (1) #1 S/G FRV is opening, (2) return #1 S/G level to program, (3) Feedwater Isolation initiated

C. (1) MFP master controller failing high, (2) control MFP speed using manual, (3) Auto Turbine Trip initiated

D. (1) MFP master controller failing high, (2) manually trip turbine, (3) Feedwater Isolation initiated

49. 055EK3.02 002

Which ONE of the following is a purpose of depressurizing all intact SGs to 300 psig during the performance of 19100-C, "ECA-0.0, Loss of All AC Power"?

A. Reduces DP across SG U-tubes to minimize possibility of tube rupture.

B. ✓ Reduces DP across RCP seals to minimize leakage and loss of RCS inventory.

C. Maximizes Natural Circulation flow before Reflux cooling begins as the RCS becomes saturated.

D. Maximizes Natural Circulation flow to allow reactor vessel head to cool since CRDM cooling fans are unavailable.

50. 055K3.01 002

Given the following conditions:

- Reactor power is steady-state at 100%.
- Rod control is in automatic.
- Sealing steam pressure drops to 0 psig due to a malfunction

Which ONE of the following conditions will result if NO operator action is taken in response to this condition?

A. Rising megawatt output and rising steam seal header pressure.

B. Rising megawatt output and rising condenser hotwell level.

C. Dropping megawatt output and dropping condenser pressure.

D. ✓ Dropping megawatt output and rising condenser pressure.

51. 056AK1.01R 002

Given the following plant conditions:

- Unit 1 has experienced a Loss of Offsite Power
- The operating crew is currently performing a cooldown, in accordance with procedure 19002-C, "ES-0.2, Natural Circulation Cooldown"
- Prior to initiating the cooldown, two CRDM fans trip

Which ONE of the following describes the maximum allowable cooldown rate?

A. <100 °F in any one hour

B. <75°F in any one hour

C. ✓ <50°F in any one hour

D. <25°F in any one hour

52. 056K1.03 002

Unit 1 is at 70% power. A limit switch problem causes MFP 1A turbine exhaust valve to close.

Which ONE of the following describes the effect on continued plant operation?

A. 1A MFP rolls to idle, the Standby condensate pump starts and Rx power can remain at 70%

B. ✓ 1A MFP trips, the standby condensate pump remains in standby, and Rx power can remain at 70%.

C. 1A MFP trips, the standby condensate pump starts and Rx power must be reduced to 56%.

D. 1A MFP rolls to idle, the standby condensate pump does not start and Rx power must be reduced to below 56%

53. 057AA2.18R 002

Given the following:

- Unit 1 at 100% power
- Alarms received indicate a failed electrical bus
- All channel 1 trip status lights illuminated
- MSIV's remain open and the unit does not trip
- All channel 1 instruments fail down scale

Which ONE of the following identifies which electrical bus is de-energized?

A. 125 V DC Vital Bus 1AD1

B. 120 VAC Vital Instrument Bus 1AY1A

C. 125 V DC Vital Bus 1BD1

D. 120 VAC Vital Instrument Bus 1BY1B

54. 059A4.11 001

After which one of the following events can feedwater isolation be reset by operating the feedwater isolation reset handswitches without performing any other actions?

A. A spray valve fails open causing pressurizer pressure to drop to 1725 psig. The spray valve is closed and pressure returns to 2235.

B. At 75% Rx power, the operator overfeeds a single steam generator to the High-High Level setpoint and clears the High-High Level.

C. Turbine high vibrations causes a turbine trip from 65% Rx power. Steam dumps open to control Tavg at 557°F.

D. A high steam line flow causes a low Tavg and an SI. Main Steam isolation terminates high flow condition and allows Tavg to return to 557°F.

55. 059AA1.01 001

Given the following plant conditions:

- Plant is operating a 100% power.
- Plant systems aligned for normal at power operations.
- RE-1950, Auxiliary Component Cooling Water radiation monitor, is in alarm

Which ONE of the following lists the type and process flows that are sensed by the alarming radiation monitor?

A. Gamma; Thermal Barrier leakage.

B. Beta; Excess Letdown Hx leakage

C. Gamma; RHR Hx leakage

D. Beta; RCP Motor Cooler leakage

56. 059K4.19 001

Which ONE of the following describes the automatic functions which take place on receipt of a feedwater isolation signal due to a reactor trip with T-ave less than 564 degrees F?

A. Main feed pumps trip, main feedwater isolation valves close, main feed regulating and bypass feed regulating valves close, bypass feed isolation valves close

B. Main feedwater isolation valves close, main feed regulating and bypass feed regulating valves close, bypass feed isolation valves close

C. Main feedwater isolation valves close, bypass feed isolation valves close, auxiliary feedwater isolation valves close

D. Main feed pumps trip, main feedwater isolation valves close, auxiliary feedwater isolation valves close

57. 059K6.09 001

Given the following:

- Unit 1 is at 60% power with both MFPs operating in AUTO.
- PT-507, Steam Header Pressure, output begins to slowly drift low.

Which ONE of the following describes the initial effect on the Main Feed Water System, assuming no operator action?

A. Both MFP's discharge pressure begins to increase and all Feed Water Reg valves begin to close.

B. Both MFP's discharge pressure begins to increase and all Feed Water Reg valves begin to open.

C. Both MFP's discharge pressure begins to decrease and all Feed Water Reg valves begin to open.

D. Both MFP's discharge pressure begins to decrease and all Feed Water Reg valves begin to close.

58. 061A1.04 002

Given the following plant conditions:

- The Unit 1 is at 100% power
- A loss of both RATs occurs due to a switchyard fault
- The unit is manually tripped
- 1AA02 and 1BA03 are energized by their D/Gs

Which of the following correctly describes the effect this will have on CST level and the actions that will be necessary?

CST #1 level will:

A. continuously lower requiring manual swap to CST #2.

B. be maintained by automatic makeup.

C. continuously lower and automatically swaps to CST #2.

D. remain full until CST #2 level reaches 66% .

59. 061AA1.01 002

Which of the following area radiation monitors intiate a CVI?

A. ARE-014, Waste Gas Effluent Monitor

B.✓ RE-003, Containment Low Range

C. ARE-2533A, Fuel Handling Building

D. RE-12117, Control Room Ventilation

60. 061K5.01 002

Given the following plant conditions:

- The Unit 1 reactor is in mode 3
- RCS heatup to 557 degrees F in progress

The heat transfer rate between RCS and the steam generators will .....

A.✓ increase as RCS temperature increases and AFW flow increases.

B. decrease as RCS temperature decreases and AFW flow increases.

C. increase as AFW temperature increases and AFW flow increases.

D. decrease as AFW temperature decreases and AFW flow increases.

61. 062A3.05 002

Given the following sequence:

- A small break LOCA occurred resulting in a reactor trip and SI.
- The SI signal was reset during the performance of 19010-C, "E-1, Loss of Reactor or Secondary Coolant."
- A loss of offsite power occurred and the diesel generators loaded as designed.

Assuming no operator actions, which ONE of the following would be the status of the loads on the 4160Vac 1E buses?

A. All equipment powered from the 4160Vac 1E buses with the control board switch in automatic will be restarted.

B. No 4160Vac 1E bus loads are automatically restarted.

C.✓ Equipment normally started during a LOSP will be automatically restarted; SI and RHR pumps remain OFF.

D. All equipment that was operating prior to the LOSP will be automatically restarted; All running ESF equipment will be reenergized.

62. 062AG2.4.24 002

The crew is in 19100-C, "Reactor Trip or Safety Injection". Prior to the step that the crew places equipment in PTL, the procedure cautions that 2 NSCW pumps should be available to load on each AC Emergency Bus.

These pumps are required to provide cooling for the .....

A. SI pump

B. MDAFW pump

C. ACCW pump

D. EDG

63. 064K2.03 002

Unit 2 is at 100% power
All Diesel Generators are currently operable
Annunciator ALB38-B09, "DG2B ENGINE CNTL POWER B FAILURE" just illuminated

Which ONE of the following describes the status of the Diesel Generator 2B with this annunciator in alarm?

A. DG2B still has capability to start and load once and is operable.

B. If DG2B was running when this occurred it will continue to operate and can be shutdown from the control room. DG2B must be declared inoperable.

C. DG2B can be started and loaded manually but is inoperable.

D. If DG2B was running it will continue to operate and can only be shutdown from the front standard. DG2B must be declared inoperable.

64. 065AA1.03 002

Unit 1 just experienced a loss of air and entered AOP 18028-C, "Loss of Instrument Air" The header pressure is 63 psig. Given the current conditions, what action, per procedure, should be taken by the operator to prevent inadvertent operation of equipment repositioned due to the loss of air?

A. Verify the cask loading pit gate seal assemblies are supplied with bottled nitrogen > 50 psig.

B. Ensure 1PV-9385 "Service Air Isolation Valve" is open.

C. If MSIVs closed due to low air pressure, place the MSIV hand switches to closed.

D. If normal letdown had not isolated due to low pressure, place the normal letdown isolation switches in open.

65. 067AK1.02 001

There is a fire in the generator hydrogen cooling system. Fire fighting efforts have caused the fire main header pressure to lower.

Which one of the following is the design pressure that will cause the FIRST diesel driven fire pump to start automatically?

A fire header pressure of.....

A. 85 psig.

B. ✓ 95 psig.

C. 105 psig.

D. 110 psig.

66. 068AK3.18 001

Evacuation of the Control Room is required due to a Control Room fire.

The actions of AOP 18038-1, "Operation From Remote Shutdown Panels," prior to evacuating the control room, include which of the following?

A. ✓ Trip both main feedwater pumps.

B. Ensure S/G pressure control in AUTO

C. Place the PZR pressure control in AUTO

D. Trip all RCPs

67. 068K1.07 002

Which one of the following describes how the incore instrumentation seal table leakage enters the Liquid Rad Waste system?

A. ✓ Drains to Reactor Cavity Sump, and then is pumped to the Floor Drain Tank.

B. Drains to the floor drain, overflows into the Reactor Cavity Sump, and then is pumped to the Waste Monitor Tank

C. Drains to the floor drain, overflows into the Reactor Cavity Sump, and then is pumped to the Floor Drain Tank

D. Drains to Reactor Cavity Sump, and then is pumped to the Waste Monitor Tank.

68. 068K6.10 002

Which ONE of the following would require termination of the release of Unit 1 Waste Monitor Tank # 10 ?

A.✓ 1-RE-0018 fails high

B. 1-RE-039A fails high

C. ARE-0014 fails low

D. 1-RE-039A fails low

69. 069AK2.03 002

Given the following conditions:

- The unit 1 RCS is at 190 ^{O}F and 350 psig
- The Aux Bldg. SO reported that both containment airlock doors are open

Which one of the following is the correct action?

A. Close the outer door within 1 hour or reduce RCS temperature to 140 ^{O}F within 24 hours

B.✓ Close the outer door prior to RCS heatup above 200 ^{O}F

C. Close the outer door prior to RCS heatup above 350 ^{O}F

D. Close the outer door within 1 hour and lock the outer door within 24 hours.

70. 071K3.05 001

Chemistry has taken a grab sample of the release in progress from the gaseous radwaste system. The results indicate that the release is above the release permit setpoints.

Which one of the following caused this?

A.✓ Waste Gas effluent monitor, RE-14, failed low.

B. Waste Gas effluent monitor, RE-14, failed high.

C. A loss of 125 vDC power to radiation trip valve, RV-0014.

D. A loss of instrument air to radiation trip valve, RV-0014

71. 072A1.01 002

ARE-2532A and ARE-2533A are indicating increasing levels of radiation.

If this trend continues which of the following should occur?

A. Only the Train A FHB isolation dampers close, the supply unit trips but the post-accident filter unit does not start.

B. The AREs will alarm locally and in the control room, initiating an isolation and a direct trip of the normal FHB HVAC units.

C. Only the Train A supply and exhaust dampers isolate, supply and exhaust units continue to run and the post-accident filter units start.

D. ✓ Train A and B supply and exhaust dampers isolate, the supply and exhaust units trip on low flow, and the post-accident filter units start.

72. 072G2.1.28 001

RE-0019, 0020 and 0021 are in alarm. Waste Water Retention Basin RV-0021 and FV-1150 have just closed.

Which equipment caused the closure?

A. RE-0019 Only

B. RE-0020 Only

C. ✓ RE-0021 Only

D. The Combination of both RE-0019 and RE-0020

73. 073A2.01R 001

Given the following:

- Unit 1 is at 100% power
- a liquid waste release is in progress.
- Annuciator ALB 05 C03, HIGH RADIATION ALARM, is illuminated.
- 1-RE-0018 spiked to high alarm due to an erractic power supply, and is now decreasing to less than backgound.

Which ONE of the following describes the initial required actions by the control room operators?

A. Have the detector assembly cleaned.

B. Notify RADCON to take radiation readings in the detector area.

C. ✓ Verify liquid rad waste release valve 1-RV-0018 is shut.

D. Initiate a work order to repair 1-RE-0018.

74. 075A4.01 001

An operator making rounds reports that 1-TI-1712, which measures the NSCW temperature at the outlet of the CCW Hx is reading 204 degrees F.

Which one of the following describes how this can be verified in the control room?

A. Use D/G jacket water inlet temperature since this is essentially the same temperature as the CCW Hx outlet temperature.

B. ACCW Hx outlet temperature can be used, a table is available to convert the indicated temperature.

C. ✓ Use the IPC since redundant information is available on the IPC.

D. CCW Hx and ACCW Hx flow can be used since a nomograph is available to convert the indicated temperature.

75. 076K2.08 001

Which one of the following describes the power supply for containment coolers 7 & 8 NSCW Supply Valve (HV-1809)?

A. 480 Vac switchgear 1AB16

B. 480 Vac switchgear 1NB21

C. ✓ 480 Vac MCC 1BBD

D. 480 Vac MCC 1NBM

76. 078G2.4.11 002

Given the following conditions:

- Plant in Mode 3.
- Total Loss of Instrument Air has occurred.
- The RO reports that Pressurizer level is 92% and slowly rising.

Which ONE of the following actions should be taken to control Pressurizer level per 18028-C, "Loss of Instrument Air"?

A. Locally isolate charging and letdown and place excess letdown in service.

B. Stop CCPs until PZR level is less than 70% then cycle a CCP on and off to maintain PZR level between 65 and 70%.

C. Locally isolate charging until PZR level is less than 70% then locally operate 1FHC-0121 to control charging flow.

D. ✓ Place the reactor Head Vent System in service, adjust head vent flow valves to desired letdown rate.

77. 079K4.01 002

If Station Instrument and Service Air System air pressure is dropping, the Service Air System is designed to automatically isolate from the Instrument Air System when pressure drops below which ONE of the following?

A. 70 psig.

B. 78 psig.

C. ✓ 80 psig.

D. 100 psig.

78. 086G2.4.25 002

During the response to a fire in the turbine building, an injured person must be transported off site. The only safe way to transport this person is via the Turbine Building elevator. The elevator is locked out. According to procedure 92005-C, which one of the following persons can authorize the use of the elevator during the fire?

A. ✓ Fire Team Captain, only

B. The Unit Shift Supervisor of the affected unit, only

C. Any Fire alarm response Team Member

D. The Burke County Emergency Management Agency

79. 103A2.03R 001

Given the following conditions for Unit 1:

- Safety Injection has actuated
- The crew is performing 19000-C, "E-0, Reactor Trip or Safety Injection", when the RO notes that Containment Pressure is 23.2 psig and that neither the Containment Spray NOR CIA have actuated.

Which ONE of the following describes the minimum action(s) required?

A. Must manually actuate either CIA manual handswitch and manually actuate both containment spray handswitches.

B. Must manually actuate both CIA manual handswitches and manually start the Containment Spray pumps.

C. Manually actuate either CIA manual handswitch and manually shut the MSIV's and bypasses.

D. Must manually actuate both CIA manual handswitches and manually shut the MSIV's and bypasses.

80. G2.1.2 002

Given the following indications on Unit 1:

- 19030-C, SGTR is being implemented
- Both CCPs and both SIPs are running
- RCS pressure 1350 psig and falling slowly
- Level in S/G 1 is 80% NR rising slowly
- Level in other S/Gs is 5% NR rising slowly
- MSIVs are open
- RCS temperature is 558 degrees F and rising slowly

Which ONE of the following describes the action to be taken and the basis for that action?

A. Dump steam at the maximum rate to cooldown the RCS.

B. Isolate SG#1 to minimize RCS cooldown.

C. Stop all RCPs because RCP trip Criteria have been met prior to initiation of RCS cooldown.

D. Stabilize the level in intact S/Gs to preserve a heat sink for cooldown.

81. G2.1.3 002

A procedure writer with an active RO license is in the control room to review a procedure revision. The RO is called for a random drug test. The RO requests that the procedure writer relieve him for about 15 minutes for the drug test.

Which one of the following describe the shift relief requirements for this situation?

The procedure writer may relieve the RO provided...

A. ...the procedure writer reviews the narrative logs, rounds sheets, and checklists for his station. The review shall include narrative logs since the last shift worked or the preceding 3 days, which ever is longer.

B. ...the procedure writer and the on-shift RO independently walk-down their assigned control boards to verify checklists items and discuss equipment status.

C. ...the relief is 45 minutes or less and a) the relieving operator is knowledgeable of plant conditions, b) they perform a joint walkdown of applicable control panels, and c) the Unit Shift Supervisor acknowledges the relief.

D. ✓ .....a full turnover is conducted as described in procedure 10004-C, Shift Relief.

82. G2.1.32 001

Which ONE of the following describes the normal configuration of the Component Cooling Water system and the reason, respectively?

A. 2 pumps running, one pump in pull-to-lock, to prevent CCW Hx tube vibration damage from excessive flow rates.

B. 2 pumps running, one pump in pull-to-lock, to avoid system pressure exceeding relief setpoints

C. ✓ 2 pumps running, one pump on standby, to avoid system pressure exceeding relief setpoints

D. 2 pumps running, one pump on standby, to prevent CCW Hx tube vibration damage from excessive flow rates.

83. G2.2.12 002

Unit 1 is at 100%
Surveillance 14905-1, RCS Leakage Calculation (Inventory Balance) is in progress

Which ONE of the following would invalidate the leak rate calculation?

A.✓ RCS diluted 50 gallons to raise RCS temperature back to program.

B. Main turbine load reduced 5 MWe to prevent exceeding allowed power limits.

C. Control rods inserted 5 steps for AFD control.

D. ECCS accumulator filled with an SI pump due to a slow leak.

84. G2.2.22 001

Which one of the following sets of conditions represents a violation of a technical specification safety limit and required action?

A. Power = 10%, Pressure = 2400 psig, Tavg = 655°F, restore to within limits OR be in Mode 3 in 1 hour

B.✓ Power = 80%, Pressure = 2250 psig, Tavg = 640°F, restore to within limits AND be in Mode 3 in 1 hour

C. Power = 10%, Pressure = 2400 psig, Tavg = 655°F, restore to within limits in 2 hrs or be in Mode 3 in 6 hrs

D. Power = 80%, Pressure = 2250 psig, Tavg = 640°F, restore to within limits in 2 hrs or be in Mode 3 in 2 hrs

85. G2.2.3 002

Which one of the following decribes the Plant Integrated Computer (IPC) terminals?

They are in mirror image locations. The IPC terminals are identical except that.....

A. the common radiation monitors go to Unit 2 only and weather data goes to Unit 1.

B. the common radiation monitors go to Unit 1 only and weather data goes to Unit 2.

C.✓ both the common radiation monitors and weather data go to Unit 1 only.

D. both the common radiation monitors and weather data go to Unit 2 only.

86. G2.3.1 001

Which one of the following dose components are combined in a Radiation Worker's Occupational Dose?

A. Total Effective Dose Equivalent and Planned Special Exposures.

B. Planned Special Exposures and Committed Effective Dose Equivalent.

C. Total Effective Dose Equivalent and Committed Effective Dose Equivalent

D. Deep Dose Equivalent and Committed Effective Dose Equivalent.

87. G2.3.4 002

Given the following plant conditions:

- A LOCA occurred and a Site Area Emergency was declared.
- The TSC and OSC have been activated.
- It is recommended that entry be made into the Safety Injection Pump Room 1A to determine why the pump will not start.
- Projected dose rate in the pump room is 1.16×10^5 mr/hr.
- Duration of the exposure is expected to be 3 minutes.

Which ONE of the following may authorize this exposure?

A. EOF Manager

B. Operations Support Center Manager

C. Health Physics Supervisor

D. Emergency Director

88. G2.3.9 001

Given the following conditions:

- Unit 1 is in Mode 2 following a refueling outage
- Containment Mini-Purge System was placed in operation in preparation for maintenance personnel to make a containment entry.
- Maintenance has requested the Mini-purge system be shutdown to reduce noise levels while they perform their activities.

Which ONE of the following should be considered prior to securing Containment Purge?

A. Outside air temperature and pressure

B. Containment humidity

C. ALARA conditions

D. Containment Purge HEPA and Charcoal filter DP

89. G2.4.1 002

Given the following events:

- Unit 1 reactor trip
- Operators observe the following conditons:
  - 1AA02 is deenergized due to a bus fault
  - 1B-DG supplying 1BA03
  - 1BB06 feeder breaker trips during load sequencing

Which of the following would describe the correct actions to take?

A. Remain in 19000-C on step 3 until power is restored to 1BB06

B. Transition to 19100-C, "ECA-0.0, Loss of All AC Power"

C. Transition to 18031-C, "Loss of Class 1E Electrical Systems"

D. Continue in 19000-C while trying to restore power to 1AA02 and 1BB06

90. G2.4.11 002

Given the following conditions:

- Unit 1 has been operating at 100% power with a 32 GPD tube leak for the last 3 months on S/G #2
- RE-724 & RE-810 became inoperable 4 hours ago, chemistry is investigating
- Chemisty sampling 2 hours ago indicated the leak rate was 37 GPD
- Chemisty sampling indicates the leak rate is currently 48 GPD

Which ONE of the following should be performed per procedure 18009-C?

A. Be in Mode 3 within 24 hours.

B. Reduce load to hot standby within 2 hrs, then cooldown and depressurize the RCS.

C. Trip the reactor; enter E-0, then transition to E-3.

D. Convene PRB to evaluate continued operation.

91. G2.4.16 001

While in the Emergency Response procedures the team is directed to "Go To" another procedure, which one of the following is the correct implementation of this action?

A. The "GO TO" implies the procedure in use is not applicable, and therefore any tasks in progress need not be completed.

B. The original procedure remains applicable because tasks still in progress must be completed prior to the transition directed by the "GO TO" step.

C. The "GO TO" implies the procedure in use is no longer applicable, transition to the new procedure but any tasks in progress should be completed.

D. Tasks still in progress need not be completed prior to the transition directed by the "GO TO" step, unless preceded by a note stating otherwise.

92. G2.4.8 002

Unit 1 has the following symptoms:

- Reactor is tripped
- core exit TC temperatures greater than 1200 F
- RVLIS full range indication is 25%

Which ONE of the following are your required actions?

Enter 19221-C FR-C.1, Response to Inadequate Core Cooling, from ....

A. Orange path on Core Cooling, and

1) Reinitiate high pressure safety injection
2) Rapidly depressurize the steam generators
3) Restart RCPs and/or open PRZR PORVs

B. Orange path on Core Cooling, and

1) Reinitiate high pressure safety injection
2) Slowly depressurize the steam generators
3) Stop all running RCPs and open PRZR PORVs

C. Red path on Core Cooling, and

1) Reinitiate high pressure safety injection
2) Rapidly depressurize the steam generators
3) Restart RCPs and/or open PRZR PORVs

D. Red path on Core Cooling, and

1) Reinitiate high pressure safety injection
2) Slowly depressurize the steam generators
3) Stop all running RCPs and open PRZR PORVs

93. WE02EK1.2R 001

19012-C, "Post LOCA Cooldown and Depressurization," is used following a LOCA event in which the RCS remains at pressure, and it is determined that.....

A. SI termination criteria cannot be met or maintained.

B. SI termination criteria have been met and can be maintained.

C. the possibility of core voiding needs to be prevented.

D. a pressurized thermal shock condition is imminent.

94. WE03EK2.2 002

Given the following plant conditions:

- A small break LOCA has occurred.
- RCPs have been tripped.
- Appropriate actions in accordance with 19010-C, E-1, Loss of Reactor or Secondary Coolant have been completed.
- RCS pressure is stable at 1525 psig.
- ECCS is operating in cold leg injection mode.

Which ONE of the following statements describes the primary method of decay heat removal at this time?

A. Heat transfer between the RCS and the S/Gs due to natural circulation flow.

B. Heat transfer between the RCS and CCW via the RHR Heat Exchangers.

C. Heat transfer from the injection of water from the RWST and the removal of steam/water out of the break.

D. Heat transfer from Reflux boiling in the S/Gs.

95. WE05EA1.3 002

Given the following plant conditions:

- Operators implement 19231-C, "FR-H.1, Response to Loss of Secondary Heat Sink".
- RCS feed and bleed criteria were met.
- Manual Safety Injection was initiated and when the operator attempted to open the pressurizer PORVs, PORV 455 failed to open.

Which ONE of the following describes the correct operator mitigation strategy to respond to this problem?

A. Stop one Centrifugal Charging Pump to reduce loss of inventory through PORVs.

B. Close any open Pzr PORV to conserve RCS inventory and return to the steps to re-establish Main Feedwater.

C. Open the reactor head vents to reduce RCS pressure since one pressurizer PORV may not provide sufficient heat removal capacity.

D. Verify PORV 456 and its block valve open to reduce RCS pressure since 1 Pzr PORV provides adequate heat removal capacity for a loss of heat sink.

96. WE07A2.02R 001

Given the following plant conditions:

- The Unit has tripped from 100% power with a LOCA in progress
- Pzr pressure is 1700 psig
- RCPs are tripped
- Core Exit thermocouples indicate 720 degrees F
- RVLIS full range indicates 36%

Which of the following describes the conditions existing in the core as applicable to the EOPs?

A. Saturated conditions, which do not present an extreme challenge to the fuel matrix and fuel cladding as long as the hot leg temperatures remain at saturated conditions.

B. Super heated conditions, which do not present an extreme challenge to the fuel matrix and fuel cladding as long as the cold leg temperatures remain at saturated conditions.

C. Saturated conditions, which present an extreme challenge to the fuel matrix and fuel cladding.

D. Super heated conditions, which present an extreme challenge to the fuel matrix and fuel cladding.

97. WE08EA2.1R 001

Step 1 of 19241-C, "FRP-1, Response Imminent Pressurized Thermal Shock Condition", has the operator check:

- RCS pressure < 300 psig
- RHR flow > 500 gpm

This step is based on:

A. preventing implementation of 19241-C if a large break LOCA is in progress.

B. ensuring adequate low head safety injection cooling prior to isolating ECCS accumulators.

C. preventing core exit temperatures from exceeding the required temperature to place RHR in service.

D. ensuring RHR system is in service to provide adequate mixing in the cold leg downcomer region.

98. WE10EA2.2 002

Given the following plant conditions:

- Shutdown is in progress to comply with Tech Specs
- The unit must be in mode 4 within 60 minutes
- Reactor trip occurred with subsequent loss of RCPs.
- Operators have implemented 19002, "ES-0.2, Natural Circulation Cooldown".
- A cooldown rate of 50 °F/hour has been established.
- Current RCS temperature is 450°F
- Operators are monitoring PZR level and RVLIS for void formation.

Which ONE of the following describes the appropriate procedural actions.

A. STOP the cooldown and remain in 19002, "ES-0.2, Natural Circulation Cooldown".

B. RAISE the cooldown rate and remain in 19002, "ES-0.2, Natural Circulation Cooldown" .

C. Transition to 19003-C, "ES-0.3, Natural Circulation Cooldown With Steam Voids in Vessel (With RVLIS)" and LOWER the cooldown rate.

D.✓ Transition to 19003-C, "ES-0.3, Natural Circulation Cooldown With Steam Voids in Vessel (With RVLIS)" and RAISE the cooldown rate.

99. WE11EA1.3 002

Given the following plant conditions:

- Reactor trip and SI occurred on Unit 1 due to a LOCA.
- Crew is performing 19111-C "ECA-1.1, Loss of Emergency Coolant Recirculation", due to the failure of both RHR sump suction valves to open.
- Crew has reduced ECCS flow to one train per step 11 of 19111-C
- Crew is performing Step 19 of 19111-C to check ECCS flow adequate and observes the following indications:
  - No RCP running
  - RVLIS Full Range = 60% and slowly dropping

Which one of the following lists the correct operator action for this condition?

A. Maintain the current ECCS alignment.

B.✓ Raise ECCS flow to increase RVLIS indication.

C. Place RHR shutdown cooling in service.

D. Isolate the ECCS accumulators.

100. WE13EK3.2R 002

Given the following condtions:

- FRP 19232-C, "Response to SG Overpressure" is being implemented
- SG #1 pressure is 1250 psig
- The MSIVs are shut
- SG #1 ARV and code safety valves are failed shut

Which one of the following actions is required to correct this situation?

A. Dump steam from SG #1 by opening the MSIV bypass valves.

B. Stop RCP #1 to reduce the heat input to SG #1.

C. Initiate maximum AFW flow to SG#1 to inject cold water to help lower SG #1 pressure.

D. Actuate SI to inject cold water into the RCS to help lower SG #1 pressure.